

UNITED STATES OF AMERICA

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DEPARTMENT OF AGRICULTURE
AND
DEPARTMENT OF HEALTH AND HUMAN SERVICES

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DIETARY GUIDELINES ADVISORY COMMITTEE

+ + + + +

SIXTH MEETING

WEDNESDAY, MAY 12, 2010

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The meeting came to order, at 8:00
a.m., Dr. Linda Van Horn, Chairperson,
presiding.

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PRESENT:

LINDA V. VAN HORN, PHD, RD, LD, DGAC CHAIR

NAOMI K. FUKAGAWA, MD, PHD, DGAC VICE CHAIR

CHERYL ACHTERBERG, PHD, MEMBER

LAWRENCE J. APPEL, MD, MPH, MEMBER

ROGER A. CLEMENS, DRPH, MEMBER

MIRIAM E. NELSON, PHD, MEMBER

SHARON M. NICKOLS-RICHARDSON, PHD, RD, MEMBER

THOMAS A. PEARSON, MD, PHD, MPH, MEMBER

RAFAEL PEREZ-ESCAMILLA, PHD, MEMBER

F. XAVIER PI-SUNYER, MD, MPH, MEMBER

ERIC B. RIMM, SCD, MEMBER

JOANNE L. SLAVIN, PHD, RD, MEMBER

CHRISTINE L. WILLIAMS, MD, MPH, MEMBER

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ALSO PRESENT:

CAROLE DAVIS, MS, RD, CO-EXECUTIVE SECRETARY
AND DESIGNATED FEDERAL OFFICER (DFO), U.S.
DEPARTMENT OF AGRICULTURE

KATHRYN McMURRY, MS, CO-EXECUTIVE SECRETARY,
U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES

ROBERT POST, PHD, MED, MSC
DEPUTY DIRECTOR, CENTER FOR NUTRITION POLICY
AND PROMOTION (CNPP), USDA

WENDY BRAUND, MD, MPH, MSED, ACTING DEPUTY
DIRECTOR, OFFICE OF DISEASE PREVENTION AND
HEALTH PROMOTION (ODPHP), HHS

KEVIN CONCANNON, MSW, UNDERSECRETARY, FOOD,
NUTRITION, AND CONSUMER SERVICES, USDA

WANDA JONES, DRPH, PRINCIPAL DEPUTY ASSISTANT
SECRETARY FOR HEALTH, HHS

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ODPH, HHS	

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1 P-R-O-C-E-E-D-I-N-G-S

2 8:01 a.m.

3 DR. POST: Ladies and gentlemen,
4 good morning from Washington, D.C. Thank you
5 for standing by.

6 Dr. Rajen Anand, the Executive
7 Director of the Center for Nutrition Policy
8 and Promotion of the United States Department
9 of Agriculture, is on the agenda to present
10 today. However, he is unable to be here.

11 My name is Robert Post. I am the
12 Deputy Director for the Center. I will be
13 representing USDA as officiating person on his
14 behalf.

15 Welcome to this webinar of the
16 sixth and final meeting of the 2010 Dietary
17 Guidelines Advisory Committee. We are now on
18 the final stretch of this journey, which began
19 almost two years ago.

20 I want to express my gratitude to
21 the Dietary Guidelines Advisory Committee
22 members for their ongoing, dedicated service

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1 in evaluating the science for the development
2 of these ever-so-important Dietary Guidelines
3 recommendations.

4 The Committee's work has never
5 been more critical, as USDA and the Department
6 of Health and Human Services work toward
7 reducing the public health problems of obesity
8 and preventing diet-related chronic diseases.

9 The Dietary Guidelines for
10 Americans are an important part of improving
11 the health and well-being of Americans of all
12 ages within every community in our country,
13 and they provide the basis for federal
14 nutrition policy and countless nutrition
15 education programs.

16 The contributions made by this
17 2010 Dietary Guidelines Committee will
18 undoubtedly rank among the highest of these
19 committees, particularly with regard to the
20 approach taken in reviewing and weighing the
21 evidence.

22 The continued cooperation between

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1 the Center for Nutrition Policy and Promotion,
2 the Agricultural Research Service within USDA,
3 and our partners, the Department of Health and
4 Human Services, in seeing this 2010 Dietary
5 Guidelines process through has definitely been
6 commendable, not to mention the immeasurable
7 amount of dedication provided and
8 contributions made by each staff member
9 supporting the Committee. My hat goes off to
10 all of you.

11 For the benefit of the webinar
12 attendees who cannot see us today, I would
13 like to share that, in addition to the
14 Committee members, also at the table here
15 today are:

16 Ms. Carole Davis, who is the
17 Director of the Nutrition Guidance and
18 Analysis Division at CNPP. Carole is the
19 Designated Federal Officer and a Co-Executive
20 Secretary for the Dietary Guidelines Advisory
21 Committee.

22 And Dr. Wendy Braund, the Acting

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1 Deputy Director of the Office of Disease
2 Prevention and Health Promotion at HHS, who is
3 representing Rear Admiral Penelope Slade-
4 Sawyer, the Director of that office, who could
5 not be here with us today.

6 And Ms. Kathryn McMurray, the
7 Senior Nutrition Advisor at the Office of
8 Disease Prevention and Health Promotion of
9 HHS, and also a Co-Executive Secretary for the
10 Dietary Guidelines Advisory Committee.

11 The Dietary Guidelines Advisory
12 Committee has had a very important charge
13 during the time in which it has served. This
14 included informing the Secretaries of both
15 Departments of changes to the Dietary
16 Guidelines that were warranted, these being
17 based on the preponderance of the most current
18 scientific and medical knowledge; placing its
19 primary focus on the review of scientific
20 evidence published since the last Dietary
21 Guidelines Advisory Committee deliberations;
22 placing its primary emphasis on the

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1 development of food-based recommendations, and
2 preparing and submitting an advisory report of
3 technical recommendations with rationales to
4 the Secretaries of USDA and HHS.

5 The charge also stated that the
6 Committee responsibilities did not include
7 translating the recommendations into a policy
8 or communications document. That task rests
9 with the federal agencies.

10 This Committee was governed by the
11 Federal Advisory Committee Act, most commonly
12 referred to as FACA. FACA was established to
13 assure that advisory committees provide advice
14 that is relevant, objective, and open to the
15 public, act promptly to complete their work,
16 and comply with reasonable cost controls and
17 recordkeeping requirements.

18 To comply with FACA rules, each
19 public meeting was announced in The Federal
20 Register through a public notice and comment
21 process, and the proceedings were open for
22 observation by the public. As I mentioned,

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1 today will be the last of the public meetings,
2 where all of the final deliberations of the
3 Committee will be presented to you.

4 During the meeting, all public
5 participants will be in a listen-only mode.
6 The public has had opportunities to
7 participate in the process by providing oral
8 testimony at one meeting and written comments
9 throughout the past one-and-a-half years via
10 our online public comments database at
11 www.dietaryguidelines.gov.

12 I would like to remind the
13 Committee members that, until their advisory
14 report is submitted to the Secretaries of
15 Agriculture and Health and Human Services,
16 they should continue to refer any individuals
17 to the Dietary Guidelines management team, who
18 contact any of the individuals who contact
19 them personally regarding the solicitation of
20 information about their work on the Committee.

21 To continue to ensure that the
22 Committee's work is transparent to the public,

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1 Committee members are also not able to speak
2 or give presentations to any individuals or
3 outside groups regarding the work of the
4 Committee until after the advisory report has
5 been delivered.

6 I have the great pleasure at this
7 time of introducing our esteemed guests.

8 First, I would like to introduce
9 or mention that we have with us Mr. Kevin
10 Concannon, the Under Secretary for Food,
11 Nutrition, and Consumer Services of USDA, and
12 Dr. Wanda Jones, Principal Deputy Assistant
13 Secretary for Health at the Department of
14 Health and Human Services. They have joined
15 us this morning to give us some remarks.

16 Let me first introduce to you the
17 USDA Under Secretary for Food, Nutrition, and
18 Consumer Services, Kevin Concannon. Under
19 Secretary Concannon was nominated for this
20 position by President Obama and Secretary
21 Vilsack, and was confirmed by the Senate in
22 July of 2009. The Under Secretary comes to

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1 the Department of Agriculture with an
2 impressive resume, having served over 25 years
3 as the Director of State Health and Human
4 Services in three states, Maine, Oregon, and
5 Iowa.

6 In addition, Under Secretary
7 Concannon has served as the President of the
8 American Welfare Association and the National
9 Association of State Mental Health Directors.

10 He received his -- (Fire alarm.)

11 I am sorry, but we have a fire
12 alarm in this building at the moment. So, we
13 are going offline for the moment.

14 (Whereupon, the foregoing matter
15 went off the record at 8:09 a.m. and resumed
16 at 10:08 a.m.)

17 DR. POST: Ladies and gentlemen,
18 good morning again from Washington, D.C.
19 Thank you very much for your patience and
20 standing by.

21 We had to evacuate the building we
22 are meeting in for a real reason, an

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1 electrical short that emptied this building.
2 So, thank you for being patient over the last
3 couple of hours, as we have been, as we got
4 our dose of vitamin D in the nice sunshine
5 today in Washington, D.C. and probably a
6 little potassium along the way for those who
7 got some coffee. So, we like a committee that
8 is committed to improving the health of all
9 Americans, including themselves. So, thank
10 you very much.

11 We are continuing the program this
12 morning. I will introduce Dr. Wanda Jones in
13 a moment. I wanted to indicate that Under
14 Secretary Kevin Concannon had to meet another
15 obligation and is not here to provide his
16 remarks.

17 But let me now introduce you to
18 our other esteemed guest.

19 I would like to now introduce to
20 you Dr. Wanda Jones from the Department of
21 Health and Human Services. Dr. Jones is the
22 Principal Deputy Assistant Secretary for

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1 Health in the Office of Public Health and
2 Science within HHS.

3 As the Principal Deputy Assistant
4 Secretary for Health, Dr. Jones actively
5 participates in the Department's efforts
6 concerning global health, disaster recovery,
7 Healthy People, and a range of other issues
8 managed within the Office of Public Health and
9 Science.

10 Dr. Jones has long been recognized
11 for her leadership in the federal and state
12 public health communities, having previously
13 served as the Deputy Assistant Secretary for
14 Women's Health and the Director of the Office
15 on Women's Health.

16 Prior to joining the Office on
17 Women's Health, she served as the Associate
18 Director for Women's Health at the Centers for
19 Disease Control and Prevention in Atlanta.

20 She obtained her doctorate in
21 public health laboratory practice from the
22 University of North Carolina.

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1 Please join me in welcoming
2 Principal Assistant Secretary for Health Wanda
3 Jones.

4 (Applause.)

5 PRINCIPAL DEPUTY ASSISTANT
6 SECRETARY JONES: Thank you, Robert, and thank
7 you, everyone, for inviting, actually, my
8 boss, Dr. Howard Koh, who had to go to Chicago
9 today, where he is actually helping promote
10 physical activity and other components of the
11 First Lady's anti-obesity efforts on behalf of
12 all the U.S. Government.

13 And for those of us who walked out
14 the eight flights this morning as well, we
15 also were attending to some of the Physical
16 Activity Guidelines guidance. So, I really
17 salute the Committee. Although it was a
18 couple-hour break this morning, we were able
19 to make it productive time. There was a lot
20 of work being done in the beautiful weather,
21 and then we also got the personal benefits of
22 a few extra steps and that vitamin D that all

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1 seemed to be so important.

2 It is a real pleasure to be with
3 you this morning and to tell you I have
4 watched off and on as this Dietary Guidelines
5 Advisory Committee has done its work. Many of
6 your names I recognize from the literature, as
7 I have dropped in and out of one nutrition or
8 dietary issue or another. Of course, our
9 colleagues at the Office of Disease Prevention
10 and Health Promotion have briefed us
11 periodically on the Advisory Committee's
12 activities.

13 So, it is really an honor to be
14 here with you in person to put faces with
15 those names and to give you a very hearty
16 thank you for the work that you have done over
17 this past year and a half or two years. Your
18 contributions are going to make a significant
19 difference to the progress that we are able to
20 make in the next version of Dietary Guidelines
21 for Americans. You have spent countless hours
22 pouring over the literature, developing

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1 evidence-based recommendations for two
2 Departments.

3 I think that is the other cool
4 thing, this partnership between Health and
5 Human Services and the U.S. Department of
6 Agriculture. We have always worked together
7 on a number of issues. Here, around Dietary
8 Guidelines, the relationship is particularly
9 strong and that shared interest as we both
10 work to create the next version, the 2010
11 Dietary Guidelines for Americans.

12 Having these evidence-based
13 recommendations, having the absolutely
14 invaluable contribution that the evidence
15 warehouse -- I will come back to its proper
16 name in just a moment, but to have that as a
17 repository that we can all draw upon, there
18 will just be immeasurable benefits to the time
19 that you have spent. I just can't really say
20 thank you enough.

21 This process for 2010 has been
22 especially robust because of this Nutrition

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1 Evidence Library that you have worked to
2 develop and the corresponding systematic
3 review process for all the questions that were
4 addressed, as you have met and gone through
5 these processes.

6 We know that the Dietary
7 Guidelines have a rich, science-based history,
8 but moving up to this new level of scientific
9 authority is going to place the Dietary
10 Guidelines in a new light and a new power, if
11 you will, that they will have to truly
12 influence many different levels of policy and
13 interaction at the federal, state, and local
14 levels, and I would daresay globally as well.

15 We often don't think about the work we do
16 domestically and the way it extends out into
17 the world, but with the media today, the
18 internet, and many other forms of access to
19 what goes on, many around the world will look
20 to these Dietary Guidelines as an invaluable
21 resource for the work that they are doing.

22 As a scientist myself, I also

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1 appreciate the processes that lead to
2 recommendations based in science to
3 transparency when those recommendations are
4 developed, the strength of evidence that is
5 weighed and assessed, and sometimes hotly
6 debated. But, you know, that is part of the
7 fun part of science. I just wish I had taken
8 a little bit more training in that debate part
9 because, you know, that is some of the most
10 lively discussion as science is constantly
11 evolving.

12 I like to say science is always
13 evolutionary; it is rarely revolutionary. It
14 is all a process, as we make steps forward.
15 We didn't get to the moon overnight. We
16 didn't get to this day of webinaring
17 overnight. And I think in my lifetime, when
18 we went from no TVs in the home to now the
19 average home has -- what? -- three to five TVs
20 and, basically, a TV in your cell phone. So,
21 this process of scientific development is
22 challenging, interesting, and for something

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1 like Dietary Guidelines, I think both novel,
2 but also absolutely critical.

3 So, on behalf of HHS, I assure you
4 that the science that you have worked so hard
5 to raise up and to ensure its integrity and
6 its accessibility, these will all be
7 assimilated, the science will be assimilated,
8 not just in your technical report, but in the
9 work that the Dietary Guidelines for Americans
10 will then entail, as your report is made
11 available, which HHS and USDA will jointly
12 release later this year.

13 So, for all the time, all the
14 thought you have put into this, the hours away
15 from home from your academic or work life,
16 every other sacrifice that you have made,
17 visible and invisible to all of us, we
18 couldn't have done this without you. The
19 product will be just phenomenal. I am
20 absolutely convinced of that, and I know Dr.
21 Koh as well is very excitingly looking forward
22 to these next phases.

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1 So, I thank you all again for all
2 your hard work. I had a delightful
3 conversation with Under Secretary Concannon.
4 I know there are many ways in which HHS and
5 USDA will continue to work on opportunities
6 moving forward, and I hope, indeed, for me
7 personally, that I will have opportunity to
8 interact with many of you at that personal
9 level again.

10 Thank you all very much. Best
11 wishes for your continued success and good
12 work. Thank you.

13 (Applause.)

14 DR. POST: Thank you to Dr. Jones
15 for those remarks, and thank you, too, for
16 Under Secretary Concannon for having made the
17 trip earlier today.

18 Thank you for sharing those
19 wonderful remarks in support of this
20 Committee's work and the work they have done,
21 as well as providing your overall
22 encouragement in support of evidence-based

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1 nutrition advice to promote general health and
2 reduce chronic disease risk for all Americans.

3 We look forward to the Committee
4 completing its goal today of achieving
5 consensus and of providing recommendations in
6 a very comprehensive, yet focused, Advisory
7 Committee report to the Secretaries of USDA
8 and HHS.

9 So, let me now turn the microphone
10 over to Dr. Wendy Braund, the Acting Deputy
11 Director and Lead for the Prevention Science
12 Team in the Office of Disease Prevention and
13 Health Promotion at HHS.

14 DEPUTY DIRECTOR BRAUND: Good
15 morning.

16 I am Wendy Braund, Acting Deputy
17 Director of the Office of Disease Prevention
18 and Health Promotion in the U.S. Department of
19 Health and Human Services.

20 On behalf of HHS, I would like to
21 join Dr. Jones, and also Mr. Concannon and Dr.
22 Post from USDA, in welcoming both the members

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1 of the Committee and the listening members of
2 the public to this meeting.

3 ODPHP's Director, Rear Admiral
4 Penelope Slade-Sawyer, also asked me to convey
5 her thanks to you and also her regrets that
6 she is unable to be here today.

7 I would like to convey the
8 Department's deep gratitude for the many hours
9 the Committee has toiled over the past year
10 and a half, with the support of USDA and HHS
11 staff, to ensure that the Dietary Guidelines
12 for Americans reflect the preponderance of
13 current scientific evidence relating to
14 nutrition and health.

15 The work of the Committee on the
16 2010 Guidelines comes at a momentous time when
17 it can have a real impact on promoting the
18 health of Americans and reducing risks for
19 major chronic diseases associated with diet
20 and physical activity.

21 HHS leaders are looking forward to
22 utilizing the technical report discussed today

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1 in developing the official federal policy with
2 our colleagues at USDA. We truly appreciate
3 all the hard work by the Committee and staff
4 members that has gone into this process.

5 Best wishes for a productive and
6 enjoyable meeting.

7 DR. POST: Thank you, Wendy.

8 In speaking about transparency
9 earlier, we are very excited to be
10 broadcasting this meeting live via the World
11 Wide Web again, like we did with the last
12 three meetings, which enables us to reach a
13 more varied and larger audience of interested
14 parties, and has the added benefit of
15 providing for a recording of the meeting,
16 which can be used for future reference. These
17 recordings are easily accessed as an archive
18 at www.dietaryguidelines.gov.

19 We have individuals that have
20 registered for this meeting from across the
21 nation as well as internationally
22 participating today. We were quite impressed

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1 at the last meeting that we had registered
2 attendees from around the world. For this
3 meeting, not only do we have about 320
4 registrants, but we have extended the global
5 reach with attendees viewing the presentations
6 from Mexico, Egypt, Canada, Myanmar, Lebanon,
7 and Israel.

8 I would also like to review a few
9 technical points for public participants who
10 are viewing today. On your screen you will
11 see some relevant information. If you
12 experience technical difficulties, you may
13 contact WebEx Technical Support toll-free at
14 1-866-229-3239. This information was also
15 emailed at the time you registered. A
16 separate technical assistance number for our
17 international participants was also provided
18 and can also be seen on your screen.

19 The staff here in the room with us
20 will be monitoring an email line, so to speak,
21 where public participants can send notes of
22 any technical difficulties while the meeting

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1 proceeds. As you see on the screen, this
2 email address is tech_issue@yahoo.com.

3 Please note that the staff will
4 not respond to these emails. It is simply one
5 of the many ways that we are monitoring the
6 streaming efficiency of the meeting to the
7 public.

8 We value your feedback on this
9 webinar meeting. So, I will also add that,
10 after the meeting, you will receive a survey
11 from WebEx in order to measure your
12 satisfaction with attending this online
13 meeting.

14 As in the past, a copy of the
15 webinar will be available online and a
16 transcript and a written summary of this event
17 will be posted to our Dietary Guidelines
18 website as they become available.

19 Because this meeting is being
20 streamed live to the public, I would like to
21 ask that the Committee members clearly state
22 their name before speaking. This is important

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1 in facilitating clear deliberations to the
2 public who are following the proceedings.

3 With that, I would like to turn
4 the meeting over to the Chair of the Dietary
5 Guidelines Advisory Committee, Dr. Linda Van
6 Horn.

7 Linda?

8 CHAIR VAN HORN: Well, thank you,
9 Rob, and thank you to everyone for your
10 patience as we have experienced sort of an
11 interesting, real-life day so far. I would
12 just like to remember that those who remain
13 flexible don't get bent out of shape.

14 (Laughter.)

15 So, I think that is what we are
16 going to practice today.

17 It is wonderful to be here with
18 our Committee as well as the support staff.
19 We have a very ambitious agenda.

20 I, too, would like to add my
21 thanks to everyone for their hard work and
22 perseverance in producing this report. I

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1 think it goes without saying that some
2 adjustments will be made to today's agenda,
3 given the delay that we have had, and our
4 group has been efficient and flexible over the
5 last year and a half in all of our
6 deliberations. So, I think today we will rely
7 on everyone to be concise, and, yet, still put
8 the effort into reviewing to the group how
9 much the work has gone forward in terms of the
10 progress.

11 Over the past year and a half, we
12 have continually been reminded of the
13 relevance of our work to the public health in
14 the United States, especially with the obesity
15 epidemic we are facing today. I can truly say
16 that the advisory report that will be
17 delivered to the Secretaries of USDA and HHS
18 will be one of the strongest, evidence-based
19 reports ever written and will be paramount in
20 assisting the federal government as they
21 develop the 2010 Dietary Guidelines for
22 Americans Policy.

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1 Since our last meeting, held just
2 one month ago, the Committee and our support
3 staff have been working hard to finalize all
4 proposed conclusion statements and support
5 summaries of the evidence, and have been fine-
6 tuning drafts of the chapters for the report.

7 I would add here that this report
8 is not yet final. There will, in fact, be
9 changes that continue to be made after today's
10 report, especially because of the condensed
11 timeframe that we have to work with today, and
12 our Committee is aware that some additional
13 changes can be made in the report as we
14 conclude with our comments today.

15 So, the focus of today's meeting
16 will be to present all the questions or
17 families of questions for each Subcommittee
18 which the Committee members posed and provide
19 conclusion statements for at least those that
20 we have developed to this point to answer
21 those questions. An agreement will be reached
22 on all these conclusions.

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1 The agenda for today's meeting
2 will follow the proposed outline, albeit,
3 again, condensed wherever possible. At the
4 end of each family of questions or set of
5 related topic area questions, there will be an
6 opportunity for the Committee to ask questions
7 or raise issues, and adjustments needing to be
8 made can be made at that time and subsequent
9 to today's meeting.

10 As a reminder for the public, the
11 Committee worked on seven different
12 Subcommittees, each with its own topics listed
13 on the agenda. In addition to the seven
14 Subcommittees, the Science Review Subcommittee
15 provided oversight and guidance related to the
16 technical review of the evidence.

17 As work within the Subcommittees
18 progressed, a new chapter for the report
19 evolved to address the total diet concept.
20 Key members of the Energy Balance and Weight
21 Management, Carbohydrates and Protein,
22 Nutrient Adequacy, Sodium, Potassium, and

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1 Water Subcommittees worked together to prepare
2 this chapter, while other Committee members
3 actively worked on writing the translation and
4 integration chapter of the report. These two
5 chapters will set the stage for the report and
6 will be discussed before the other
7 Subcommittee chapters today.

8 In quick summary, I want to tell
9 you how we answered our scientific questions.

10 Most of these were asked using the USDA's
11 Nutrition Evidence Library systematic review
12 process. We commonly refer to that as NEL.

13 For some questions, it was decided
14 that a formal NEL review was not needed. In
15 some cases, such as when only a brief update
16 was needed, other sources of evidence were
17 used when appropriate, such as the 2005
18 Dietary Guidelines report, the IOM report or
19 the Physical Activity Advisory Committee
20 report.

21 For other questions, food pattern
22 modeling was used to understand the

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1 implications of specific recommendations on
2 the total diet. And yet, for others, data
3 analyses were used to answer the questions.

4 Our total review of the evidence
5 will be summarized in the advisory report.
6 Details of the evidence review will also be
7 available in the electronic database
8 accessible by the public called the USDA
9 Nutrition Evidence Library. All information
10 related to the criteria used in reviewing the
11 evidence will be located here, including
12 inclusions/exclusion criteria, quality
13 ratings, et cetera. The NEL ensures that the
14 details of our scientific review are well-
15 documented, transparent, and reproducible.

16 In previous meetings, conclusion
17 statements based on a NEL review were
18 presented with numeric grades that indicated
19 the strength of the evidence. However, after
20 reviewing the entire body of conclusion
21 statements for our Subcommittees, the
22 Committee decided to drop the numeric rating

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1 system because it was difficult to apply a
2 common grading system to evidence reviews that
3 varied in their methodology.

4 Therefore, the 2010 Dietary
5 Guidelines will use standardized vocabulary
6 instead of the numeric rating, and there are
7 several terms that we are actually going to
8 discuss a bit in terms of how those will be
9 conveyed. For further details on these,
10 please refer to the conclusion statement
11 evaluation criteria posted on the Dietary
12 Guidelines website under Meeting 6.

13 I would also like to mention that
14 close to a thousand public comments were
15 reviewed over the last year and a half. Each
16 Subcommittee looked at these and took them
17 into consideration during their deliberations.

18 So, at this time, I would like to
19 begin with the Subcommittee presentations. We
20 have a lot to cover today, but we will start
21 with the introduction of "The Total Diet:
22 Combining Nutrients, Consuming Foods" chapter,

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1 which is new to this report.

2 With that, we will just move right
3 into it. I will be the person presenting a
4 summary of this.

5 All of the Committee members have
6 had a chance to look at this. But the Total
7 Diet chapter is being included for the first
8 time.

9 And I am not sure why it is not
10 going. Okay, thank you. It is not advancing.

11 This is included for the first
12 time. It synthesizes the evidence on dietary
13 components that contribute to excess energy
14 and inadequate nutrient intakes, and the foods
15 that are needed to provide essential nutrients
16 and other health benefits. It provides a
17 brief evidence-based comparison of worldwide
18 eating patterns and describes the USDA food
19 patterns that demonstrate a flexible nutrient-
20 dense total diet.

21 It is also a catalyst for the
22 total diet approach. The current average

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1 American diet bears very little resemblance to
2 the recommended Dietary Guidelines. We
3 consume too many calories, too much added
4 sugar, solid fats, refined grains, and salt.
5 We also consume too little dietary fiber,
6 vitamin D, calcium, potassium, unsaturated
7 fatty acids, including omega-3, and other
8 nutrients found in vegetables, fruits, whole
9 grains, low-fat dairy products, and seafood.

10 Overweight and obesity are highly
11 prevalent in the United States in both adults
12 and children. The single most significant
13 adverse health trend among U.S. children in
14 the past 40 years has been the dramatic
15 increase in overweight and obesity. Factors
16 associated with preventing adiposity are
17 incorporated in the total diet described in
18 this chapter.

19 The definition of total diet is
20 the combination of foods and beverages that
21 provide energy and nutrients and constitute an
22 individual's complete dietary intake on

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1 average over time. As we blend the
2 recommendations into a healthful total diet,
3 we are discussing moderate energy intake, and
4 this is achieving the recommended nutrient
5 intakes within a total diet that meets, but
6 does not exceed energy needs.

7 People consume too many calories
8 relative to the calories they expend. Diets
9 high in energy, but low in nutrients can leave
10 a person overweight, but undernourished and at
11 risk for chronic disease.

12 Americans are encouraged to know
13 their energy needs. That means need to know
14 how many calories you need to eat each day.
15 Beverages contribute heavily to overall
16 dietary and energy intake, and calories in
17 these foods need to be considered as well.

18 Portion control and quantities
19 consumed are also important considerations.
20 We also need to reduce the solid fats and
21 added sugars, commonly referred to as SoFAS,
22 in our diet. SoFAS contribute substantially

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1 to the intake, somewhere around 35 percent of
2 our total caloric intake, which leads to
3 excessive intake of saturated fat and dietary
4 cholesterol and neglects dietary fiber and
5 other essential nutrients. The DGAC focus is
6 on reducing SoFAS rather than discretionary
7 calories.

8 The sources of solid fats include
9 grain-based desserts such as cakes, cookies,
10 pies, et cetera; cheese; sausage, franks,
11 bacon, ribs; pizza, and white potatoes fried,
12 French fries. The sources of added sugars
13 include sodas, grain-based desserts, fruit
14 drinks, dairy deserts, and candy.

15 What we eat versus what is
16 recommended is vastly different. We have an
17 illustration of this, recognizing that the
18 calories from solid fats and added sugars
19 should be less than a third of what we
20 currently are consuming.

21 The nutrient-dense foods include
22 vegetables, fruits, high-fiber whole grains,

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1 seafood, eggs, and nuts, low-fat forms of milk
2 and milk products, lean meats and poultry,
3 when prepared without added SoFAS, starches or
4 sodium. Found in a variety of forms, but
5 ideally minimally-processed, these foods will
6 contribute those nutrients without excessive
7 energy, and they can provide the nutrients
8 that are currently lacking.

9 We further illustrate in one of
10 the figures the examples of the foods that we
11 are currently eating versus what is
12 recommended and, once again, illustrating the
13 vast disparate nature of our current diet
14 versus what we would want to consume.

15 We also need to reduce sodium.
16 Excessive sodium raises blood pressure.
17 Current food supply is replete with excess
18 sodium, and about 75 percent of sodium is
19 added during food processing. Food
20 manufacturers and restaurant industries have a
21 critically-important role to play in helping
22 us reduce sodium intake.

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1 Regarding worldwide dietary
2 patterns, there is evidence accumulating that
3 certain dietary patterns are associated with
4 health benefits. The DGAC examined dietary
5 patterns and total mortality, CVD, and blood
6 pressure. This is a new focus in this report
7 because, finally, data on whole patterns and
8 whole eating styles are available for a
9 comparison with health outcomes.

10 We focused on the DASH-style and
11 the Mediterranean-style eating patterns with
12 considerable evidence available for both. We
13 also examined the traditional Asian diets that
14 represent Japanese and Okinawan research, as
15 well as vegetarian diets.

16 Then, we looked at the flexibility
17 of trying to apply these types of eating
18 patterns by using the USDA food patterns.
19 Consistent with emerging evidence about
20 dietary approaches to primary disease
21 prevention, these patterns include recommended
22 amounts from the major food groups in

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1 nutrient-dense forms and allow for oils with
2 limits on calories from the SoFAS. They meet
3 the nutrient needs within the energy
4 requirements. They are developed on plant-
5 based, lacto-ovo vegetarian, and vegan
6 variations. And further, the USDA modeling
7 examined the impact of the non-nutrient-dense
8 choices.

9 So, in summary, good health across
10 the lifespan requires a total diet that is
11 limited in total calories and portion control,
12 focused on nutrient-dense vegetables, fruits,
13 high-fiber whole grains, nonfat and low-fat
14 milk and dairy products, seafood, lean meat
15 and poultry, eggs, soy products, nuts, seeds,
16 and oils, and very low in SoFAS.

17 We also advocate physical
18 activity. It is important for energy balance
19 and maintaining body weight, but the primary
20 focus should be on reducing excess calorie
21 intake. Physical activity alone will not
22 address the obesity problem in this country.

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1 It must go hand-in-hand with limits on total
2 caloric intake.

3 Children and adolescents are of
4 particular concern. I can say that the entire
5 Committee is united in its focus on the
6 importance of primary prevention of obesity
7 starting in childhood. The dietary patterns
8 formed during youth set the foundation for the
9 choices and behaviors as adults.

10 Several distinct dietary patterns
11 are associated with health benefits. A common
12 feature is emphasis on plant foods. Americans
13 have considerable flexibility in selecting a
14 diet that meets these nutrient requirements
15 while reducing preventable diseases and
16 controlling weight.

17 The challenge will be to promote
18 this population-wide adoption of a healthy
19 dietary pattern in the setting of powerful
20 influences that currently promote unhealthy
21 lifestyle. Yet, we know that, as a group and
22 with combined partnership, we can accomplish

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1 these goals.

2 This ends the introduction and
3 summary of the Total Diet chapter. Most of
4 the Committee members have had a chance to
5 look at this report, this chapter. Additional
6 modifications are still needed, but, as a
7 group, are there any comments from the
8 Committee?

9 Larry?

10 MEMBER APPEL: Yes, this is Larry
11 Appel.

12 I have several comments, but the
13 one issue that I wanted to have from the
14 Committee, because I wrote a section on
15 dietary patterns, was whether or not to more
16 explicitly include Japanese and Okinawan
17 diets.

18 The database is just not as rich
19 as for the others, but, on the other hand, we
20 felt that we needed to accommodate or mention
21 other cultures. So, I greatly truncated the
22 section, but I really would also want to make

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1 sure that the Committee feels comfortable with
2 what was written.

3 CHAIR VAN HORN: Xav?

4 MEMBER PI-SUNYER: So, I would
5 take it out myself. That is my opinion. I
6 think that there's not enough evidence-based
7 data on that. I think, in a way, it sort of,
8 by putting it in the first chapter, you are
9 kind of giving emphasis to it as, quote, "good
10 diet". I think it is confusing personally. I
11 would take it out.

12 CHAIR VAN HORN: I think, just to
13 reflect some of the comments that have been
14 made already by Committee members, it is that
15 there is nothing wrong at all with the
16 traditional Japanese and Okinawan diets, but
17 much of the research that was accomplished on
18 those groups was older. It was done back in
19 the fifties and sixties, when even their
20 dietary patterns were different than they are
21 now, as things have evolved and become more
22 Westernized. So, I think we run the risk of

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1 emphasizing a diet that was at one point
2 fairly nutritious that perhaps at this point
3 is less so.

4 I do think that the data are the
5 data, and the good thing about this particular
6 chapter is that we at least had epidemiologic
7 data on whole dietary patterns which have not
8 previously been available to review in terms
9 of coming up with this chapter. So, while I
10 think that the emphasis on evidence-based data
11 is very apparent throughout this report, and
12 this certainly is evidence-based, I think
13 that, as Xav points out, you sort of run the
14 risk of perhaps overfocusing on a particular
15 eating pattern that has data associated with
16 it, when we know there are other cultures that
17 have nutritious diet patterns as well that we
18 don't have the data on to compare it with.

19 Other thoughts? Cheryl?

20 MEMBER ACHTERBERG: I just wanted
21 to add the comment that I think we need to
22 insert into this chapter that there is no

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1 single American diet or, for that matter,
2 Western diet, but many different American
3 diets.

4 CHAIR VAN HORN: Right, and that
5 is why the USDA modeling offers all those
6 different choices: vegan, vegetarian, use of
7 starchy vegetables as opposed to whole grains,
8 and there's a variety, but to state that.
9 Okay. Yes.

10 Mim?

11 MEMBER NELSON: To that end --
12 this is Mim Nelson -- I am in favor, actually,
13 of removing the Asian and Okinawa section.
14 But sort of following up on Cheryl's comment,
15 I think there could be a paragraph that talks
16 about basically most traditional diets there
17 is evidence that there is health-promoting
18 aspects of most of these traditional diets.
19 You could just like put a string -- even
20 though there's limited, there's not tons of
21 evidence, as much as for DASH and
22 Mediterranean. That would be a way to

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1 highlight the flexible, you know, the
2 heritage, the cultural differences. There may
3 be a way to go into depth with DASH and
4 Mediterranean, and then you have sort of a
5 catchall about the flexibility and the
6 traditional diets generally in their native
7 form are fairly healthy, something in those
8 lines.

9 MEMBER APPEL: This is Larry Appel
10 again.

11 One option is to really constrict
12 it even more in the main chapter, and then
13 constrict it a bit more in that appendix.
14 But, still, I think it is worth mentioning,
15 but it is a question of highlighting when you
16 don't have as much evidence.

17 MEMBER NELSON: Yes, I think that
18 is exactly it. But I think the whole purpose
19 is that you can eat healthfully in a variety
20 of ways. I think that is the purpose of that
21 whole section, and I think you can do it, but
22 not necessarily highlight the older data

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1 there.

2 VICE CHAIR FUKAGAWA: This is
3 Naomi Fukagawa.

4 I would concur with the decision
5 to remove it from the main body of the
6 chapter, but, again, do think that it is very
7 important to keep in the appendix, but not in
8 a whittled-down form, because I do think that
9 the facts that you do provide are valuable and
10 important for the community that is reading
11 the appendix to know that we acknowledge this.

12 You might even include some other diets that
13 are culturally different or ethnically
14 different, although there may not be specific
15 data on them.

16 MEMBER CLEMENS: This is Rog. I
17 am putting on my technology hat.

18 I appreciate the remarks. I think
19 people are really going to look at the slide
20 that deals with sources of solid fats and that
21 of sugars very carefully. I am glad that
22 these topics are raised in the chapter.

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1 I just want to bring to the
2 surface that, in fact, if you look at fried
3 materials, whether that is French fries,
4 potatoes, or any other things that are fried,
5 today's technology says that restaurants are
6 now using winterized vegetable oil instead of
7 lard with very few exceptions. So, I see that
8 as a caloric issue and not a solid fat issue.

9 CHAIR VAN HORN: Yes, that is
10 important. Okay. That was very valuable.

11 Now I think we will just move
12 right along to the Translating and Integrating
13 the Evidence chapter, and Naomi will handle
14 that.

15 VICE CHAIR FUKAGAWA: Thank you,
16 Linda.

17 Oh, sorry.

18 MEMBER APPEL: I don't want to
19 drill down in detail, but I had about four
20 comments that I think are substantive related
21 to the chapter. I think we could just go
22 through them quickly.

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1 One, I just spoke with other
2 members of the Committee. It says, "lower
3 intake of sugar-sweetened beverage". I think
4 it should be "greatly reduced intake of sugar-
5 sweetened beverage". It says, "Less hours of
6 screen time" should be modified "without
7 consuming calorie foods" because it is not
8 just the physical activity component; it is
9 the eating component that is associated with
10 that. So, that should be added.

11 There's a bit of dissonance about
12 energy balance. It says, "Overweight and
13 obesity could result from excess calorie,
14 inadequate physical activity, or both." Then,
15 we say in a sentence just below that it is
16 mostly caloric. So, there is some
17 wordsmithing just so people don't say, "Oh,
18 it's the physical activity that's our
19 problem."

20 And I have all of this. Then, in
21 terms of when we list the beverages, it is
22 very confusing. I think we need to put

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1 calories from all the beverages, absolute
2 amounts, rather than percent of calories
3 within beverages -- it is just confusing -- in
4 grams.

5 I guess those are the main points.

6 And the other thing is that graphic of the
7 pie is actually misleading because it makes it
8 seem as though what we should be eating is
9 more. I know we are not here to talk about
10 graphics, but that is a problem right now.

11 CHAIR VAN HORN: Well, actually, I
12 think the graphic is very important and I
13 think it is still a work-in-progress.

14 MEMBER APPEL: Yes.

15 CHAIR VAN HORN: Personally, I
16 wanted to see a plump version of this that
17 illustrates the obesity problem, and this
18 graphic doesn't quite do justice to that. But
19 I think we are still working on that, if I am
20 not mistaken.

21 MEMBER APPEL: Okay.

22 CHAIR VAN HORN: But your other

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1 comments are very well-taken. As I said
2 earlier, it is not only physical activity; it
3 absolutely is a matter of reducing total
4 calories, as this report continues to
5 reiterate over and over again throughout the
6 chapters.

7 VICE CHAIR FUKAGAWA: So, this is
8 Naomi again.

9 I would like to emphasize,
10 however, that we not confuse the public by
11 focusing so much on sugar because sugar, in
12 and of itself, is a nutrient and very
13 important. Really, the issue of the story
14 about added sugars is total calories. I think
15 it is very important to do that because at the
16 present time it may seem like we are singling
17 out a particular added component of the diet,
18 and our real problem is not so much that sugar
19 is bad, as much as we argue too much --

20 MEMBER NELSON: This is Mim.

21 I think the chapter says, first
22 and foremost, it is calories --

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1 CHAIR VAN HORN: Right.

2 VICE CHAIR FUKAGAWA: Okay.

3 MEMBER NELSON: -- and then these
4 are the major contributors to that.

5 VICE CHAIR FUKAGAWA: Okay, so
6 those changes then were suggested --

7 MEMBER NELSON: Yes, yes.

8 CHAIR VAN HORN: And the point I
9 made in my opening remarks I think is also
10 vital. That is, it is time for everyone in
11 this country to know how many calories they
12 need each day and to be able to figure that
13 out, so that they don't exceed them.

14 As we are right now, people are
15 really clueless about how many calories they
16 eat, how many calories they need, how many
17 calories a child needs versus how many
18 calories an older person needs, those kinds of
19 awarenesses. All the labeling in the world is
20 not going to help somebody if you don't have
21 any idea how many calories you need. So, I
22 think that message of really becoming more

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1 conscious of energy balance is a message that
2 really needs to go out loud and clear.

3 We currently are doing our own
4 research at the moment with 4- to 10-year-old
5 children, and even they can get their heads
6 wrapped around that concept. So, I think it
7 is time to be able to proceed with this
8 knowledge and help people become more
9 conscientious about energy balance and
10 understanding how that works.

11 Okay. Other comments?

12 (No response.)

13 All right. Now we will move along
14 to the translation. Thank you.

15 VICE CHAIR FUKAGAWA: Thank you.

16 This is Naomi Fukagawa.

17 I think we all agree, or there is
18 no disagreement, that adherence to dietary
19 recommendations over the past 30 years has
20 really been very dismal and disappointingly
21 slow. I do think that our Committee has been
22 unanimous in our desire to try to change this.

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1 So, a small group of four,
2 including Drs. Nelson, Clemens, Perez-
3 Escamilla, and Rimm, got together, together
4 with the rest of the DGAC, to find a way to
5 translate and integrate the evidence that we
6 have accumulated over the past two years.

7 Next slide, please.

8 So, to do this, major findings
9 with cross-cutting public health impact were
10 identified through the process with the intent
11 that we would provide guidance on how to
12 implement some of the changes that would be
13 needed to assure effective enhancement of the
14 health and well-being of the population
15 through diet.

16 So, Dr. Mim Nelson will now take
17 us through the integrated points that we have
18 identified and our recommendations for the
19 successful implementation of this over the
20 next five years.

21 Mim?

22 MEMBER NELSON: Thanks, Naomi.

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1 This is Mim Nelson.

2 Yes, so, as Naomi said, the key is
3 we have answered so many individual questions
4 with very focused intent with the individual
5 questions, that we felt that it was very
6 important to integrate and look at the
7 overarching, following and dovetailing on the
8 Total Diet chapter.

9 So, we came up with four main
10 bullet points or concepts that we feel really
11 should help to drive what the actual 2010
12 Dietary Guidelines are. So, this is the
13 first.

14 "Reduce the incidence and
15 prevalence of overweight and obesity in the
16 U.S. population by reducing overall calorie
17 intake and increasing physical activity."

18 So, No. 1 is reducing calories and
19 increasing physical activity. The different
20 sort of points under this are to know calorie
21 needs, decrease intake of calories from added
22 sugar, solid fats, and refined grains;

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1 increase intake of a variety of vegetables,
2 fruits, and fiber-rich whole grains; avoid
3 sugar-sweetened beverages. I think this
4 dovetails, Larry, with what you were talking
5 about in the whole diet. Although we couldn't
6 think of, except for pleasure, couldn't think
7 of a reason, a nutritional reason why we
8 should actually say you need to eat or drink
9 sugar-sweetened beverages. So, we had avoid;
10 consume smaller portions; choose lower-calorie
11 options, especially when eating foods away
12 from home, and increase overall physical
13 activity.

14 Next slide, please.

15 The second main integrated finding
16 is to "Shift food intake patterns to a more
17 plant-based diet that emphasizes vegetables,
18 dried beans and peas" -- this includes canned
19 beans -- "whole grains, nuts and seeds.
20 Additionally, increase intake of seafood and
21 nonfat/low-fat milk and dairy products and
22 consume only moderate amounts of lean meats,

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1 poultry, and eggs."

2 This will help to meet nutrient
3 needs, especially shortfall nutrients, while
4 maintaining energy balance, and can be
5 attained through a wide range of food
6 patterns, vegan to omnivore, and can embrace
7 cultural heritage and food preferences. The
8 point here, looking at the Total Diet chapter,
9 this is sort of the synthesis about this
10 pattern of eating, but that there's
11 flexibility.

12 Next slide.

13 Third is we did single out, and
14 the third is to "Reduce intake of foods
15 containing added sugars, solid fats, refined
16 grains, and sodium because they contribute
17 few, if any nutrients."

18 These are the main components of
19 our diet that are overconsumed. They lead to
20 excess calorie intake. What we are talking
21 about, sugars, fats, and grains.

22 To accomplish this goal, efforts

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1 must go beyond individual behavior change,
2 that we need a comprehensive approach. We
3 will be required to help facilitate change.
4 The food industry, from growers, producers,
5 manufacturers, retailers, must act to enable
6 Americans to achieve these goals.

7 In the chapter, we talk about we
8 have had the recommendation for vegetables and
9 fruits for a long time. We have had the
10 recommendations around sodium. Nothing has
11 happened. If anything, things have gotten a
12 little worse in some of the areas, that it is
13 way beyond individual behavior change, that we
14 need to actually change the nature of the
15 foods that are available to people, both
16 within grocery stores, where they buy them,
17 retail, and at restaurants. So, this bullet,
18 in particular, is a charge to the food
19 industry as a whole.

20 Fourth is to "Meet the 2008
21 Physical Activity for Americans."

22 Could I go back to the other one?

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1 Sorry.

2 It is not just the larger food
3 industry. I mean individuals can make a
4 difference here as well. But it is really
5 difficult for individuals to make a difference
6 within the context of the food environment,
7 but they can. So, it is not just solely on
8 the industry.

9 So, next slide.

10 Then, fourth, to "Meet the 2008
11 Physical Activity Guidelines for Americans."
12 We need to improve physical activity
13 participation at home, school, work, and
14 community and reduce sedentary behaviors among
15 children and adolescents. We will get further
16 into that in just a second.

17 So, these are the four main
18 integrated points that we feel capture the
19 essence of almost all the questions.

20 Next slide, Kellie.

21 So, as we mentioned before,
22 there's a lot of focus in the report on

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1 children, and trends for childhood overweight
2 and obesity are alarming. To reverse the
3 trend, we need to improve the food environment
4 for children at home, school, and the
5 community; prevent obesity early, even in
6 utero; prevent maternal obesity before
7 conception and during gestation.

8 Next slide, please.

9 Improve foods sold and served in
10 schools; increase nutrition and physical
11 education in schools; develop standard
12 approaches for not only tracking, but we don't
13 have any nationally-standardized language
14 tools for physicians and others that are
15 seeing these children to monitor, track,
16 prevent, and treat overweight and obesity.
17 Similarly, we need some standardized
18 approaches for the healthcare profession that
19 are seeing women who are planning to get
20 pregnant and those that are pregnant. We need
21 standard approaches. We need safe communities
22 and routes to school; remove sugar-sweetened

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1 beverages and high-calorie snacks from
2 schools; promote action around reducing screen
3 time, and since children are gaining the most
4 weight during the summer months, we need to
5 have a much better, improved programming
6 during the summer months.

7 Okay. Next slide.

8 We certainly have a lot of
9 challenges, and we acknowledge these. There's
10 population growth, availability of fresh
11 water, arable land constraints. Right now, we
12 are 7.5 million acres shy for vegetable,
13 fruit, and whole grain production. Some of
14 these challenges also are around climate
15 change, current policies, business practices,
16 and the environments do not promote physical
17 activity.

18 Next slide.

19 To do this, to create this
20 meaningful, sustainable change, we need to
21 improve nutrition literacy and empower and
22 motivate people to want to change. We feel

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1 that people don't know much about nutrition,
2 let alone cooking anymore.

3 Create financial incentives for
4 healthy food; improve availability of fresh
5 produce, especially in rural and urban areas;
6 increase environmentally-sustainable
7 production of vegetables, fruits, and whole
8 grains; ensure household food security; expand
9 sustainable, safe aquaculture; encourage the
10 food industry and restaurants to offer health-
11 promoting foods, and we need to implement the
12 National Physical Activity Plan that was
13 released on May 3rd, last week.

14 So, measuring success. As a
15 Committee, we feel that it is one thing to put
16 the Dietary Guidelines out there, but if we
17 are going to actually implement these and
18 actually see meaningful change, we need to
19 have a systems approach to this, so that we
20 actually implement the changes that we are
21 asking for. Otherwise, there's no reason to
22 have a 2015 Dietary Guidelines Committee

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1 because we are not making any meaningful
2 change in any of these areas.

3 We think that there needs to be a
4 really focused strategic plan that brings
5 multiple stakeholders together who are all
6 vested in this and have a role to play. I
7 think that some of this is happening with
8 sodium, not so much with vegetables and
9 fruits, reducing added sugars, reducing solid
10 fats.

11 The Foresight Group in the UK has
12 been doing a lot of work in this area. Other
13 countries have been doing some large-scale
14 strategic planning with some success. So, I
15 think this is a really important point. There
16 is no reason to keep going on otherwise.

17 And we encourage all stakeholders
18 to take action, so that every choice available
19 to all Americans is a healthy choice, and that
20 success can be measured through evidence that
21 meaningful changes occurred when the 2015 DGAC
22 convenes.

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1 So, I am going to stop there, and
2 I think we are happy to take questions or
3 comments, suggestions.

4 MEMBER PEREZ-ESCAMILLA: Thank
5 you, Naomi and Mim, for a wonderful
6 presentation.

7 My comment is related to the slide
8 that has the focus on children, and it is the
9 third bullet that reads, "Prevent maternal
10 obesity before conception." I think we should
11 add an excessive postpartum weight
12 retention --

13 MEMBER NELSON: Yes.

14 MEMBER PEREZ-ESCAMILLA: -- because
15 both are very important issues.

16 Then, I wouldn't state it as
17 preventing obesity during gestation, but,
18 rather, preventing excessive gestational
19 weight gain, so that we don't imply we are
20 advocating for dieting, intentional dieting,
21 during pregnancy.

22 MEMBER NELSON: Right. Yes. Got

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1 it. Thanks. Yes, very good.

2 Tom?

3 MEMBER PEARSON: This is Tom
4 Pearson.

5 Thank you for that. I think the
6 call to action, considering the lack of
7 changes in many areas over the last 15 or 20
8 years, obviously, brings this all to even more
9 of a crisis mode.

10 One issue that arose two weeks ago
11 at the second U.S. Dietary Summit, Nutrition
12 Summit, here in Washington, was this issue of
13 education in food safety. I wonder if, on
14 line 179 of the document, there could be some
15 changes.

16 There's been two body blows to
17 food safety. One has been the total
18 eradication of it from school curricula, and
19 the second has been the withdrawal of funding
20 from Extension Services and local education
21 nutrition, things that could do the nutrition
22 education outside the school curriculum. So,

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1 our safety net for prevention of food-borne
2 illnesses, et cetera, has gotten thinner and
3 thinner and thinner.

4 So, I just wonder if the
5 comprehensive health nutrition and physical
6 education programs could include not just food
7 preparation, cooking, et cetera --

8 MEMBER NELSON: Right. Yes.

9 MEMBER PEARSON: -- but really the
10 provision --

11 MEMBER NELSON: Definitely, food
12 safety.

13 MEMBER PEARSON: -- of food safety
14 specifically stated.

15 MEMBER NELSON: Yes. Absolutely.
16 Yes, duly noted.

17 Yes, Rog? Oh, sorry, Cheryl.

18 MEMBER ACHTERBERG: I would like
19 to go back on the integrated findings, the
20 third slide.

21 MEMBER NELSON: The third point or
22 the third slide?

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1 MEMBER ACHTERBERG: The third
2 point.

3 MEMBER NELSON: Okay.

4 MEMBER ACHTERBERG: There we go.

5 MEMBER NELSON: Yes.

6 MEMBER ACHTERBERG: And while I
7 commend all the work presented here, I do have
8 an issue with the last clause because they
9 contribute few, if any, nutrients. I think
10 some foods containing SoFAAs do, in fact,
11 contain other important nutrients, thinking of
12 breakfast cereals, for example. So, it is the
13 "because" part that I am uncomfortable with.
14 I think there is a different "because" because
15 what they contribute they don't need.

16 MEMBER NELSON: Right.

17 MEMBER ACHTERBERG: But it is not
18 because they contribute few, if any,
19 nutrients. Some foods do; some foods don't.

20 MEMBER NELSON: Is there a
21 sense -- because originally we didn't have
22 that clause, but then some Committee members

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1 wanted it added. I think that we could easily
2 just have reduced intake, you know, end at
3 "sodium", period, and then within the
4 paragraph -- because in the chapter it is a
5 little different than this, but not the
6 headline. In the paragraph that follows, we
7 can talk about exactly your point.

8 So, I am happy with that if other
9 Committee members are happy with that. I am
10 seeing a nod. Okay. Yes, that is fine. Duly
11 noted.

12 Naomi, I think for each one of
13 these discussions somebody should take charge.

14 I will take, if it is okay, I will take
15 charge with making these notes, and then make
16 sure they get incorporated in. Does that make
17 sense?

18 VICE CHAIR FUKAGAWA: Yes, that is
19 fine.

20 MEMBER NELSON: Okay.

21 VICE CHAIR FUKAGAWA: But I did
22 want to clarify that one of the issues about

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1 these four points is that we are trying to
2 define them for the group. So, we need to
3 reduce the intake of those components, but
4 those components are part of foods.

5 MEMBER NELSON: Yes. Like
6 cereals, for example, should have less sugar
7 in them.

8 VICE CHAIR FUKAGAWA: Yes.

9 MEMBER NELSON: That is basically
10 what we are saying.

11 VICE CHAIR FUKAGAWA: And so, it
12 does have fortified grains, and so forth,
13 which is good. But, then, on the other hand,
14 we have to balance that with the fact that
15 oftentimes along comes components that they,
16 themselves, do not provide additional
17 nutrients. So, maybe the wordsmithing needs
18 to make that clear.

19 MEMBER NELSON: I think in the
20 paragraph below we can make sure that is
21 there.

22 MEMBER ACHTERBERG: Or you could

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1 just say, "especially those that contribute
2 few, if any, nutrients", or something along
3 that line.

4 MEMBER NELSON: It is just to
5 maintain accuracy here.

6 MEMBER CLEMENS: I agree.

7 This is Rog.

8 And refined grains, we also should
9 remember that, as we refine grains, one, they
10 are delivery vehicles for a lot of nutrients,
11 that we do fortification in this country as
12 required by law. Also, that refined grains
13 have provided a vehicle for fortification of
14 folic acid in this country since 1996. And
15 thirdly, refined grains have also removed the
16 anti-nutrients in many cases, such as the
17 phytates and oxalates, which inhibit mineral
18 absorption. So, there's some really strong
19 attributes that refined grains bring to the
20 total picture of the nutrition in the United
21 States.

22 MEMBER NELSON: Except they are

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1 overconsumed, I mean at least from, you
2 know --

3 MEMBER CLEMENS: Then, it becomes
4 a caloric and consumption level issue and not
5 refined grains per se.

6 MEMBER NELSON: Right, but, I
7 mean, from the Nutrient Adequacy Subcommittee,
8 they are a component of the diet that is
9 overconsumed.

10 MEMBER CLEMENS: Indeed, it is the
11 overconsumption because --

12 MEMBER NELSON: Right. Because
13 this is just reducing --

14 MEMBER CLEMENS: -- they have to
15 make up some of those areas where we see
16 nutrient inadequacies.

17 MEMBER NELSON: Right. Right.
18 So, what we are saying is reducing. We are
19 not saying eliminating, yes.

20 MEMBER SLAVIN: This is Joanne.

21 I am with Roger there. I think it
22 is really confusing because refined grains are

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1 a big part of food intake, and they kind of
2 are lined up there with components rather than
3 a group. So, just the way that is written
4 creates a problem.

5 MEMBER NELSON: The bullets are
6 only just sort of --

7 MEMBER SLAVIN: No, but on the top
8 you see, "added sugars, solid fats, refined
9 grains, and sodium". Those things are not
10 really parallel. They are not really --
11 nutrients, food groups. So, it puts it in a
12 really strange position, and this is an
13 important chapter. So, I am not comfortable
14 with the way it is said.

15 And it is the fortification, you
16 know, that is the policy and that is how we
17 are getting nutrients. So, it is a definite
18 concern the way it is there.

19 MEMBER NELSON: Would you suggest
20 that we keep the "added sugars, solid fats,
21 and sodium" in the same string with the second
22 sentence, you know, "most reduction in refined

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1 grains"?

2 MEMBER SLAVIN: I am just not sure
3 why we are targeting them where they are.

4 MEMBER NELSON: It is because of
5 the calories. These are the components that
6 are contributing the most to calories.

7 MEMBER CLEMENS: There may be a
8 plus and minus with that because, clearly,
9 they contribute a lot of nutrition as well as
10 energy. So, the public needs to understand
11 that balance.

12 MEMBER PI-SUNYER: So, maybe you
13 should have a "because" again and say,
14 "because they contribute too much calories,"
15 so you are clear as to why you are targeting
16 them.

17 MEMBER NELSON: I think that,
18 isn't that -- I mean the whole point of this,
19 the whole setup of this chapter is really
20 around the energy balance.

21 But I think there is a way -- I
22 agree there is a difference between the

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1 refined grains and the other three. I mean I
2 think there may be a way to -- and maybe if
3 there is a sense of the Committee, we should
4 separate out the refined grains in the bolded
5 section; we could separate out refined grains.

6 Certainly, in the paragraph that is
7 underneath we can talk about that they bring a
8 whole host of nutrients. So, we are not
9 talking about removing them from the diet. We
10 are talking about a modest reduction in
11 refined grains.

12 MEMBER CLEMENS: Well, Mim, maybe
13 we should go back to the basics and introduce
14 earlier about the SoFAAs, and refined grain
15 goes away.

16 MEMBER NELSON: The problem from a
17 calorie standpoint, it is a huge piece. I
18 don't know that I would be comfortable with
19 that because the point here is around
20 calories. Those are the constituents that are
21 really sort of out of order.

22 But Rafael?

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1 MEMBER PEREZ-ESCAMILLA: This is
2 Rafael Perez-Escamilla.

3 In Linda's excellent presentation,
4 she is listing as a top source of solid fats
5 grain-based desserts, cakes, cookies, et
6 cetera. It is the second source of added
7 sugars. So, this is a subgroup of products
8 made with refined grains that are contributing
9 very much to the excessive intake.

10 So, could it be said, "some
11 refined grain products," you know, to qualify
12 a little bit what you mean by refined grains?

13 MEMBER NELSON: Or "grain-based
14 desserts," which is really what the problem
15 is.

16 MEMBER ACHTERBERG: I would say
17 snacks and desserts.

18 MEMBER NELSON: Snacks and
19 desserts, yes.

20 MEMBER ACHTERBERG: I think I
21 would be happy with that. Yes, I think
22 certain --

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1 MEMBER CLEMENS: I would support
2 that as well. I appreciate Cheryl's remarks,
3 yes.

4 MEMBER ACHTERBERG: -- grain-based
5 snacks and desserts. I won't do it right now,
6 but I think maybe Naomi and I could go back,
7 fiddle with this, and then send it to the
8 Committee, if that sounds okay to the group.

9 MEMBER CLEMENS: We might want to
10 take a look at some of the snacks that are
11 coming out there, Mim. Today we have,
12 obviously, snacks that have less calories,
13 snacks with less fat and calories; now we have
14 these bioactives which the Committee did not
15 address. They actually could have a positive
16 impact on the entire health benefits of the
17 United States. We haven't talked about that
18 at all.

19 MEMBER NELSON: Maybe, but seeing
20 what children do with these smaller packages,
21 they just eat five. So, I think still the
22 debate is out.

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1 MEMBER CLEMENS: Sure, that is
2 energy issue as well.

3 MEMBER NELSON: But I am happy to
4 separate out the refined grains and talk about
5 certain snacks and dessert-based. Right.

6 CHAIR VAN HORN: Okay. I think we
7 are ready -- Larry?

8 MEMBER APPEL: Yes, Larry Appel.

9 There's one section that was in
10 our 2005 report that is not in either of these
11 two chapters, but I think is important, if we
12 are successful. That is the role of diet and
13 physical activity in reducing health
14 disparities, both for sodium, potassium,
15 dietary pattern, and if we actually deal with
16 the obesity epidemic, you are going to put a
17 dent in disparities.

18 I am wondering whether we should
19 just -- we can almost pull this section from
20 the 2005 report without a lot of, you know --

21 MEMBER PI-SUNYER: I would agree
22 with that, and I think we could pull it and

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1 even just quote it, if you want, not
2 different.

3 MEMBER NELSON: Maybe during a
4 break I can just take a look at that, but what
5 page is it on, Larry?

6 MEMBER APPEL: It is on page 9 of
7 the blue book.

8 MEMBER NELSON: Okay. I will take
9 a look, but you think that could be
10 incorporated here or in the total diet?

11 MEMBER APPEL: I am not sure. I
12 think that if we are successful with
13 implementation, you want to be able to say,
14 well, if this works, we are going to improve
15 the health and we are likely to reduce
16 healthcare disparities.

17 MEMBER NELSON: Right.

18 MEMBER APPEL: I think that is the
19 message. So, it could go here.

20 CHAIR VAN HORN: Yes, it should go
21 here I think then, given that.

22 MEMBER NELSON: Okay. Yes.

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1 MEMBER CLEMENS: Rog.

2 I really appreciate the graphic on
3 the challenges ahead. So, I am going to put
4 on my farmer's hat.

5 And freshwater, land constraints,
6 and climate change, were the top three issues
7 addressed at the summit that was held in
8 Bangkok at the end of last year, that is
9 seriously affecting our agricultural
10 production here in the United States as well
11 as importation of inferior products to the
12 United States.

13 I think if we can work together
14 with you, Mim, of course, to strengthen the
15 issues on freshwater technology, so how can we
16 reclaim some of the arable land? Salinity is
17 a big issue, of course, and we can't do
18 anything with climate change, but we need to
19 be sensitive; the cultivars that are now
20 imported, as what it is used in agriculture to
21 provide better food for tomorrow.

22 So, I will be glad to work with

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1 you on those three very strategic areas within
2 agriculture.

3 MEMBER NELSON: Well, we are not
4 saying anything more than that, that they are
5 challenges.

6 MEMBER CLEMENS: Significant
7 challenges.

8 MEMBER NELSON: Yes. I mean I
9 think these are significant challenges. They
10 are beyond our Committee. We are just stating
11 they are significant challenges.

12 CHAIR VAN HORN: Right.

13 MEMBER NELSON: We are not really
14 writing much about them because it is not us.

15 CHAIR VAN HORN: Exactly.

16 Okay. Anything else on this
17 chapter?

18 (No response.)

19 Okay. I would like to move on,
20 but before we launch into the discussion of
21 the Energy Balance and Weight Management
22 chapter, and all of the science-based

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1 chapters, I would like to circle back to what
2 I mentioned earlier in regard to providing the
3 terms used to indicate the strength of the
4 evidence, and the fact that the Committee
5 struggled somewhat with dealing with
6 recognizing this is the first evidence-based
7 report that is being produced, and the volume
8 of the review based on evidence published
9 since 2005 alone took an enormous amount of
10 time, but it did not allow us the opportunity
11 to go back to the 2005 report and review
12 everything prior in that amount of time. And
13 therefore, this report represents a transition
14 between the past and the future, and we wanted
15 very much for those who follow to be able to
16 make sense out of the review that we have
17 conducted because it will set the stage for
18 what happens from now.

19 I would like to ask Larry Appel to
20 help us a bit as we have abandoned the idea of
21 trying to come up with a number specifically.

22 We have decided to use terminology that not

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1 only represents the volume of studies that
2 have been done, or even what type of studies
3 that they have been, but takes into
4 consideration the considerable interpretation
5 and qualitative reviews that each Committee
6 member has done in preparing this report.

7 Larry, do you want to just sort of
8 amplify that?

9 MEMBER APPEL: Sure. Okay, yes.
10 This is Larry Appel.

11 I know we are pressed for time,
12 but this is really important as we go through
13 each of the chapters.

14 I think, actually, there is more
15 continuity than sort of like shifting sand on
16 this. So, while dropping the numbers, I think
17 we want to keep terminology that is
18 reasonable.

19 So, there's been some email
20 traffic on whether to truncate down to just
21 strong, moderate, and limited, which I think
22 many of us felt a bit constrained with, with

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1 just those three, and others I know have
2 agreed to it. But when I looked at the
3 conclusions again last night, I saw still a
4 lot of variability in this. In some sense, it
5 actually makes sense.

6 So, one issue is whether we can be
7 a little bit more flexible than having those
8 three terms, strong, moderate, and limited,
9 and whether we can go back -- and I can't tell
10 you how far it is back, but I did find an
11 email where we said, oh, strong, convincing,
12 persuasive, and that was Grade I, and then
13 Grade II, fair, moderate, inconsistent, and
14 Grade III, limited. I think we have also used
15 insufficient. So, that is one issue.

16 Then, I will mention the second
17 issue related to the grading that I think
18 probably many of us feel, which is that there
19 is Grade I or Grade II, but then there is
20 something in between, you know. I actually
21 saw some conclusions this time that said
22 moderately strong, you know.

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1 (Laughter.)

2 And actually, to tell you the
3 truth, I felt good about that. It actually
4 says, yes, you know, because it is not a home
5 run; it is not reaching first base. It is
6 somewhere around second or third base, you
7 know, for our baseball metaphors here.

8 So, I think that is the second
9 issue, whether we want to allow some gradation
10 between one and two. I know these came at the
11 last meeting, but I think they will frame --
12 you know, we really need to decide this before
13 we decide on these conclusions.

14 So, I will stop there.

15 CHAIR VAN HORN: Right. And as
16 the Committee knows, as we plow through the
17 rest of these chapters, we just wanted to set
18 the stage for allowing, making allowances for
19 some of these terms to be adjusted
20 accordingly.

21 So, as we go through the reports
22 and you come up with your conclusion

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1 statements, you know, the Committee as a whole
2 should look at that, especially those that
3 know the literature really well, and be able,
4 if you so choose, to modify somewhat, soften
5 somewhat, moderate somewhat these terms in
6 order to do justice to the totality of the
7 evidence as you know it. Okay?

8 Xav?

9 MEMBER PI-SUNYER: So, Larry, I
10 understood your second point, but I didn't
11 understand your first. I have no objection to
12 adding moderately strong between strong and
13 moderate, but you were a little vague on your
14 first one.

15 MEMBER APPEL: The first one is,
16 hopefully -- well, let me clarify. So, we
17 received an email yesterday that we should use
18 strong, moderate, or limited. Okay? Instead
19 of strong, just strong, have some flexibility
20 with other terms, convincing, persuasive. For
21 Grade II, instead of just moderate, we could
22 use fair.

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1 I would like to hear Rafael. I
2 know you sent an email on this point
3 yesterday. So, there might be a dissenting
4 opinion.

5 Then, I guess for Grade III there
6 was, again, some email traffic, limited, and
7 then adding the option for insufficient.

8 CHAIR VAN HORN: I have a feeling
9 as we get going this will become more
10 apparent. At this point, we are talking sort
11 of in generalities, but I think as we get into
12 the report some of this will become apparent.

13 We just sort of wanted everyone to
14 hang onto this concept that, as we go forward,
15 if adjustments to these conclusion statements
16 would help to further define exactly what the
17 level of science is, people would have the
18 prerogative to modify it. That's all.

19 MEMBER PI-SUNYER: Okay, but don't
20 we have to decide on what we are going to use
21 at the beginning or else how can we implement
22 it?

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1 CHAIR VAN HORN: That is why we
2 are making these comments now.

3 MEMBER PI-SUNYER: Oh, okay.

4 CHAIR VAN HORN: If you decide
5 that the three terms that we were limited to
6 prior to this discussion could be expanded to
7 include modifiers, if you so choose -- you
8 don't have to, but, you know, as a group, we
9 should keep these in mind as we go forward, in
10 the absence of the grading.

11 Tom?

12 MEMBER PEARSON: This is Tom
13 Pearson.

14 So, the plan is, then, to use this
15 table that was just sent around as the key for
16 interpretation of this information that will
17 appear within the document somewhere?

18 My concern goes back to something
19 that you had started with, and that is the
20 legacy of the 2010 Guidelines. A number of us
21 in the room have been working with the
22 Clinical Guidelines. They have a grade and a

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1 class of evidence. The grade is very similar
2 to the discussions we had before. The class
3 is a little different. A class IA is
4 something that is so established that we are
5 not going to go back and talk about it. The
6 science is done. This is science-based
7 practice, over.

8 And I want to make sure that
9 these, if you like, at the 2015 Guidelines
10 would have enough granularity and
11 definitiveness so that we will know what not
12 to go back to. There was a lot of new ground
13 at these Guidelines to do the evidence-based
14 with the rigor that was done. That has to be
15 preserved, so we don't do it all over again in
16 five years.

17 MEMBER NELSON: Linda?

18 CHAIR VAN HORN: Yes?

19 MEMBER NELSON: So, this is Mim.

20 I think one of the most important
21 qualifiers is you could have moderate, but
22 consistent or you could have moderate and

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1 inconsistent. I mean, you know, I think
2 consistent and inconsistent are even -- like
3 those two modifiers that go with the strong,
4 moderate or limited are perhaps equally as
5 important, because if there's moderate, it
6 means there's a few studies, but it is
7 consistent; it is going in the right direction
8 if it is moderate, but inconsistent, it is
9 sort of all over the place. You know, I think
10 that that is a modifier.

11 But I think we should try to keep
12 with the strong, moderate, and limited, but
13 maybe have qualifiers around those three, if
14 we needed it. You know, as you said, maybe it
15 is moderately strong. At least you know that
16 it is in between, and we try to use those
17 words, but we could have some flexibility
18 within those words. I don't know.

19 CHAIR VAN HORN: Yes, that's the
20 point, flexibility within the words. That is
21 exactly the point.

22 MEMBER NELSON: Yes.

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1 CHAIR VAN HORN: Okay. I think it
2 will become more apparent as we go forward,
3 and many of them will not change, but it is
4 just to allow the Committee to have some
5 flexibility if you decide that the term is too
6 strong or needs some modification.

7 With that, Xav, we would like to
8 go ahead and turn the floor over to you.

9 MEMBER PI-SUNYER: Okay. So, we
10 are starting now with the Energy Balance and
11 Weight Management. Here you see the members
12 of the Subcommittee: Rafael Perez-Escamilla,
13 Miriam Nelson, Joanne Slavin, Christine
14 Williams, and Linda Van Horn.

15 And the staff, who were enormously
16 helpful to us: Eve Essery, Kellie O'Connell,
17 Jean Altman, Julie Obbagy, and Rachel Hayes.
18 So, I want to thank them for all the work they
19 have done.

20 We will start with Dr. Nelson, who
21 is going to talk about, "What effects do the
22 food environment and dietary behaviors have on

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1 body weight?"

2 Mim?

3 CHAIR VAN HORN: Before we do
4 that, I am so sorry, I should have allowed Rob
5 to make a comment. We are going to interrupt
6 for one minute to let Rob say something.

7 DR. POST: Yes, procedurally, I
8 think it is important for the Committee
9 members to write their edits into the draft as
10 they agree upon them and raise them in the
11 draft text, in the chapters, so that we can,
12 in fact, collect them. I think you've got a
13 way to do that, and putting the pages in blue
14 folders we have given you, so that the staff
15 can, in fact, get them and then incorporate
16 the changes. So, remember that as you
17 proceed, as we begin to get into the meat of
18 this.

19 Thanks.

20 MEMBER NELSON: Thank you.

21 It is Mim Nelson here.

22 So, we did a family of questions

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1 that had not been addressed before in the
2 Dietary Guidelines. This is really because of
3 some emerging evidence around the effect of
4 the food environment. Certainly, most of the
5 dietary behaviors have been addressed before,
6 but not the food environment.

7 I will just say that, because this
8 is sort of emerging research, we were quite
9 cautious in how we looked at this. So, what
10 we focused on primarily was the use of meta-
11 analyses and systematic reviews. Also, when
12 you are talking about the environment, there's
13 so many different factors, that it is hard to
14 look at just one thing.

15 So, next slide, please.

16 Very quickly, an emerging body of
17 science has documented the impact of the food
18 environment on select behaviors of body weight
19 in both children and adults.

20 This is where I would love to have
21 a qualifier, Larry, because this was that
22 there is consistent, strong evidence. I think

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1 it probably is that it is moderately strong
2 evidence now indicates that the food
3 environment is associated with dietary intake,
4 especially less consumption of vegetables and
5 fruits and higher body weight.

6 The presence of supermarkets in
7 local neighborhoods and other sources of
8 vegetables and fruits are associated with
9 lower body mass index, especially for low-
10 income Americans, while lack of supermarkets
11 and long distances to supermarkets are
12 associated with higher body mass index.

13 Finally, there is limited, but
14 consistent evidence that suggests that
15 increased geographic density of fast food
16 restaurants and convenience stores is also
17 related to increased body mass index. This
18 comes up in a different question that we
19 address a little bit later.

20 Next slide.

21 So, in terms of behaviors, that
22 was the sort of overall. When we look at

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1 this, there's strong, consistent evidence that
2 indicates that children and adults who eat
3 fast food are at increased risk of weight
4 gain, overweight, and obesity. The strongest
5 documented relationship between fast food and
6 obesity is when one or more fast food meals
7 are consumed per week. There's not enough
8 evidence at this time to similarly evaluate
9 eating out at other types restaurants and risk
10 of weight gain, overweight, and obesity.

11 This built upon the 2005
12 Guidelines. There is strong evidence that
13 documents a positive relationship between
14 portion size and body weight.

15 Strong and consistent evidence in
16 both children and adults shows that screen
17 time is directly associated with increased
18 overweight and obesity. The strongest
19 association is with television screen time.

20 Then, strong evidence shows that,
21 for adults who need or desire to lose weight
22 or who are maintaining body weight following

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1 weight loss, that self-monitoring of food
2 intake improves outcomes.

3 Next slide.

4 There's moderate evidence to
5 suggest that children who don't eat breakfast
6 are at increased risk of overweight and
7 obesity. The evidence is stronger for
8 adolescents. There is inconsistent evidence
9 that adults who skip breakfast are at
10 increased risk for overweight and obesity.

11 Some of this was snacking and
12 breakfast. A lot is around the definitions of
13 which, I think that is something that needs to
14 be improved, and I think we would have better
15 research to address this question.

16 And there's limited and
17 inconsistent evidence suggesting that snacking
18 is associated with increased body weight.
19 Most of this, I believe, is because the
20 definitions of snacking were so different, and
21 that was a real problem.

22 And the evidence is insufficient

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1 to determine whether frequency of eating has
2 an effect on overweight and obesity in
3 children and adults.

4 Next slide.

5 Any questions?

6 And I didn't talk about the
7 implications. I just say globally it was more
8 like with breakfast, you know, you should
9 choose wisely and eat healthy foods for
10 breakfast, and when snacking, choose healthy
11 foods and stay within your calorie limits, and
12 that eating at fast food restaurants was, if
13 you do, choose the lower-calorie options and
14 smaller portions. So, those are just sort
15 some of the global implications.

16 So, open for questions.

17 MEMBER CLEMENS: Go ahead, Xav.

18 MEMBER PI-SUNYER: No, you go
19 ahead.

20 MEMBER CLEMENS: Oh, okay. This
21 is Rog.

22 I appreciate the graphics,

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1 particularly the third or fourth one there,
2 Mim, where you talked about energy balance and
3 weight management relative to the availability
4 of the food supply as you look at
5 supermarkets.

6 We did a study in Los Angeles, a
7 little community out there on the west side of
8 the country, where we brought in fruits and
9 vegetables to communities that were really
10 underserved and in an attempt to provide them
11 with other foods, as you pointed out so
12 nicely. The reality in that study
13 demonstrated that the people didn't want them.

14 For whatever reasons, they would have the
15 citrus, they would have blueberries or
16 blackberries, but they chose not to purchase
17 those foods. As a result, the supermarket
18 said, "I can't afford to keep these foods in
19 our inventory," and therefore, went back to
20 their routine of other kinds of foods.

21 I think there is a serious
22 challenge there to provide education and

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1 benefits. A variety of cultures, I think
2 Cheryl made a comment about the diversity
3 earlier this morning. Now we tried to embrace
4 the different cultures since there were these
5 fruits and vegetables, the kinds of foods that
6 we were trying to support in these underserved
7 populations in particular, so that they see
8 how important it is relative to their health.

9 MEMBER PEREZ-ESCAMILLA: This is
10 Rafael.

11 I just want to mention, you know,
12 a very big barrier, Roger, has been the
13 inability for people to be able to use their
14 Food Stamps, which now is, you know, the SNAP
15 benefits. The EBT system, the technology and
16 the adoption by farmers' markets, and so on,
17 is really still at early stages.

18 The Federal government is coming
19 up with a national pilot program called HIP,
20 Health Incentive Project, to give a fiscal
21 incentive for individuals who use their Food
22 Stamps to purchase fruits and vegetables.

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1 So, I think there is still a lot
2 that we don't know about, but my
3 interpretation, after working for so many
4 years with low-income communities, is not that
5 they don't want fruits and vegetables. It is
6 an issue of the types of fruits and
7 vegetables, as you mentioned, but it is also
8 an enormous issue of access and affordability.

9 The WIC program is also moving
10 very rapidly and very actively with
11 disbursement of vouchers that can be exchanged
12 at farmers' markets.

13 I would say that, in my mind, a
14 big priority is really to try to support more
15 of the research that is needed to better
16 understand how to motivate more low-income
17 families to purchase and prepare in a healthy
18 way fresh fruits and vegetables and other
19 products.

20 MEMBER PI-SUNYER: So, Mim, maybe
21 that should be under your challenges.

22 MEMBER NELSON: It is.

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1 MEMBER PI-SUNYER: Yes.

2 MEMBER NELSON: Sorry. It is at
3 the top line of the Integration chapter, is
4 exactly that. I mean that was the top line.

5 There are some great successes at
6 bringing in vegetables and fruits into urban
7 areas. There are some not-so-great successes.

8 I think we need to learn about that. I think
9 the price incentive needs to be changed.

10 But that is the top bullet in the
11 Integrated chapter.

12 MEMBER PI-SUNYER: Okay, I have a
13 comment on your third slide where you have
14 "There's not enough evidence...." Since we go
15 to what Larry's suggestion is, do you want to
16 change that to sufficient --

17 MEMBER NELSON: Can you just tell
18 me which topic it is? Sorry.

19 MEMBER PI-SUNYER: Conclusions,
20 Dietary Behaviors. Oh, you have it
21 insufficient. That is not the way it is in
22 mine. Okay, you have it already.

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1 MEMBER NELSON: Yes, I worked on
2 these slides this morning.

3 MEMBER PI-SUNYER: Okay.

4 MEMBER NELSON: So, what you might
5 have in here may be different.

6 MEMBER APPEL: Larry Appel.

7 This has been great.

8 I had just an issue or it is a
9 comment/issue. In the Total Diet chapter, it
10 says, "self-monitoring of calorie intake and
11 physical activity for weight control". Are we
12 recommending that for the general population?

13 Because your slides here really focus on what
14 many of us do, which is among people who are
15 trying to lose weight and sustain weight loss.

16 Because I think measuring calorie
17 intake is a very big deal and very difficult
18 for people to do. And I'm thinking, well,
19 what about just measuring weight, you know,
20 among people who are not overweight yet, a
21 small population right now, hopefully, getting
22 bigger.

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1 But could you comment on that
2 because I think I have, there is a bit of a
3 disconnect if we --

4 MEMBER NELSON: Yes. So, I think
5 there is a bit of a disconnect. It is
6 interesting you brought it up.

7 So, the evidence is certainly the
8 strongest, and we only looked at for this
9 question for people who needed to lose weight
10 or had lost weight and needed to maintain that
11 weight loss. I think that we have certainly
12 stretched the evidence. When we talk about
13 the general population in the Integration
14 chapter, I think that probably we could have a
15 lively debate on whether we think everybody
16 should know what their calorie needs are.

17 I have to say that there is a part
18 of me not with the people who need to lose
19 weight and monitor after weight loss, but I am
20 concerned that we may be setting the stage for
21 some unintended consequences with knowing your
22 calorie needs. There is some weird stuff that

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1 goes on when people, you know, they exercise,
2 and then if they know exactly how many
3 calories they exercise for, they think they
4 can eat so many more calories. Like there are
5 some tricky parts here that we haven't tested
6 out.

7 I do think that there is certainly
8 a lot of need for better labeling that is
9 really clear, so people understand calories
10 much better. I don't want to go back, but in
11 terms of the general population and the
12 evidence about knowing their calories, I think
13 they should. I think it is part of nutrition
14 education.

15 I think we need to figure out how
16 we don't get people obsessed and start having
17 weird stuff going on, but at the same time
18 they need to understand, when they get that
19 package of something, they are actually
20 getting 800 calories, or when they are having
21 that drink, they are getting 800 calories. I
22 think we need to have more of that.

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1 So, I haven't quite answered your
2 question, but it is a really important one.

3 MEMBER PI-SUNYER: I think we need
4 to have it in there. I think self-monitoring
5 is a pretty broad statement. What it relates
6 to is getting rid of unconscious eating.

7 MEMBER NELSON: Yes.

8 MEMBER PI-SUNYER: And I think
9 Americans do an enormous amount of unconscious
10 eating.

11 MEMBER NELSON: Yes.

12 MEMBER PI-SUNYER: And given the
13 portion sizes and everything else, people have
14 to be restrained. And the only way they will
15 be restrained is with self-monitoring. So, I
16 don't think there is anything wrong with
17 keeping that in there. I think it is a
18 message we need to get across. We need
19 conscious eating in this country, instead of
20 unconscious eating.

21 MEMBER NELSON: Yes.

22 CHAIR VAN HORN: Exactly. If this

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1 group will remember, we had an excellent
2 presentation by Brian Wansink on mindless
3 eating. And mindless eating is what
4 contributes to excessive energy intake. The
5 only way you can combat mindless eating is to
6 put some mind to it. That requires
7 monitoring.

8 As Xav just pointed out, I think
9 that there is the type of very deliberate
10 monitoring that one would do if they were
11 trying to lose weight and, in fact, really
12 come up with this energy deficit that we know
13 is required in order to lose weight, but there
14 is another monitoring that we are advocating
15 now for the first time, that people everywhere
16 who are all at risk of overweight and obesity
17 do in terms of putting together how many
18 calories they need for the day and how many
19 calories are in that food substance that they
20 are about to purchase or consume.

21 You can't have one without the
22 other. Just knowing how many calories is in

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1 something and not knowing how many that
2 reduces from your total allotment for the day
3 is meaningless.

4 So, I think our goal is exactly
5 that. It is both. It is combining the
6 behavior of self-monitoring at various
7 gradations of intensity to help elaborate or
8 explain how energy balance works.

9 MEMBER NELSON: Larry? Oh,
10 Cheryl?

11 MEMBER ACHTERBERG: Recognizing,
12 just as you said, Linda -- Cheryl
13 Achterberg -- that taken to the extreme, the
14 person becomes obsessive that this can lead to
15 very serious eating disorder. I think we have
16 to acknowledge extremes can be dangerous to
17 health as well.

18 MEMBER NELSON: Larry?

19 MEMBER APPEL: I just want to
20 follow up on what Linda said. I think we
21 really, then, need to make the distinction
22 between calorie monitoring that we advocate in

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1 clinical trials for overweight versus this
2 gradation because it does not come across.

3 The second thing is --

4 MEMBER NELSON: Sorry, Larry.
5 Does it not come across in the Integration?
6 This is very focused on people that need to
7 lose weight, this question. But in the
8 Integration chapter, it is more around people
9 need to know their calorie intake and to be
10 able to understand that better. So, there's
11 two different pieces.

12 MEMBER APPEL: Yes, it is that
13 piece that is actually in the whole diet
14 chapter. But there is actually a big
15 implication to this that I think we might want
16 to add, and I know this is going back.

17 It is that, if you are going to
18 monitor yourself calories, you have to have
19 the calorie information available. So, this
20 actually is a reason for a statement on making
21 calorie intake available at point of purchase
22 or point of consumption.

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1 MEMBER NELSON: And that is in the
2 integrated chapter. There is a lot on that.

3 MEMBER APPEL: Okay.

4 MEMBER NELSON: Point of purchase,
5 whether it is restaurant food, whether it is
6 retail, whatever, we have a lot about better,
7 clear labeling, I think, and the nutrition
8 literacy that goes with understanding that.

9 Yes?

10 MEMBER PI-SUNYER: Okay. Can we
11 go on to Rafael?

12 MEMBER PEREZ-ESCAMILLA: Thank
13 you, Xavier.

14 And the first question that I am
15 going to address is, "What is the relationship
16 between maternal weight gain during pregnancy
17 and maternal child health?" The conclusions
18 that I am going to present right now are
19 derived from the 2009 Gestational Weight Gain
20 Guidelines IOM report.

21 The Committee had agreed that,
22 whenever we used authoritative reports as the

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1 main source of evidence, we were not going to
2 grade them. That is why you don't see any of
3 the strong, moderate, limited language in
4 here, but, obviously, this is something I am
5 more than open to discussion.

6 Maternal weight gain during
7 pregnancy outside the recommended ranges is
8 associated with suboptimal maternal and child
9 health. Women who gain weight excessively
10 during pregnancy retain more weight after
11 delivery, are more likely to undergo a
12 cesarean section and to deliver large-for-
13 gestational-age newborns. And their offspring
14 may be at increased risk of becoming obese
15 later on in life.

16 Women who gain weight below
17 recommendations are more likely to deliver
18 small-for-gestational-age newborns. These are
19 also more likely to be programmed to develop
20 certain chronic diseases later on in life.

21 The second question that I am
22 going to address is, what is the relationship

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1 between breastfeeding and maternal postpartum
2 weight change? The conclusion is that a
3 moderate body of consistent evidence shows
4 that breastfeeding may be associated with
5 moderate maternal postpartum weight loss.
6 However, this weight loss is small, transient,
7 and depends on breastfeeding intensity and
8 duration.

9 MEMBER PI-SUNYER: Okay. Any
10 questions or comments for Rafael?

11 (No response.)

12 Okay. Then, we go on to the other
13 ones.

14 Christine?

15 MEMBER WILLIAMS: This is a family
16 of questions related to dietary intake
17 associated with childhood adiposity.

18 Moderately-strong evidence from
19 recent prospective cohort studies that
20 identify plausible reports of energy intake
21 support a positive association between total
22 energy (caloric) intake and adiposity in

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1 children.

2 Moderately-strong evidence from
3 methodologically-rigorous longitudinal cohort
4 studies of children and adolescents suggests
5 that there is a positive association between
6 dietary energy density and increased adiposity
7 in children.

8 Moderate evidence from prospective
9 cohort studies suggests that increased intake
10 of dietary fat is associated with greater
11 adiposity in children.

12 Strong evidence supports the
13 conclusion that greater intake of sugar-
14 sweetened beverages is associated with
15 increased adiposity in children.

16 Limited and inconsistent evidence
17 suggests that, for most children, intake of
18 100 percent fruit juice is not associated with
19 increased adiposity when consumed in amounts
20 that are appropriate for age and energy needs
21 of the child. However, intake of 100 percent
22 juice has been prospectively associated with

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1 increased adiposity in children who are
2 overweight or obese.

3 A limited body of evidence from
4 longitudinal studies suggests that greater
5 intake of fruits and/or vegetables may protect
6 against increased adiposity in children and
7 adolescents.

8 Limited and inconsistent evidence
9 exists to support the hypothesis that intake
10 of calcium and/or dairy (milk and milk
11 products) may play a role in regulating
12 adiposity in children and adolescents.

13 And finally, insufficient evidence
14 exists to support the hypothesis that dietary
15 fiber is protective against increased
16 adiposity in children.

17 If I could go back one, the next
18 one, if I could change the calcium one, it is
19 really limited and inconsistent evidence does
20 not support the hypothesis that intake of
21 calcium and/or dairy (milk and milk products)
22 may play a role in adiposity in children and

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1 adolescents. That wording had gotten changed
2 slightly.

3 MEMBER NELSON: But, Christine --
4 this is Mim -- that is the only one that I
5 have a question on. I don't think it is
6 limited. Isn't it pretty -- I mean there's
7 moderate evidence or there's strong evidence
8 that there is no relationship. I don't think
9 it is limited.

10 MEMBER WILLIAMS: That was the
11 thing, and using that word "limited", it
12 didn't quite fit here. I think it's --

13 MEMBER NELSON: Because you could
14 have strong evidence that something is not
15 related.

16 MEMBER WILLIAMS: It is
17 insufficient and it is mixed or inconsistent.

18 MEMBER NELSON: So, there is not
19 much evidence?

20 MEMBER WILLIAMS: It's mixed, but
21 on the whole it does not support the
22 hypothesis.

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1 MEMBER NELSON: But it's mixed is
2 one thing. Is there not much research in this
3 area?

4 MEMBER WILLIAMS: No, there was a
5 fair amount of research. It was about 17
6 studies, but eight of the 17 showed no
7 association and five of them did show a
8 protective --

9 MEMBER NELSON: It sounds like it
10 is moderate. To me, it would be there is
11 moderate evidence that there is no
12 association. That is how I would look at that
13 data, but I defer to others.

14 MEMBER WILLIAMS: It was mixed or
15 eight that showed no and, again, five that did
16 show some protective. So, it was mixed, but
17 leaning towards --

18 MEMBER NELSON: And the better,
19 there wasn't any difference between the
20 better-designed studies or not?

21 MEMBER WILLIAMS: Not so much.
22 And then there were three review articles that

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1 didn't feel that the evidence was strong
2 enough to support it.

3 MEMBER PI-SUNYER: Christine, the
4 question is whether it really is not limited,
5 but you got quite a few articles. You got 18,
6 you said? But it is inconsistent --

7 MEMBER WILLIAMS: That is the
8 thing. It is not really limited.

9 MEMBER PI-SUNYER: So, it is
10 inconsistent, but not limited?

11 MEMBER WILLIAMS: It is more
12 inconsistent.

13 MEMBER PI-SUNYER: So, maybe you
14 should drop "limited" there and just put
15 "inconsistent evidence".

16 MEMBER WILLIAMS: That would fit,
17 "inconsistent". "Inconsistent evidence does
18 not support the hypothesis."

19 MEMBER NELSON: But, then, I think
20 you would say there is moderate evidence to
21 say that there's -- we are wordsmithing, but
22 it is like there is a moderate amount of

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1 evidence, but it is inconsistent. That is
2 probably --

3 MEMBER WILLIAMS: Yes.

4 MEMBER PEREZ-ESCAMILLA: This is
5 Rafael Perez-Escamilla.

6 MEMBER WILLIAMS: But again using
7 that word "moderate", we are saving that for
8 Grade II, which --

9 MEMBER NELSON: But 17 studies
10 sounds --

11 MEMBER PEREZ-ESCAMILLA: Yes,
12 Christine, this is Rafael here.

13 But wouldn't the theory of meta-
14 analysis exactly would predict that? That if
15 there is no relationship and you are doing a
16 number of studies in different samples, some
17 will give you a result in one direction and
18 others in the other; when you take the
19 average, there is no effect, no relationship?

20 I mean, because it does seem this
21 is a very important distinction because
22 presenting it as insufficient, if I was a

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1 funding agency, I would interpret that as I
2 need to fund more of these studies.

3 MEMBER WILLIAMS: It is more
4 inconsistent.

5 MEMBER PEREZ-ESCAMILLA: Right,
6 but it is inconsistent because there is no
7 relationship probably. If the studies are of
8 good quality and on average are telling you
9 there is no relationship, then there is no
10 relationship, even though some individual
11 studies go in one direction and others in the
12 other.

13 MEMBER WILLIAMS: There were more
14 studies that showed no association than there
15 were that showed a protective association, but
16 there were some on both sides.

17 MEMBER PEREZ-ESCAMILLA: So, if
18 you take the average, it is probably going to
19 be no association, right?

20 MEMBER WILLIAMS: A preponderance
21 of evidence --

22 MEMBER APPEL: Does not show a

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1 relationship.

2 MEMBER NELSON: That sounds like,
3 the preponderance of the evidence --

4 MEMBER WILLIAMS: The
5 preponderance of the evidence does not support
6 the hypothesis?

7 MEMBER NELSON: Yes, does not
8 support the relationship.

9 Are you writing that down?

10 MEMBER PI-SUNYER: Yes, go ahead,
11 Eric.

12 MEMBER RIMM: All right, this is
13 Eric Rimm.

14 Linda knows I was going to bring
15 this up, but I am still concerned about the
16 very strong hypothesis or the very strong
17 conclusion that you have about fat, dietary
18 fat and obesity in children, because it is
19 exactly opposite to what we are saying among
20 adults. So, I think that if there is to be a
21 message here, it should be a very strong
22 message.

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1 Before Under Secretary Concannon
2 left, he caught me outside during the fire
3 drill, as he caught everybody and said hello
4 to everybody, and he said that our work here
5 is very important and he was going to the Hill
6 to advocate for more money for the WIC
7 program. The way the WIC program is set up
8 and the advice and the food they give is based
9 on the IOM Report and the Dietary Guidelines.
10 I feel pretty strongly about the dietary fat
11 one.

12 I appreciate the incredible amount
13 of hard work that has been done. And
14 actually, Chris, you were the first person
15 that we put up on the pedestal because the
16 first presentation you made nine months ago
17 was incredibly detailed with a lot of hard
18 work and a lot of reading that went into the
19 fruits and vegetables or the first one you
20 looked at.

21 But I took the chapter and looked
22 at the 16 studies that showed a positive

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1 association and the 10 studies that didn't. I
2 am quite concerned about the quality of the
3 studies that we are using to support this
4 hypothesis.

5 One of them was cross-sectional.
6 Three of them, I think, actually, were the
7 same study. The largest study is a study from
8 China, where they actually were not looking at
9 kids gaining weight, but already looking at
10 obese kids. About 8 percent of the study was
11 obese kids and looking at who stayed obese and
12 who didn't. All the other studies were in the
13 range of 40 to about 200 people, and without
14 exception, not a single one of them controlled
15 for sugar-sweetened beverages or fruits and
16 vegetables. The two other points that you
17 made are associated with adiposity. So, I am
18 quite concerned.

19 Then, I looked at the 10 studies
20 that did not support that hypothesis and I
21 thought that, actually, many of them were much
22 better quality and, to me, would support the

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1 hypothesis that there is not an association
2 between dietary fat and greater adiposity.
3 Because I am worried that, with this
4 conclusion, there will be new WIC guidelines
5 or there will be new school lunches that will
6 focus on low-fat diets. I think in the
7 population of children over the last 30 years
8 we have seen that low-fat diets lead to weight
9 gain.

10 MEMBER WILLIAMS: Well, I think we
11 are basically recommending that children
12 consume fat within the recommended ranges. We
13 are emphasizing that saturated fat be reduced.

14 But there were more studies in the
15 dietary fat question than any of the other
16 questions on dietary intake. We were relying
17 on the evidence already presented by the
18 American Dietetic Association for the earlier
19 studies, which we didn't rereview.

20 So, again, there were --

21 MEMBER RIMM: There were a lot of
22 studies.

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1 MEMBER WILLIAMS: There were a lot
2 of studies; 16 of them.

3 MEMBER RIMM: I am worried about
4 the quality of the studies.

5 MEMBER WILLIAMS: Sixteen of the
6 27 studies did show positive association. And
7 again, overall, it seemed to support the
8 conclusion. Again, we didn't rereview all the
9 ADA studies. This was combined. We are
10 building on that review.

11 MEMBER PI-SUNYER: So, Joanne
12 wants to add something here.

13 (Laughter.)

14 MEMBER SLAVIN: How could you
15 tell? How could you tell?

16 Joanne Slavin.

17 I agree with Eric. I think that
18 fat -- and I just wanted to mention that
19 there's a lot of conflict with this with what
20 we have in our chapter, too. It is going to
21 be difficult to sort that out.

22 Some of the ones like fiber, you

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1 know, you have a really low grade for fiber,
2 and I know there's very little data. That is
3 inconsistent.

4 Sugar-sweetened beverages, we have
5 a real inconsistency there. A lot of the
6 studies -- we got rid of cross-sectional
7 studies. So, we come up with a very different
8 conclusion.

9 And I also think that the calcium
10 and dairy question is also in our chapter, and
11 we get a different conclusion. I think that
12 the calcium and the dairy is very confusing in
13 that.

14 So, I am concerned about that this
15 chapter and this review is inconsistent with
16 some of the other things. I am sure it is
17 essentially what Eric is talking about in fat,
18 too.

19 MEMBER PI-SUNYER: Yes, Tom?

20 MEMBER PEARSON: I think one way
21 to maybe rationalize some of these differences
22 is that we did a lot in the Fatty Acid and

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1 Cholesterol section by very strictly talking
2 about isocaloric changes. So, one of the real
3 questions in those 26 studies -- you have
4 juxtaposed slides here. No one is arguing
5 about total energy intake and adiposity in
6 children. Okay? No one is arguing about
7 that. Okay?

8 So, above that, the juxtapose of
9 this other slide is, is dietary fat associated
10 with adiposity above that of the recognized
11 calories? I think it has been our position,
12 just to support what Eric was saying, that it
13 is about the calories. It is about the
14 calories.

15 Now fat is, of course, the most
16 easy way to get calories, but to identify this
17 as the only way out, it is not because, if
18 calories are controlled, particularly with the
19 exchanges that we were talking about in the
20 dietary fat with exchanges for monounsaturated
21 fats and polyunsaturated fats, is a healthier
22 way, even within the fat category, in terms of

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1 metabolic effects.

2 So, I am wondering if you could
3 look at this in terms of the moderate evidence
4 talking about this control for your previous
5 slide, and that is total dietary energy.

6 MEMBER RIMM: Yes, I think that
7 the studies that did not find an association
8 found an association for total energy and TV
9 watching. That is the reason why they didn't
10 find an association for fat.

11 So, that is what I did last night
12 and the day before, is go through these 26
13 studies, because I really feel that we would
14 do a disservice if institutionalized feeding
15 then went to saying something that was
16 different than what we are feeding adults.
17 This is a pretty strong conclusion. It does
18 say dietary fat is associated with adiposity.

19 I think the accepted range is
20 whatever, 25 to 35 for children. I think this
21 is implying that dietary fat, I know it leads
22 to calories, but you are saying that dietary

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1 fat, essentially, independent of these other
2 conclusions, leads to adiposity, and I don't
3 think that is the case, based on my --

4 MEMBER WILLIAMS: But I think we
5 should also remember that a significant
6 proportion of children are above the
7 recommended range. That probably is about a
8 third of children who are above that 35
9 percent.

10 MEMBER RIMM: Oh, I agree
11 completely.

12 MEMBER WILLIAMS: Of course, the
13 saturated fat intake in that group is also
14 very high.

15 MEMBER RIMM: Right.

16 MEMBER WILLIAMS: I think, also,
17 we were emphasizing that we want to decrease
18 the SoFAS, and total fat is a big part of
19 that. So, there are a lot of different parts
20 of this, but we do want to address childhood
21 obesity and high caloric intake. Dietary fat
22 is very caloric intake, and --

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1 MEMBER PI-SUNYER: Yes. Well, in
2 the implications, you do say --

3 MEMBER WILLIAMS: And one-third of
4 our children are consuming too much.

5 MEMBER PI-SUNYER: In the
6 implications, you do say total fat intake
7 should not exceed the IOM acceptable ranges.

8 MEMBER WILLIAMS: And at the
9 present time, a third of our children do and
10 are at risk of overconsuming calories. So, I
11 think there's different sides of this.

12 CHAIR VAN HORN: I have to admit,
13 and I will just weigh-in on this one as well,
14 because I totally appreciate what was said. I
15 do think that the quality of the studies does
16 need to be reviewed accurately and
17 consistently across all these different
18 chapters. We can't single out this particular
19 topic in this particular chapter and talk
20 about the data as not matching up, if we don't
21 consistently do that in every single issue.

22 I think there's a couple of things

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1 that we need to get very clear. One is that
2 no one is recommending a low-fat diet. Thirty
3 percent of calories from fat is not a low-fat
4 diet. And the idea of having a range between
5 25 and 35 percent is certainly reasonable.
6 That is what the AMDR is, and that makes total
7 sense.

8 But we can't, on one hand, talk
9 about reducing the SoFAS, recognizing that 35
10 percent of the total caloric intake of our
11 children now comes from added sugars and fats,
12 above and beyond what their required nutrient
13 intake is, without making some comment about
14 the need to reduce those foods or those
15 sources of calories that are in excess of what
16 their nutrient needs are.

17 So, I think we are all in
18 agreement with the emphasis on reducing
19 excessive calories. I think we need to
20 remember that those excessive calories are
21 coming from certain kinds of foods, which we
22 have already identified.

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1 But to be able to do justice to
2 the literature that is currently available
3 that Christine has spent hours and hours
4 evaluating and providing us with this summary
5 statement, I think we just, once again, need
6 to decide whether we need to moderate perhaps
7 the emphasis on it, but the data are the data.

8 So, to be able to come up with a statement
9 that we can agree reflects what the data show,
10 as well as implications, then, for what that
11 means in terms of the translation is what we
12 are about in terms of this discussion today.

13 Tom?

14 MEMBER PEARSON: I mean the data
15 being the data, we have strong, consistent
16 evidence in adults that a replacement of
17 saturated fats with carbohydrates is an
18 inferior option to replacing it with
19 monounsaturated and polyunsaturated fats.

20 CHAIR VAN HORN: We do for lipids,
21 but --

22 MEMBER PEARSON: Isocalorically.

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1 CHAIR VAN HORN: Okay,
2 isocalorically.

3 MEMBER PEARSON: No, that is what
4 I said, is that this is the point of my
5 comments: when we wrote something, everything
6 was said upfront; this is all isocaloric
7 substitutions. We are not adding anything.
8 We are substituting things. That has to be
9 really out in front. And this is the concern
10 with these 26 studies.

11 So, the literature being the
12 literature, we have Grade 1A evidence on the
13 old system, strong, consistent evidence for
14 this isocaloric. So, we, obviously, are
15 pretty much at a loggerhead compared to the 26
16 studies, 10 of which, obviously, support that
17 it is not the fat; it is the calories, and 16
18 others. So, that is the problem.

19 CHAIR VAN HORN: Yes.

20 MEMBER WILLIAMS: And we are not
21 recommending that this be replaced totally
22 with carbohydrates. We haven't made any

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1 recommendations like that.

2 MEMBER PI-SUNYER: Yes, the
3 recommendation is not to increase calories by
4 increasing carbohydrates. It is to keep the
5 fat below 35 percent.

6 MEMBER RIMM: That is not what the
7 conclusion says. The conclusion says that
8 there is evidence out there saying that fat
9 causes obesity. And I would argue that the
10 evidence is weak, and a lot of them are poorly
11 done because the studies are so small, that is
12 all they can do. I understand it is hard to
13 study kids. But if you are comparing this to
14 the evidence we had for milk, I would put this
15 in the same thing. If giving this to an
16 independent person, in looking at this, they
17 would say it is inconsistent; I can't make a
18 conclusion from this because the studies are
19 too small.

20 MEMBER WILLIAMS: But you said 40
21 to 200 subjects. I mean that is not exactly
22 small.

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1 MEMBER RIMM: No, I just think
2 that --

3 MEMBER WILLIAMS: We have our
4 inclusion/exclusion criteria, and we set the
5 number of subjects that --

6 MEMBER NELSON: This is Mim.

7 MEMBER RIMM: If you don't control
8 for TV, then --

9 MEMBER NELSON: Yes, you don't
10 control for calories or TV, I mean all of
11 those. I mean I think there are several
12 questions that we are going to deal with today
13 that need to have in their conclusions a
14 little bit more framing, more than just like
15 the very narrow focus of we looked at this and
16 this is what we saw. Because, yes, we
17 describe it underneath, and you get more into
18 the details, but I think there are several
19 questions where, if we don't frame it, we are
20 contradicting ourselves.

21 This would be one of those
22 questions where I think that we need a little

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1 bit more text that sort of puts it into
2 context. And therefore, then, it is true to
3 the science, but it also puts it into context.

4 That would just be my suggestion.

5 From what I am hearing, it sounds
6 like there is more inconsistent evidence
7 because of the nature of the diversity of the
8 studies, but it also might be that it may be
9 more related not to the dietary fat per se,
10 but to excess calorie intake.

11 MEMBER WILLIAMS: I don't think
12 you can make that conclusion, though. I think
13 like many of the areas where you are looking
14 at the studies, many of the studies are better
15 controlled than others, and many of them did
16 control for physical activity. So, I don't
17 think you can make a blanket statement that
18 they ignored that.

19 MEMBER SLAVIN: This is Joanne,
20 though.

21 I agree with Eric that the way
22 that this sorts out is very troubling because

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1 I think the milk, with him, I think that the
2 data is probably equally good, and it comes
3 out really, you know -- and if I look at the
4 calcium and dairy, in our review it is pretty
5 mixed calcium versus dairy.

6 It is kind of this whole food
7 versus nutrient where we struggle here, that
8 when we ever isolate a nutrient or a group, we
9 tend to make the wrong conclusion because we
10 focus on one thing. When we have these grades
11 here that are really difficult, because I
12 could see, I agree with Eric that somebody
13 would say, okay, well, dietary fat has to go
14 in children, I mean just based on that, as far
15 as obesity. And we don't want that to be
16 interpreted, and we all believe that, but if
17 it is on a piece of paper, it is risky for us.

18 MEMBER WILLIAMS: But we are not
19 saying that dietary fat has to go in children.

20 We are saying that we recommend that children
21 consume dietary fat within the recommended
22 ranges. And the fact is that a third of the

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1 children do not consume it within the
2 recommended; they are over.

3 MEMBER PI-SUNYER: Well, maybe
4 instead of having that in the implications, as
5 Mim suggests, you might have that in the
6 conclusion, part of the conclusion, that you
7 want to keep within the IOM guidelines.

8 MEMBER WILLIAMS: We could expand
9 that to include that.

10 CHAIR VAN HORN: Yes, that would
11 help, I think, to just provide it within the
12 context. Again, I don't think any of us are
13 disagreeing with what the issue is as much as
14 how to present it in a way that is fair to the
15 literature review, but also consistent within
16 the body of the report.

17 The only other thing I will say in
18 the case of what you were describing, Tom, as
19 far as the adult literature, one of the
20 things, even in the adult literature, is the
21 avoidance or just plain insufficient
22 documentation of the type of carbohydrate that

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1 was consumed. Often the reports -- and I am
2 familiar with that literature -- totally
3 ignore issues such as complex carbohydrates or
4 dietary fiber.

5 All carbohydrate is not created
6 equally. So, if you substitute for total fat
7 refined carbohydrates, yes, I can imagine that
8 is going to have some adverse consequences in
9 terms of cardiovascular risk. As far as
10 calories being calories, I think that is
11 pretty well-documented. Frank Sacks'
12 presentation and the POUNDS LOST study I think
13 are a landmark trial as far as that goes.

14 So, I think all we are trying to
15 do now is be consistent in both the reviews
16 that we are providing and the conclusions that
17 we are stating with the recommendations that
18 we are making on the basis of those that fit
19 within these guidelines that we are trying to
20 develop.

21 But I don't think you can talk
22 about dietary fat and carbohydrate without

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1 including the qualitative nature of both of
2 those, actually. You know, there is no
3 biologic requirement for saturated fat. Yet,
4 we allow it because people like to eat animal
5 products.

6 The carbohydrate issue is one that
7 relates, again, as we said, to the complexity
8 of the carbohydrate, the fiber that is
9 involved, but also in our diet the recognition
10 that refined carbohydrates are where the
11 fortification takes place.

12 So, somehow we are grappling as
13 best we can with all those competing
14 priorities.

15 Tom?

16 MEMBER PEARSON: But I think that
17 is a place for our research recommendation.
18 Because as you take the literature, the
19 hypothesis put forward was carbohydrate as a
20 substitution for fat, as a substitution for
21 mono- and polyunsaturated fats. So, that is a
22 further clarification, but not a condemnation

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1 because the science that was put forward
2 tested the hypothesis in a straightforward
3 way. So, these are some issues.

4 But if you look at the NEL search
5 terms and everything, they said it was
6 straightforwardly identified as the study
7 informing this body. We took that as the
8 evidence as such. And that is Class 1A
9 evidence, right.

10 MEMBER NELSON: Chris, one quick
11 question: were there any trials where they
12 actually did control calorie intake or they
13 literally kept that constant and they saw that
14 dietary fat contributed to obesity rates?

15 MEMBER WILLIAMS: Well, these were
16 primarily epidemiological studies and not
17 randomized controls trials, yes. So --

18 MEMBER RIMM: There was one trial,
19 but by the time they got to the intervention
20 versus the control, there was only 2 percent
21 of energy difference.

22 MEMBER NELSON: No difference?

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1 MEMBER WILLIAMS: Yes.

2 MEMBER RIMM: They didn't find any
3 difference, not too surprisingly.

4 MEMBER NELSON: Yes.

5 MEMBER WILLIAMS: There was just
6 one trial in the whole thing, you know.

7 CHAIR VAN HORN: Okay. Well, in
8 the interest of time, we knew going into this
9 day that there would be some topics that still
10 would require some additional discussion. I
11 think at this point we have pretty much
12 fleshed this one out.

13 I think what we will do is add
14 this to a list that will need to have further
15 attention drawn to it. And again, given our
16 truncated time today, I think this will be one
17 of those topics on the list that we will have
18 to as a group come up with consensus on the
19 way that should be stated. I think we are
20 close, but rather than wordsmithing right now,
21 I think we need to move ahead.

22 Larry?

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1 MEMBER APPEL: Yes, Larry Appel.

2 Just to put some teeth to that, I
3 am just wondering process here because I think
4 we would like to leave here with that, I think
5 Mim's qualifier. So, I was just wondering, is
6 somebody going to do that and have some
7 traffic, so we can reach closure today? This
8 is an important one, and we can't let it
9 linger.

10 CHAIR VAN HORN: Okay. So, maybe
11 Mim and Christine, if you could work together
12 on trying to come up with a --

13 MEMBER NELSON: I think it should
14 be Eric and Christine personally, just because
15 Eric knows the literature better. I just
16 think it needs to be framed; that's all. And
17 then, I think if you frame it, everybody will
18 be fine, and it is still being true to the
19 science.

20 MEMBER RIMM: Yes, actually, this
21 is Eric.

22 I think the implications are

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1 really well-written. It actually does point
2 to exactly the stuff we were talking about.

3 MEMBER NELSON: So, pull some of
4 that.

5 MEMBER RIMM: I just worry about
6 the conclusion being pulled out and pulled out
7 of context.

8 MEMBER NELSON: So, this may be
9 one where you pull a couple of those sentences
10 up --

11 MEMBER RIMM: Yes.

12 MEMBER NELSON: -- and then it
13 frames it. That is all I think. Some of
14 them, I think we are going to have to do that.

15 MEMBER RIMM: Well put, Mim.
16 You're a great leader.

17 (Laughter.)

18 MEMBER NELSON: Oh, yes.

19 CHAIR VAN HORN: So, how about
20 Eric and Christine with Mim as the mediator?
21 How's that?

22 (Laughter.)

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1 It sounds like a good plan. Okay.

2 Xav, let's move ahead.

3 MEMBER PI-SUNYER: Okay. So, we
4 will go on to the next section, which is
5 macronutrient proportion and body weight. And
6 the question that was asked, what is the
7 relationship between macronutrient proportion
8 and body weight in adults?

9 And the conclusion, next slide, is
10 strong and consistent evidence demonstrates
11 that when overweight/obese persons attempt to
12 lose weight with reduced calorie intake, when
13 calorie intake is controlled, macronutrient
14 proportion of the diet is not related to
15 losing weight.

16 And secondly, a moderate body of
17 evidence provides no data to suggest that any
18 one macronutrient is more effective than any
19 other for avoiding weight regain in weight-
20 reduced persons.

21 Next slide, please.

22 A moderate body of evidence

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1 demonstrates that diets with less than 45
2 percent of calories as carbohydrates are not
3 more successful for long-term weight loss;
4 that is 12 months' effort. There is also some
5 evidence that they may be less safe. In
6 shorter-term studies, low-calorie, high-
7 protein diets may result in greater weight
8 loss, but these differences are not sustained
9 over time.

10 A moderate amount of evidence
11 demonstrates that intake of dietary patterns
12 with less than 45 percent calories from
13 carbohydrate or more than 35 percent calories
14 from protein are not more effective than other
15 diets for weight loss or weight maintenance,
16 are difficult to maintain over the long term,
17 and may be less safe.

18 The next question is, is dietary
19 energy density associated with weight loss,
20 weight maintenance, and type 2 diabetes among
21 adults?

22 Strong and consistent evidence

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1 indicates that dietary patterns that are
2 relatively low in energy density improve
3 weight loss and weight maintenance among male
4 and female adults.

5 I guess we could cut out "male and
6 female". There are no others, are there?

7 (Laughter.)

8 Consistent, but limited, evidence
9 suggests that lower energy density diets may
10 be associated with lower risk of type 2
11 diabetes among adults.

12 So, this is the macronutrient
13 section, and are there any comments?

14 Mim?

15 MEMBER NELSON: So, there was no
16 looking at just weight maintenance? It is all
17 around weight loss and weight maintenance --

18 MEMBER PI-SUNYER: Weight regain,
19 right.

20 MEMBER NELSON: Okay. Yes. We
21 have that elsewhere.

22 MEMBER APPEL: Yes, I don't know,

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1 it is just there's a little bit of awkwardness
2 with the wording where the "strong and
3 consistent evidence demonstrates when
4 overweight or obese persons attempt to lose
5 weight with reduced caloric intake, when
6 caloric intake is controlled...." Can that be
7 dropped, the "when caloric intake is
8 controlled"? It sounds like we are in an
9 experiment here.

10 I think that the reality is that
11 they were trying to reduce their caloric
12 intake. I don't know. It --

13 MEMBER PI-SUNYER: Yes, I think we
14 could drop that.

15 MEMBER APPEL: Okay.

16 MEMBER PI-SUNYER: Sure.

17 MEMBER SLAVIN: Which one are you
18 on?

19 MEMBER APPEL: The optimal one.

20 MEMBER PI-SUNYER: The first one
21 here. It is on your slide deck.

22 MEMBER SLAVIN: I am worried about

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1 that because it kind of gets back to Tom's
2 issue.

3 MEMBER APPEL: It says, though, in
4 the sentence before that, when they attempt to
5 lose weight with reduced caloric intake.

6 MEMBER PI-SUNYER: Well, what I am
7 saying here is that there is no magic to a
8 particular diet, like a protein diet. If the
9 calories are the same in a higher protein
10 diet, a higher carbohydrate diet, or a higher
11 fat diet, you can lose the same amount of
12 weight. It is the same.

13 MEMBER SLAVIN: Yes, I think that
14 the reason that it is in there is because the
15 point is there's no magical property.

16 MEMBER PI-SUNYER: Right. Of an
17 individual macronutrient.

18 MEMBER SLAVIN: Yes, but high
19 protein diets work because, for other reasons,
20 people eat less. There is nothing magical
21 about them. I don't know how else to get that
22 in there.

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1 MEMBER APPEL: This is Larry
2 again.

3 That doesn't really come across,
4 though, with this fairly technical wording,
5 "when calorie intake is" --

6 MEMBER PI-SUNYER: Well, if you
7 can come up with better ones, better words, we
8 will put it in. But I think it does make the
9 point that what we are saying is there is
10 nothing magical about a particular
11 macronutrient, that if you control for
12 calories, they all do the same thing.

13 If everybody takes an 800-calorie
14 diet, and one is high in protein and one is
15 high in fat and one is high in carbohydrates,
16 they all give you the same weight loss over
17 time.

18 MEMBER APPEL: So, at similar
19 levels of calorie intake, distribution of
20 macronutrients has no impact on weight.

21 MEMBER PI-SUNYER: Right. Right.

22 MEMBER APPEL: Because when you

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1 are talking about calorie intake and it is
2 controlled, it is almost like there is
3 somebody controlling.

4 I guess my duty will be to come up
5 with an alternative.

6 MEMBER PI-SUNYER: Okay.

7 CHAIR VAN HORN: Yes, I would say
8 that is going to be the rule for the day. If
9 you are not happy with something, come up with
10 something better. I mean that really is the
11 recommendation here in order to be efficient
12 and move things along.

13 MEMBER PI-SUNYER: Okay. I am
14 going to go on to older adults.

15 MEMBER PEREZ-ESCAMILLA: I have a
16 couple of comments.

17 MEMBER PI-SUNYER: Okay, Rafael.

18 MEMBER PEREZ-ESCAMILLA: One is a
19 question for Larry and Linda in terms of the
20 total diet story. Just to verify that, in
21 terms of the dietary patterns that you are
22 looking at in terms of Mediterranean and DASH,

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1 in my understanding, all of them have more
2 than 45 percent of calories from
3 carbohydrates, right? You don't have any
4 pattern that is -- okay. Which I think is
5 good because it is consistent with this
6 conclusion.

7 MEMBER PI-SUNYER: Yes, as long as
8 we don't have the Okinawan diet, which is 80
9 percent carbohydrates.

10 MEMBER PEREZ-ESCAMILLA: Okay.
11 Well, that would be true, yes.

12 And the second comment that I have
13 is related to energy density and type 2
14 diabetes. It is that the evidence is limited.

15 There are only three studies, two cohort
16 studies and one cross-sectional study. And
17 the two cohort studies control for calories.
18 So, that is an area where it does suggest that
19 dietary quality matters quite a bit.

20 MEMBER PI-SUNYER: Are you saying
21 you would like to change that second bullet
22 point, Rafael under --

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1 MEMBER PEREZ-ESCAMILLA: No, it is
2 already in the chapter.

3 MEMBER PI-SUNYER: Okay.

4 MEMBER PEREZ-ESCAMILLA: That's
5 fine. Yes, fine.

6 MEMBER PI-SUNYER: Thanks.

7 Okay. If we go on for older
8 adults, for older adults, what is the effect
9 of weight loss versus weight maintenance on
10 selected health outcomes?

11 And the conclusion is weight loss
12 in older adults has been associated with an
13 increased risk of mortality, but because most
14 studies have not differentiated between
15 intentional versus unintentional weight loss,
16 recommending intentional weight loss has not
17 been possible. Recently, however, moderate
18 evidence of a reduced risk of mortality with
19 intentional weight loss in older persons has
20 been published. Intentional weight loss,
21 therefore, is recommended.

22 In addition, with regard to

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1 morbidity, moderate evidence suggests that
2 intentional weight loss in older adults has
3 been associated with reduced development of
4 type 2 diabetes and improved cardiovascular
5 risk factors. There are insufficient data on
6 cancer to come to a conclusion. Weight gain
7 produces increased risk for several health
8 outcomes.

9 Observational studies of weight
10 loss, especially when intentionality cannot be
11 rigorously established, may be misleading with
12 respect to the effect of weight on mortality.

13 Loss of weight is appropriate advice for
14 elderly overweight/obese persons. Weight gain
15 should be avoided. This is the implication
16 statement.

17 Any comments? Yes, Mim?

18 MEMBER NELSON: Xav, this is Mim.

19 For the first conclusion
20 statement, where at the end it says,
21 "Intentional weight loss, therefore, is
22 recommended," could you add a qualifier that

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1 says, in the conclusion, that says, in
2 overweight or obese that are at risk for
3 chronic disease, or something like that?
4 Because just the way it sounds there, I don't
5 think for ideal body weight people unless they
6 are at risk for hypertension, or they have
7 hypertension, or something like that, or other
8 conditions, it is not across the board for
9 older adults. It is for certain segments.

10 MEMBER PI-SUNYER: Well, the way
11 we had it, I guess it should say, again,
12 overweight and obese.

13 MEMBER NELSON: Yes, I would just
14 add that. That is all I meant.

15 MEMBER PI-SUNYER: Sure. That's
16 fine. That is what we meant. Sorry.

17 MEMBER NELSON: I figured that is
18 what you meant.

19 MEMBER PI-SUNYER: Yes.

20 Okay. The next section is on
21 physical activity. Dr. Nelson will present
22 that.

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1 MEMBER NELSON: Sure. We have
2 presented this before, so I will be very, very
3 fast.

4 Next slide, please.

5 So, strong, consistent evidence
6 indicates that physically-active people are at
7 reduced risk of becoming overweight or obese.

8 Furthermore, there is strong evidence that
9 physically-active adults who are overweight or
10 obese experience a variety of health benefits
11 that are generally similar to those observed
12 in people of ideal body weight. Because of
13 the health benefits of physical activity that
14 are independent of body weight classification,
15 people of all body weight classifications gain
16 health and fitness benefits by being
17 habitually physically active.

18 Next slide.

19 In addition, strong and consistent
20 evidence based on a wide range of well-
21 documented studies indicates that physically-
22 active people have higher levels of health-

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1 related fitness, lower risk of developing most
2 chronic, disabling medical conditions, and
3 lower rates of various chronic diseases than
4 do people who are inactive.

5 The health benefits of being
6 habitually active appear to apply to all
7 people regardless of age, sex, race,
8 ethnicity, socioeconomic status, and people
9 with physical or cognitive disabilities.

10 And all of this comes from the
11 2008 Physical Activity Guidelines for
12 Americans report.

13 MEMBER PI-SUNYER: Any comments?

14 MEMBER RIMM: This is Eric.

15 I didn't actually get to read this
16 because I knew this was so well-documented.

17 MEMBER NELSON: Oh-oh.

18 MEMBER RIMM: Is there anything on
19 strength training versus physically active?
20 What is the --

21 MEMBER NELSON: Well, in the
22 implications we talk about the goal is to get

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1 people to meet the 2008 Physical Activity
2 Guidelines, which is both aerobic and strength
3 training. We basically are embracing not only
4 the report with the evidence, but also the
5 implication and the guidelines which are in
6 the 2008, which is both. That was two years
7 of work.

8 CHAIR VAN HORN: Yes, no kidding.

9 Okay. Xav, is that the end of
10 your report? Okay. That was absolutely
11 excellent.

12 I think you all deserve a
13 tremendous amount of credit. That is a huge
14 literature to have to review.

15 We will now take a 15-minute
16 break, and we will reconvene at 12:30.

17 Thank you.

18 (Whereupon, the foregoing matter
19 went off the record at 12:15 p.m. and resumed
20 at 12:31 p.m.)

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1 A-F-T-E-R-N-O-O-N S-E-S-S-I-O-N

2 12:31 p.m.

3 CHAIR VAN HORN: Welcome back,
4 everyone.

5 We have now taken our break, and
6 we are going to reconvene with a discussion of
7 the Nutrient Adequacy chapter, and Shelly
8 Nickols-Richardson is going to lead us through
9 that.

10 Shelly?

11 MEMBER NICKOLS-RICHARDSON: Thank
12 you, Linda.

13 The first slide just, again,
14 recognizes the Committee members on the
15 Nutrient Adequacy Subcommittee: Cheryl
16 Achterberg, Naomi Fukagawa, Mim Nelson, and
17 Joanne Slavin.

18 Our fabulous staff members,
19 including Trish Britten, Eve Essery, Rachel
20 Hayes, Shanthy Bowman, and Patricia MacNeil.
21 Without them, none of this would have been
22 done. So, thank you to the staff.

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1 We have three questions related to
2 dietary components and nutrients:
3 overconsumed, underconsumed, and then the
4 micronutrients. So, we will start with those
5 first.

6 The first question was: what
7 nutrients and dietary components are
8 overconsumed by the general public?

9 The conclusion is that estimated
10 intakes of the following nutrients and dietary
11 components are high enough to be of concern,
12 and for adults this includes total energy
13 intake, particularly energy from solid fats
14 and added sugars, which I will refer to as
15 SoFAS; sodium; percentage of total energy from
16 saturated fats; total cholesterol in men, and
17 refined grains.

18 And for children, energy intake
19 from solid fats and added sugars; sodium;
20 percentage of total energy from saturated
21 fats; total cholesterol, only in boys aged 12
22 to 19 years, and refined grains.

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1 And I should probably back up just
2 a second and mention that all of the questions
3 that are being presented from this
4 Subcommittee have been discussed at previous
5 meetings, that much of our questions and
6 conclusions are based on dietary intake data
7 from NHANES sources, and just a few that have
8 NEL searches, and I will try to identify those
9 as we go.

10 So, back to overconsumed
11 components, again, those are our conclusions.

12 The implications, then, are to lower overall
13 energy intakes without compromising nutrient
14 intakes, Americans should reduce consumption
15 of calories from SoFAS. SoFAS generally
16 provide few, if any, micronutrients. Intakes
17 of SoFAS should be kept as low as possible
18 across all age/sex groups, to less than the
19 maximum limits calculated for the USDA Food
20 Patterns.

21 Concentrated efforts are needed to
22 lower total sodium intakes by all Americans.

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1 Likewise, deliberate public health efforts are
2 warranted to reduce intakes of saturated fats
3 to meet dietary guidelines for optimal health.

4 Males older than age 12 years also
5 are encouraged to consume less total dietary
6 cholesterol.

7 Intakes of refined grains are too
8 high and at least half of all refined grains
9 should be replaced with high-fiber whole
10 grains.

11 The second question is: what food
12 groups and selected dietary components are
13 underconsumed by the general public?

14 The conclusion is that currently-
15 reported dietary intakes of the following food
16 groups and selected dietary components are low
17 enough to be of concern. For both adults and
18 children, this includes vegetables, fruits,
19 whole grains, fluid milk and milk products,
20 and oils.

21 The implications, then, are that,
22 despite the evidence that health-promoting

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1 dietary patterns are those that include a
2 variety of foods and combinations of foods
3 from each of the basic food groups, many
4 Americans make food choices that do not meet
5 the characteristics of the healthy dietary
6 patterns. And just as a side note, much of
7 that will be discussed in the Total Diet
8 chapter.

9 A fundamental premise of the
10 Dietary Guidelines Advisory Committee is that
11 nutrients should come from foods. Often
12 nutrient intake shortfalls are an indicator of
13 low intakes of certain food groups that
14 provide specific nutrients.

15 Hence, efforts are warranted to
16 promote increased intakes of vegetables,
17 especially subgroups including dark green
18 vegetables, red-orange vegetables, and cooked
19 dried beans and peas, fruits, whole grains,
20 and fat-free or low-fat fluid milk and milk
21 products, including calcium and vitamin D
22 fortified soy milk, among all ages;

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1 substitution of oils for solid fats,
2 regardless of age, and increased intakes of
3 lean, heme-iron-rich meat, poultry, and fish
4 by adult women and adolescent girls.

5 Further implications are that
6 intakes of nutrient-dense foods -- that is,
7 foods in their leanest or lowest-fat forms and
8 without added fats, sugars, starches, or
9 sodium -- should replace foods in the current
10 American diet that contribute to high intakes
11 of SoFAS and refined grains.

12 Oils should only be substituted
13 for solid fats rather than added to the diet.

14 Substitutions and selection of
15 nutrient-dense forms of vegetables, fruits,
16 whole grains, and fluid milk and milk products
17 to replace non-nutrient-dense forms of foods
18 should be done in a manner such that total
19 caloric intake falls within or below daily
20 energy needs.

21 The third question is: what
22 nutrients are underconsumed by the general

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1 public and present a substantial public health
2 concern?

3 The conclusions are that reported
4 dietary intakes and associated indices of
5 nutrient status for the following nutrients
6 are of public health concern: for both adults
7 and children, these include vitamin D,
8 calcium, potassium, and dietary fiber.

9 Implications, then, are that
10 efforts are warranted to promote increased
11 dietary intakes of foods higher in vitamin D,
12 calcium, potassium, and dietary fiber for all
13 Americans, regardless of age. Recommended
14 intakes of these nutrients of concern, in
15 particular, and of all essential nutrients, in
16 general, should be achieved within the context
17 of flexible dietary intake patterns that
18 balance energy intake with energy expenditure.

19 I will stop here and see if there
20 are any questions, comments, issues related to
21 the first three questions.

22 MEMBER PEARSON: Well, just from

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1 the fatty acid and cholesterol side, I think
2 we just want to congratulate your group for
3 obviously providing some crosstalk with our
4 recommendations. I think it is very important
5 for these to have a solid front and to
6 reiterate and emphasize several of the things
7 that we are doing.

8 I think part of our nutrition
9 inadequacy is the overconsumption. I think
10 you can't emphasize that too much.

11 MEMBER RIMM: Shelly, this is Eric
12 Rimm.

13 I don't remember when you
14 presented this in the past, but was there
15 anything about omega-3 fatty acids being a
16 shortfall nutrient, since it is something that
17 we have looked at and modeled?

18 MEMBER NICKOLS-RICHARDSON: No, we
19 did not address omega-3's as a shortfall
20 nutrient.

21 MEMBER NELSON: Well, you guys did
22 it.

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1 MEMBER NICKOLS-RICHARDSON: Yes.

2 MEMBER PEARSON: This is Tom
3 again.

4 I think just one other point is
5 that many of our individual groups did
6 nutrition modeling. I think many of them, I
7 think the conclusion was that certainly for
8 dietary fat and cholesterol that you could
9 construct a diet within the nutrient adequacy
10 to also reduce the overnutrients in our own
11 areas. So, I think all that nutrition
12 modeling we did I think does particularly
13 impact on your section because it confirms the
14 ability to do this within the usual kind of
15 base diet.

16 CHAIR VAN HORN: I hadn't thought
17 of it until you mentioned that, Tom. Also, in
18 the spirit of trying to provide crosstalk and
19 joint recommendations in each of these
20 chapters, I suppose we could also at this
21 point reiterate the fact that there is no
22 biologic requirement for saturated fat, and

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1 all the essential fatty acids can be, and many
2 of them should be, derived from the
3 unsaturated sources. You know, that would
4 just give further support to what the Fatty
5 Acid chapter talks about because it is
6 saturated fat that remains a big problem, and
7 there is no nutrient requirement for saturated
8 fat.

9 Good. Anything else for Shelly so
10 far?

11 (No response.)

12 Okay. Shelly?

13 MEMBER NICKOLS-RICHARDSON: Okay.

14 The next set of questions address specific
15 nutrients during various stages of the
16 lifespan, nutrient supplements, and then some
17 behavior questions.

18 So, our next question is: what is
19 the relationship between folate intake and
20 health outcomes in the U.S. and Canada
21 following mandatory folic acid fortification?

22 Conclusions are that strong and

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1 consistent evidence demonstrates a large
2 reduction in the incidence of neuro tube
3 defects in the U.S. and Canada following
4 mandatory folic acid fortification. A limited
5 body of evidence suggests stroke mortality has
6 declined in the U.S. and Canadian populations
7 following mandatory folic acid fortification.

8 And then, a limited body of
9 evidence suggests colorectal cancer incidence
10 has increased in the U.S. and Canadian
11 populations following the mandatory
12 fortification.

13 Implications, then, are that folic
14 acid fortification --

15 MEMBER NELSON: We had talked this
16 morning, because we have provided the
17 implications. So, I am not sure we need to go
18 over this implication, if you wanted to --

19 MEMBER NICKOLS-RICHARDSON: Okay.
20 So, the comment is that we have presented
21 these implications, actually, previously a
22 couple of times. So, anyway, the conclusions

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1 were listed here.

2 Did I just go backwards.

3 So, implications are here, and if
4 everyone is agreeable, we can move forward
5 without going thorough into implications. Is
6 that acceptable? Okay. All right. So,
7 again, implications.

8 The next question, then, related
9 to iron. The question was: is iron a
10 nutrient of special concern for women of
11 reproductive capacity?

12 The conclusion is that substantial
13 numbers of adolescent girls and women of
14 reproductive capacity have laboratory evidence
15 of iron deficiency, with the implication being
16 that efforts are warranted to increase dietary
17 intake of heme-iron-rich foods and of
18 enhancers of iron absorption by these special
19 populations.

20 The next question is: are older
21 adults consuming sufficient vitamin B12?

22 The conclusion is that recent

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1 evaluation of NHANES data shows that
2 individuals older than age 50 years are
3 consuming adequate intakes of vitamin B12,
4 including B12 found naturally in foods and
5 crystalline B12 consumed in fortified foods.

6 Nonetheless, a substantial
7 proportion of individuals older than age 50
8 years may have reduced ability to absorb
9 naturally-occurring vitamin B12, but not the
10 crystalline form.

11 So, implications here include
12 that:

13 Although individuals older than
14 age 50 appear to be meeting their need for
15 vitamin B12, they should be encouraged or
16 continue to encourage foods fortified with
17 B12, such as fortified cereals or their
18 crystalline form of B12 supplements, when
19 necessary.

20 Practitioners should assess
21 vitamin B12 status in those older than 65
22 years of age, and some criteria are listed

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1 here for what is adequate B12 status.

2 The next question is: can a daily
3 multivitamin/mineral supplement prevent
4 chronic disease?

5 The conclusion is that, for the
6 general healthy population, there is no
7 evidence to support a recommendation for the
8 use of multivitamin/mineral supplements in the
9 primary prevention of chronic disease.

10 As well, limited evidence suggests
11 that supplements containing combinations of
12 certain nutrients are beneficial in reversing
13 chronic disease when used by special
14 populations, such as zinc or zinc plus
15 antioxidant supplements in preventing further
16 age-related macular degeneration in
17 individuals with intermediate or advanced
18 disease and EPA and DHA supplements in
19 individuals with coronary heart disease.

20 However, certain nutrient
21 supplements appear to be harmful in other
22 subgroups, such as beta-carotene or beta-

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1 carotene plus vitamin A supplements in smokers
2 and individuals exposed to asbestos due to
3 documented increases in lung cancer and
4 vitamins A and E in a variety of subgroups due
5 to elevated risk of death.

6 So, implications here:

7 Although intake of a variety of
8 multivitamin/mineral supplements increased
9 blood levels of many nutrients, particularly
10 in people who had suboptimal status before
11 supplementation, long-term effects on primary
12 prevention of several chronic diseases are
13 poorly-defined. In the context of an
14 overweight society, the impact of multivitamin
15 and mineral supplement use on obesity-specific
16 endpoints is unexplored.

17 At present, Americans are
18 encouraged to meet overall nutrient
19 requirements within energy levels that balance
20 daily energy intake with expenditure. This
21 can be accomplished through a variety of food
22 intake patterns that include nutrient-dense

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1 forms of foods.

2 The last family of questions were
3 related to some behaviors in nutrient intake,
4 the first of which is: what is the
5 relationship between nutrient intake and
6 breakfast consumption, snacking, and eating
7 frequency? The three questions presented here
8 were conducted through NEL searches.

9 The conclusion related to
10 breakfast is that moderate evidence supports a
11 positive relationship between breakfast
12 consumption and intakes of certain nutrients
13 in children, adolescents, and adults.

14 A limited body of evidence
15 supports a positive relationship between
16 snacking and increased nutrient intake in
17 children, adolescents, adults, and older
18 adults, and inadequate evidence is available
19 to evaluate the relationship between eating
20 frequency and nutrient intakes.

21 So, implications here are:

22 Americans are encouraged to eat

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1 nutrient-dense forms of foods for breakfast
2 while staying within energy needs to
3 facilitate achieving nutrient recommendations.

4 And likewise, nutrient-dense forms
5 of foods are suggested for any snacks, if
6 energy allowance permits this behavior without
7 incurring weight gain.

8 Any discussion or questions/issues
9 related to the more specific nutrient needs
10 across lifespan and behavior questions?

11 Larry?

12 MEMBER APPEL: Yes, Larry Appel.

13 Could you go back to that dietary
14 multivitamin/mineral supplementation
15 implication slide? Yes.

16 That sentence, "In the context of
17 an overweight society, the impact of
18 multivitamin/mineral supplement use on
19 obesity-specific endpoints is unexplored."
20 The way it reads, it is like, well, this is an
21 area of research that we should be jumping on.

22 I must say that I look at that and I go that

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1 is not how I am going to write a grant, you
2 know. So, I am wondering if you could just
3 delete that. I don't think it is necessary,
4 unless there is some other intent. I wasn't
5 sure.

6 MEMBER NICKOLS-RICHARDSON: No. I
7 think in looking at that, the intent of that
8 was just to address the fact that two-thirds
9 of the population is overweight/obese. In
10 looking at this many, many times, it really
11 doesn't make sense to have that there because
12 I don't know that we are going after
13 micronutrient supplements for helping with
14 weight loss. So, I agree that that can be
15 removed.

16 CHAIR VAN HORN: If I recall, this
17 topic was addressed when we discussed the
18 paradox of obesity and malnutrition in the
19 same individual. If you eat a third to more
20 of your calories from snacks, desserts, pizza,
21 et cetera, chances are your nutrient adequacy
22 is compromised. So, I think the whole point

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1 was just trying to look at that.

2 But the recommendations for
3 improving the dietary sources of those
4 nutrients should also accommodate weight
5 control in a preferable way over taking a
6 multivitamin supplement and allowing the
7 continued intake of snacks, desserts, and
8 pizza. I think that was the point.

9 Xav?

10 MEMBER PI-SUNYER: The one
11 combination of vitamin and mineral that does
12 seem to help is calcium and vitamin D. So,
13 the question is, are people going to read this
14 as saying they should drop that?

15 MEMBER NICKOLS-RICHARDSON: No, I
16 don't think so because that is actually more
17 of the text of the chapter. Yes, what we were
18 presenting is just a couple of examples here.

19 So, that is one of the areas where
20 calcium/vitamin D does seem to be beneficial,
21 particularly for bone health, particularly in
22 post-menopausal women. So, I don't think we

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1 have lost that. It is part of the chapter.
2 It is just not reflected here in the
3 conclusion statement.

4 MEMBER NELSON: But, Xav, it is in
5 the individual conclusion statements of the
6 individual nutrients that we looked at.

7 VICE CHAIR FUKAGAWA: This is
8 Naomi.

9 I just wanted to comment briefly
10 about the point made regarding saturated fat
11 and its not being required. But in the spirit
12 of wanting to encourage whole foods in the
13 diet, it is very important for us to realize
14 that saturated fats do have to come along with
15 some of those foods that we are recommending.

16 So, therefore, I think I would urge that we
17 have a balance in our conclusions when we
18 state that.

19 Thank you.

20 MEMBER CLEMENS: I appreciate
21 that, Naomi. We also know that 50 percent of
22 the calories in breast milk comes from

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1 saturated fat.

2 MEMBER ACHTERBERG: And, Shelly, I
3 am sorry I didn't ask this question earlier,
4 but in the spirit of learning, relative to
5 vitamin B12 and absorption at certain ages,
6 and so forth, is there a significant impact
7 for people who chronically take prescriptions
8 for Zantac or Nexium or a whole spectrum of
9 those kinds of drugs in terms of either B12
10 absorption or other vitamins?

11 MEMBER NICKOLS-RICHARDSON: It is
12 a great question. This is Shelly again. It
13 is a great question.

14 I think we didn't address
15 drug/nutrient interaction issues. I think
16 that is probably beyond the scope of what we
17 really were able to answer, but I do think
18 that that is an important question.

19 But just in terms of dietary
20 intake, dietary guidance, that moves maybe
21 into the realm of people with further disease
22 that really need medical nutrition therapy

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1 versus general healthy dietary guidelines for
2 the healthy American population. So, it is a
3 drug/nutrient interaction question that I
4 think it is very important, but I think it is
5 beyond the scope of what we were trying to
6 answer.

7 MEMBER CLEMENS: I appreciate
8 that, Shelly, because we know that so many
9 people who are older are on statin drugs, and
10 there is a vitamin D issue associated with
11 that population group. So, I don't know if we
12 allow for it in our commentary here yet, but
13 publicly and from a clinical perspective that
14 needs to be addressed as well.

15 MEMBER PEREZ-ESCAMILLA: Shelly,
16 this is Rafael Perez-Escamilla.

17 And thanks again for a wonderful
18 job from your Subcommittee.

19 Have you had a chance to look at
20 the SoFAS and intakes by ethnicity, race, or
21 income categories? Because I totally agree
22 with the approach suggested by Larry of

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1 illustrating the fact, if these Dietary
2 Guidelines are followed, we can substantially
3 address health disparities in the country, but
4 it is also very important at the same time for
5 policymakers and the public at large to
6 understand the amount of work that is needed
7 and how disproportionately the burden is in
8 certain groups in our society.

9 MEMBER NICKOLS-RICHARDSON: That
10 is a great question. We weren't able to do it
11 by ethnicity, but I can say that, for the
12 SoFAS intake, that by income the Food and
13 Nutrition Service reports on WIC program
14 participants, on Food Stamp participants, that
15 those included both participants and non-
16 participants, so really getting at the income
17 or economic situation. There were not
18 differences in SoFAS intakes between those
19 that were participants versus non-
20 participants. So, School Lunch, WIC, and Food
21 Stamp participation, it was equivalent. So, I
22 think those reports were very helpful in

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1 answering at least the economic part of that.

2 CHAIR VAN HORN: Anything else for
3 Shelly and her group? Cheryl?

4 MEMBER ACHTERBERG: Just one more
5 comment to follow up. Whether it is a note
6 for a future Committee or a footnote we put
7 somewhere, I think in the future we need to
8 define better or more clearly what we mean by
9 healthy Americans because anyone who is in
10 medical practices knows that by age 60 it is
11 hard to find someone who isn't on a
12 prescription. And there are many other
13 variations of this. So, I think in the future
14 this issue has to be dealt with in a different
15 manner. It is probably beyond what we can do
16 now, but somewhere we have to set that out, so
17 that in the future it can be addressed.

18 CHAIR VAN HORN: Yes, we can
19 recommend that for the future.

20 Okay. Shelly, thank you very much
21 and to everyone in the subgroup.

22 We are now ready to talk about

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1 fatty acids, and Tom Pearson's group will
2 report.

3 MEMBER PEARSON: Very good. Thank
4 you very much.

5 I want to begin by acknowledging
6 the contributions of a terrific working group
7 of colleagues: Eric Rimm, Roger Clemens, and
8 Naomi Fukagawa.

9 And staff members Pat Guenther,
10 Molly McGrane, and Thomas Fungewe. I have not
11 forgotten Shirley Blakely, and I want to just
12 single out Shirley. I am going to dearly miss
13 our every Monday calls. We have been meeting
14 every Monday on the telephone for a year and a
15 half.

16 (Laughter.)

17 And if there is anything that has
18 kept this wagon of the train on the tracks, it
19 has been Shirley. So, kudos to Shirley and a
20 lot of gratitude.

21 Okay. So, these have all been, I
22 think, presented and discussed in the past.

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1 So, we are going to move through them quite
2 quickly, and, hopefully, at the end of this we
3 will be back on our original schedule for the
4 day.

5 And the first question was: what
6 is the effect of saturated fatty acid intake
7 on increased risk of cardiovascular disease or
8 type 2 diabetes, including intermediate
9 markers such as serum lipids and lipoprotein
10 levels?

11 And the conclusion here, and I
12 might say there's a couple of conclusions that
13 are a little bit different. Given the change
14 in the grading things, they may vary from what
15 you have in the slide handouts in front.

16 But our conclusion is: strong
17 evidence indicates that dietary saturated
18 fatty acids is positively associated with
19 intermediate markers and endpoint health
20 outcomes for two distinct metabolic pathways,
21 increased total and LDL cholesterol and
22 increased risk of cardiovascular disease, and

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1 two, increased markers of insulin resistance
2 and increased risk for type 2 diabetes.

3 Conversely, decreased SFA intake
4 improves measures of both CVD and type 2
5 diabetes risk. The evidence shows that a 5
6 percent energy decrease in saturated fatty
7 acids, when replaced by MUFA or PUFA,
8 decreases risk of cardiovascular disease and
9 type 2 diabetes in healthy adults. It
10 improves insulin responsiveness in insulin-
11 resistant and type 2 diabetes subjects. And
12 again, the emphasis here is isocaloric
13 substitution rather than addition of or
14 subtraction of the fats and calories.

15 The implication, there's many
16 implications on all of these, and there's only
17 been a couple -- this implication, which I am
18 not going to read, basically suggests that a 5
19 percent substitution for MUFAs or PUFAs from
20 saturated fatty acids, down from the 11 to 12
21 percent of energy from saturated fats
22 currently, to a goal of less than 7, would, in

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1 fact, have a significant public health impact.

2 This is an old implication, but
3 added to the bottom of it was the additional
4 comment that there is good evidence that
5 atherosclerosis starts in childhood and young
6 adulthood, and the benefits from this would
7 extend down to ranges that we, otherwise,
8 wouldn't have previously appreciated.

9 I am not going to show you all the
10 implications because most of them haven't
11 changed from what we have presented in the
12 past. We are going to stick mostly with our
13 conclusion.

14 What is the effective dietary
15 cholesterol intake on risk of cardiovascular
16 disease, including effects of intermediate
17 markers such as serum lipid and lipoprotein
18 levels and inflammation? This is the second
19 question.

20 Ah, the conclusion is that
21 moderate evidence from epidemiologic studies
22 relates dietary cholesterol intake to clinical

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1 CVD endpoints. Many randomized clinical
2 trials on dietary cholesterol use eggs as the
3 dietary source. Independent of other dietary
4 factors, evidence suggests that consumption of
5 one egg per day is not associated with risk of
6 CHD or stroke in healthy adults, although
7 consumption of more than seven eggs per week
8 has been associated with increased risk. An
9 important distinction is that among
10 individuals with type 2 diabetes increased
11 dietary cholesterol intake is associated with
12 cardiovascular disease risk.

13 And again, the implications, I
14 think we are talking about a little bit of the
15 issues related to egg consumption is almost a
16 surrogate for cholesterol intake. Obviously,
17 they are not the same, although eggs continue
18 to be the main source, single dietary source
19 of cholesterol.

20 And the point here is that eggs
21 are also a good source of high-quality protein
22 and numerous micronutrients. So, we

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1 distinguish the type 2 diabetes patients in
2 which there does appear to have negative
3 effects on serum lipids and lipoprotein levels
4 and the risk of CVD, and also the more than
5 seven eggs per week consumption is not
6 recommended for the general public. So, for
7 that group, it is less than 200 milligrams per
8 day for persons with or at high risk for
9 cardiovascular disease and type 2 diabetes.

10 We did have some modeling of
11 nutrients. So, the next question in this is:
12 what is the impact on food choices and
13 overall nutrient adequacy of limiting
14 cholesterol to less than 200 milligrams per
15 day? This would be particularly relevant to
16 those recently sizable groups that we just
17 mentioned in which this would be a
18 recommendation.

19 And the conclusion is that the
20 cholesterol levels could be reduced to less
21 than 200 milligrams in the patterns at all
22 calorie levels by limiting eggs to less than

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1 two per week, reducing amounts of meats and
2 poultry, and substituting some oils for solid
3 fats. I think also using nuts and soy protein
4 would be part of those recommendations. And
5 these changes would result in reductions in
6 some nutrients, including protein, choline,
7 vitamin A, vitamin D, EPA, and DHA, and an
8 increase in vitamin E.

9 I might say that most of those,
10 choline, vitamins A and D, were already below
11 the recommended levels. So, this is a further
12 reduction below those other reductions.

13 Any comments on the saturated fat
14 and cholesterol?

15 MEMBER PEREZ-ESCAMILLA: Tom?

16 MEMBER PEARSON: Yes?

17 MEMBER PEREZ-ESCAMILLA: This is
18 Rafael Perez-Escamilla.

19 I guess in terms of the whole
20 conclusion, what is it, what is it that you or
21 your Subcommittee is recommending? Are you
22 recommending changes in the cholesterol intake

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1 levels to the whole population or just for
2 individuals who have had chronic disease?

3 MEMBER PEARSON: The current
4 recommendation is for less than 300 milligrams
5 per day. So, we are not making those
6 recommendations for individuals, healthy
7 individuals. The current recommendation is
8 for less than 200 mg/day for patients with
9 cardiovascular disease, and I guess we are
10 probably adding an emphasis on the 200 mg/day
11 for patients with diabetes as well. So, it is
12 not a very big change. It is another very
13 high-risk group that is being added to that,
14 but not the general -- there is really no
15 evidence that we could find that there was a
16 risk for the less than 300 mg/day,
17 essentially, the 200 to 300 level for healthy
18 individuals.

19 MEMBER PEREZ-ESCAMILLA: And in
20 terms of the daily egg findings, I am assuming
21 you are referring to egg equivalents, right?
22 It is not only fresh eggs, but also egg-

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1 containing products have to be taken into
2 account when people decide?

3 MEMBER PEARSON: I would imagine.

4 I mean, again, the problem is that eggs are
5 changing along with everything else. So,
6 previously, not that many years ago, there was
7 about 38 percent of cholesterol was from the
8 single source eggs. Now I think it is down to
9 something like 24 or 25 percent. So, eggs are
10 changing and the way they are used is
11 changing. So, it is becoming less of an issue
12 just to single this out on eggs.

13 So, I think we are really talking
14 about, and this is more of the tail wagging
15 the dog in that the literature has dealt with
16 eggs rather than the fine nutrient analyses,
17 what we are really after, and that is the
18 milligrams of cholesterol per day.

19 So, I don't think there is any
20 evidence to suggest that a milligram of
21 cholesterol from an egg is any different than
22 a milligram of cholesterol from a dairy

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1 product or some of the other sources. So, I
2 think that is really, Rafael, what the issue
3 is, is that eggs become a surrogate for
4 cholesterol consumption, but an increasingly
5 poor surrogate.

6 MEMBER WILLIAMS: I just wondered,
7 as far as the eggs, for people who don't
8 consume that many eggs or don't consume egg
9 yolks, there maybe should be some distinction.

10 Also, there is such a big difference in size
11 of eggs. Does that make a difference?

12 MEMBER PEARSON: Yes, I think this
13 was the point in terms of the change; there
14 has been some change in eggs, rather than also
15 in the consumption of eggs over time. I think
16 this is what we were talking about.

17 But I would point out, as was
18 pointed out I think in the discussion
19 previously, is some of those nutrient
20 inadequacies, the choline, the A and the E are
21 in the yolk. So, that some of those issues of
22 concerns of a reduction in eggs would also

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1 have to do with a reduction in egg yolks,
2 where all the cholesterol is. But we all know
3 that, obviously, egg whites is the standard
4 protein that we use for reference. So, we
5 know that that is an extraordinarily good
6 source of protein. Okay.

7 MEMBER NELSON: This is Mim.

8 I just have a very quick -- so,
9 the modeling was really for this lower step-
10 downed version, not for the general
11 population? It was for those that are at
12 risk, the 200?

13 MEMBER PEARSON: No, it was
14 modeling in the general, the calorie levels,
15 the different calorie levels --

16 MEMBER NELSON: But it was for
17 two --

18 MEMBER PEARSON: -- for the
19 general diet.

20 MEMBER NELSON: Right.

21 MEMBER PEARSON: The point is
22 that, for individuals with the recommendations

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1 who are going to be at that 200 level --

2 MEMBER NELSON: Right.

3 MEMBER PEARSON: -- this is for
4 whom it is relevant.

5 MEMBER NELSON: Yes, that's what I
6 mean.

7 MEMBER PEARSON: Right.

8 MEMBER NELSON: The 200 milligrams
9 was for those people where it is relevant.
10 Okay.

11 MEMBER PEARSON: But it is still
12 worth doing the modeling because --

13 MEMBER NELSON: Yes, yes.

14 MEMBER PEARSON: -- you know, if
15 you counted up the people with a history of
16 cardiovascular --

17 MEMBER NELSON: Right.

18 MEMBER PEARSON: -- disease, which
19 is probably 5 to 10 percent, and the people
20 with diabetes, which is another 7 to 10
21 percent --

22 MEMBER NELSON: Yes.

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1 MEMBER PEARSON: -- depending on
2 ethnic group, you know, it is a pretty good-
3 sized group.

4 MEMBER NELSON: Yes.

5 MEMBER PEARSON: Okay. So, the
6 next slides have to do with some of the other
7 fatty acids. The next question is: what is
8 the effect of dietary intake on
9 monounsaturated fatty acids, MUFAs, when
10 substituted for saturated fatty acids on
11 increased risk for cardiovascular disease and
12 type 2 diabetes, including intermediate
13 markers such as lipid and lipoprotein levels,
14 blood pressure and inflammation? And again,
15 the emphasis here was isocaloric substitution
16 rather than any kind of addition or
17 subtraction.

18 And the conclusion is strong
19 evidence in the case of dietary MUFA is
20 associated with improved health outcomes
21 related to both cardiovascular disease and
22 type 2 diabetes, when MUFA is a replacement

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1 for dietary saturated fatty acids. The
2 evidence shows a 5 percent energy replacement
3 of saturated fat with MUFA decreases
4 intermediary markers and the risk for
5 cardiovascular disease and type 2 diabetes in
6 healthy adults and improves insulin
7 responsiveness in insulin-resistant and type 2
8 diabetes subjects.

9 The next subquestion in here was:
10 what is the effect of replacing a high
11 carbohydrate diet with a high monounsaturated
12 fat diet in persons with type 2 diabetes?

13 And the conclusion there is that
14 moderate evidence indicates that increased
15 MUFA intake, rather than high carbohydrate
16 intake, may be beneficial for persons with
17 type 2 diabetes. High MUFA intake, when
18 replacing a high carbohydrate diet, again, in
19 an isocaloric fashion, results in improved
20 biomarkers of glucose tolerance and diabetic
21 control.

22 Next, moving on to polyunsaturated

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1 fatty acids, it is: what is the effect of
2 dietary intake of n-6 polyunsaturated fatty
3 acids on risks of cardiovascular disease and
4 type 2 diabetes, including intermediate
5 markers such as lipid and lipoprotein levels,
6 blood pressure, and inflammation?

7 And the conclusion, again, very
8 similar to the MUFA recommendation, is that
9 strong and consistent evidence indicates that
10 dietary polyunsaturated fatty acids are
11 associated with improved health outcomes
12 related to cardiovascular disease, in
13 particular, when PUFA is a replacement for
14 dietary saturated fatty acids or trans fatty
15 acids. Evidence shows that energy replacement
16 of saturated fatty acids with PUFA decreases
17 total cholesterol, LDL cholesterol, and
18 triglycerides, as well as numerous markers of
19 inflammation. PUFA intake significantly
20 decreases risk of cardiovascular disease and
21 has also been shown to decrease the risk of
22 type 2 diabetes.

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1 Getting to one of the other fatty
2 acids of interest, stearic acid is: what are
3 effects of dietary stearic acid on LDL
4 cholesterol?

5 And the conclusion here is that
6 C18 saturated fatty acid, stearic acid:
7 moderate evidence from a systematic review
8 indicates that, when stearic acid is
9 substituted for saturated fatty acids or trans
10 fatty acids, plasma LDL cholesterol levels are
11 decreased; when substituted for carbohydrates,
12 LDL cholesterol levels are unchanged, and
13 when substituted for monounsaturated or
14 polyunsaturated fatty acids, LDL cholesterol
15 levels are increased.

16 Therefore, the impact of stearic
17 acid replacement of other energy sources is
18 variable regarding LDL cholesterol, and the
19 potential impact of changes in stearic acid
20 intake on cardiovascular disease risk remains
21 unclear.

22 We did do some modeling, nutrient

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1 modeling, looking at the redefinition of
2 saturated fats into an operationalized
3 definition for this modeling exercise as total
4 saturated fatty acids minus stearic acid. So,
5 in fact, there is an LDL cholesterol-neutral
6 effect of stearic acid, removing it from the
7 group which heretofore had been called
8 cholesterol-raising.

9 So, the question is: what is the
10 impact on food choices and overall nutrient
11 adequacy of limiting cholesterol-raising fatty
12 acids to: first, less than 7 percent of total
13 calories; and (b), less than 5 percent of
14 total calories, with cholesterol-raising fatty
15 acids operationalized as total saturated fatty
16 acids minus stearic acid?

17 And the conclusion is that the
18 USDA food patterns have 6.0 to 6.8 percent of
19 calories from cholesterol-raising fatty acids.

20 Parenthetically, stearic acid is generally
21 about 2 to 2.2 percent of energy in the U.S.
22 diet. So, to further reduce levels of

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1 cholesterol-raising fatty acids, all solid
2 fats were removed from the patterns and were
3 isocalorically replaced with oils, resulting
4 in cholesterol-raising fatty acid levels of 5
5 to 5.5 percent of calories, which would likely
6 be consistent and compatible with the previous
7 less than 7 percent of saturated fat goals
8 from our food modeling exercise.

9 Another issue with fatty acids
10 looked at trans fatty acids. The question
11 was: what effect does consuming natural or
12 ruminant versus synthetic or industrially-
13 hydrogenated trans fatty acids have on LDL,
14 HDL, and non-HDL cholesterol levels?

15 And the conclusion is that limited
16 evidence is available to support a substantial
17 biological difference in detrimental effects
18 of industrial trans fatty acids, iTFA, and
19 ruminant trans fatty acids, or rTFA, on health
20 when rTFA is consumed at seven to ten times
21 the normal level of consumption. So, one of
22 the peculiarities of this evidence base is

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1 that the randomized, high-quality studies were
2 all done well above that of trans fatty acid
3 consumption overall.

4 Then, getting into some of the n-3
5 fatty acids and issues, it is: what is the
6 relationship between consumption of seafood
7 n-3 fatty acids and risk of cardiovascular
8 disease?

9 And the conclusion is that
10 moderate evidence shows the consumption of two
11 servings of seafood per week -- that is 4
12 ounces per serving -- which provide an average
13 of 250 milligrams per day of long-chain n-3
14 fatty acids, is associated with reduced
15 cardiac mortality from CHD or sudden death in
16 persons both with and without cardiovascular
17 disease.

18 We did, also, some food modeling
19 in this arena, answering the question: what
20 is the impact on nutrient adequacy of
21 increasing seafood in the USDA food patterns
22 to one of three scenarios? Four ounces per

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1 week of seafood high in n-3 fatty acids; that
2 is EPA and DHA. The second scenario was 8
3 ounces per week of seafood, including seafood
4 both low and high in n-3 fatty acids in
5 proportion to that currently consumed in the
6 American diet; and three is 12 ounces per week
7 of seafood low in n-3 fatty acids. Those are
8 not the marine seafood sources that have the
9 high n-3 fatty acids.

10 So, with these three scenarios,
11 then, the conclusion is that the amounts of
12 seafood in the base USDA food patterns could
13 be increased without any negative impact on
14 nutrient adequacy. In the reference 2000-
15 calorie pattern, the three seafood variations
16 resulted in 292 milligrams per day of EPA and
17 DHA in the 4 ounces per week of seafood high
18 in n-3 fatty acids; 253 milligrams per day of
19 EPA and DHA in the 8 ounces per week of the
20 kind of average balance of seafood currently
21 consumed, and 201 milligrams per day of EPA
22 and DHA in the 12 ounces of seafood low in n-3

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1 fatty acids.

2 So, you can see at least at this
3 reference calorie level that the high n-3
4 foods at 4 ounces or at the average content of
5 8 ounces meets the 250-milligram goal and the
6 one with the low n-3 seafood, obviously, falls
7 slightly below that, either requiring more of
8 those sources of seafood to be consumed or to
9 add some of the other high n-3 seafood to
10 that, pursuant to scenario No. 2.

11 There's also the issue of plant
12 n-3 fatty acids versus the marine sources of
13 fatty acids. So, the question is: what is
14 the relationship between consumption of plant
15 n-3 fatty acids and the risk of cardiovascular
16 disease?

17 And for this, the conclusion was
18 that alpha-linolenic acid, ALA, intake of .6
19 to 1.2 percent of total calories will meet
20 current recommendations and may lower
21 cardiovascular disease risk, but new evidence
22 is insufficient to warrant greater intake

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1 beyond this level to assure, obviously, the
2 essential fatty acids are consumed. Limited
3 but supportive evidence suggests that higher
4 intake of n-3 from plant sources may reduce
5 mortality among persons with existing
6 cardiovascular disease. Clearly, this is an
7 area that we have been commenting on with our
8 research recommendations, considering issues
9 of production in the high marine n-3 fatty
10 acids.

11 A very interesting, and I think
12 relatively new, area with a lot of quite
13 recent data is the issue of maternal dietary
14 intake of n-3s from seafood. The question
15 there, then, is: what are the effects of
16 maternal dietary intake of n-3 fatty acids
17 from seafood on breast milk composition and on
18 health outcomes in infants?

19 And the conclusion there is that
20 moderate evidence indicates that increased
21 maternal dietary intake of long-chain n-3
22 PUFAs, in particular, docosahexaenoic acid,

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1 DHA, from at least two servings of seafood per
2 week, during pregnancy and lactation is
3 associated with increased DHA levels in breast
4 milk and improved infant health outcomes, such
5 as visual acuity and cognitive development.
6 And we emphasize it appears that the DHA is
7 really the issue here rather than any of the
8 other n-3 fatty acids.

9 Finally, we singled out a couple
10 of foods, whole foods, that were traditionally
11 considered high fat sources. Those are nuts
12 and chocolates. So, the first question is:
13 what are the health effects related to
14 consumption of nuts?

15 And the conclusion is that there's
16 moderate evidence that consumption of unsalted
17 peanuts and tree nuts, specifically walnuts,
18 almonds, and pistachios, in the context of a
19 nutritionally-adequate diet and when total
20 calorie intake is held constant, has a
21 favorable impact on cardiovascular disease
22 risk factors, particularly serum lipid levels.

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1 And the same question: what are
2 the health effects related to consumption of
3 chocolate?

4 The conclusion is moderate
5 evidence suggests that modest consumption of
6 dark chocolate or cocoa is associated with
7 health benefits in the form of reduced
8 cardiovascular disease risk. Potential health
9 benefits needs to be balanced with caloric
10 intake, again, part of the mantra of the fatty
11 acid group.

12 And those are our comments, open
13 for discussion.

14 MEMBER PI-SUNYER: This is
15 Pi-Sunyer.

16 I have two questions for you, Tom.
17 The first deals with this issue of effect of
18 omega-3's on cognitive function. On page 50
19 of the draft, you have this figure from Brenna
20 and Lapillone which is kind of stunning in
21 terms of the drop in verbal IQ in relation to
22 not having as much seafood in pregnancy.

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1 So, I think that figure No. 1, the
2 reference is not listed in your list of
3 references. So, I think if you are going to
4 have the figure, you need to have the
5 reference.

6 Second, I think a lot of women in
7 this country now during pregnancy are worried
8 about methylmercury and won't eat any fish.
9 So, I think the question is how you translate
10 this appropriately to pregnant women, that it
11 might affect cognitive function of their kids.

12 MEMBER PEARSON: Let's hear from
13 both Roger and Eric on this. This has been
14 discussed extensively, as well as a joint
15 meeting with the Food Safety group and the
16 inclusion in this chapter, I might say, of a
17 figure which talks about the omega-3 sources
18 and the methylmercury levels, which is on page
19 45.

20 But I don't know, Roger, do you
21 want to --

22 MEMBER CLEMENS: No, we'll let

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1 Rafael, who wrote that section. Rafael, do
2 you want to comment on that?

3 MEMBER PEREZ-ESCAMILLA: Yes, I
4 think the conclusion that is part of the Food
5 Safety Subcommittee presentation, but we may
6 not be able to get into detail into that later
7 on, is that the benefit/risk analyses that
8 have been conducted targeting the U.S.
9 population as well as a couple of European
10 populations, and so on, show that women can
11 safely consume 12 ounces of seafood or even
12 more during pregnancy, lactation, and so on,
13 as long as they choose seafood species that
14 are low in methylmercury, which are many
15 options for them to do so.

16 In terms of what I think is a most
17 useful study, the benefit/risk analysis done
18 with seafood data from Connecticut showing
19 that, out of 16 species, over half of them not
20 only could be consumed two or three times per
21 week, but they could be consumed daily, over
22 half of these species, without posing a risk

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1 in terms of neurological development or
2 cardiovascular disease. And I won't say we
3 are posing a risk; with the benefit/risk ratio
4 still being very favorable in terms of that
5 behavior.

6 MEMBER CLEMENS: My general
7 feeling is that obstetricians around the
8 country are scaring pregnant women to death
9 about the absolute --

10 MEMBER PEREZ-ESCAMILLA: So, a
11 very important research recommendation has to
12 do with risk communication regarding seafood
13 consumption and how to communicate it in a way
14 that is not misinterpreted, as it has been in
15 the past, because the advisory never ever
16 stated women should not eat any seafood during
17 pregnancy. So, your point is very well-taken.

18 MEMBER ACHTERBERG: A quick
19 clarification, please. Cheryl.

20 Lake fish, freshwater fish, or
21 only maritime sea fish?

22 MEMBER PEREZ-ESCAMILLA: Yes, we

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1 are talking about mostly marine fish, but in
2 terms of locally-caught fish, people have to
3 pay attention to local and state advisories.
4 It is very much included, and the point is
5 that the information is out there. How you
6 frame it in a user-friendly way for consumers
7 to be able to do the benefit/risk analysis
8 based on their choices is the next generation
9 of research in this area, I would say.

10 MEMBER PEARSON: But large
11 predatory, ocean-going fish, which don't
12 include salmon and many of the common things
13 that we do eat.

14 I want to make sure that Xavier's
15 first question was on page 50, and the
16 specific question, Xavier, you had on that
17 figure?

18 MEMBER PI-SUNYER: No, I just said
19 I just thought it was very kind of scary.

20 MEMBER SLAVIN: This is Joanne.

21 You know, the reference is
22 missing. So, that is one thing. It is not in

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1 the back.

2 But, also, I think it is a little
3 misleading. It is sitting there and it looks
4 shockingly effective. So, I think it needs to
5 be discussed a little more and put into
6 context. Is it the fish? Is it the
7 polyunsaturated fat? What's causing this
8 relationship? So, I just find it kind of
9 hanging out there. And because it is in a
10 figure, I think it will get too much attention
11 and it needs to be put into context.

12 MEMBER PEARSON: This was a figure
13 that was added because of its interest and
14 relatively recent. But we do need to -- I
15 wasn't aware that this reference didn't get
16 put in, but it will. It is a relatively-
17 recent paper.

18 We had, just to answer the
19 question, we had, actually, was it two or
20 three experts in on this discussion? Dr.
21 Brenna was one of them, looking at this.
22 Also, I think Dr. Brenna has chaired a WHO or

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1 maybe it was a European Union group on this
2 issue, which has just published their report
3 recently as well, again, on the same issue.

4 And the animal and other
5 supportive information looks at this
6 particularly as DHA.

7 MEMBER SLAVIN: Yes. This is
8 Joanne Slavin again.

9 I think if you look on the X-axis
10 there, it says it is estimated n-3 fatty acids
11 from seafood in pregnancy. So, I am curious,
12 like Cheryl's point is, how is this data --
13 you know, because if it comes out just eat
14 fish and your kid is going to be brilliant, it
15 could be misinterpreted.

16 MEMBER PEARSON: I think this had
17 to do with mainly fish consumption.

18 MEMBER SLAVIN: Across the board?
19 EPI data?

20 MEMBER PEARSON: Right, right.

21 MEMBER SLAVIN: Yes. So, I think
22 that's --

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1 MEMBER PEARSON: Any type of fish.

2 MEMBER SLAVIN: -- risky, the way
3 it is presented right now.

4 MEMBER PEARSON: Well, we will get
5 the reference summarized. But I might say it
6 is only part of a much larger literature with
7 other expert testimony, basic science modeling
8 of this in animal models, and a variety of
9 other things. So, this isn't just the only
10 thing that is out there.

11 MEMBER SLAVIN: And, you know, I
12 think it does -- this is Joanne here again --
13 supplements, why can't I just supplement? If
14 it is the PUFA, or is it the fish, or what's
15 the point here?

16 MEMBER PEARSON: All of our
17 literature reviews excluded supplements.

18 MEMBER SLAVIN: But if you look at
19 the study, if it is n-3 fatty acids from
20 seafood, if I just eat fish oils, right?

21 MEMBER PEARSON: From seafood.
22 Right.

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1 MEMBER SLAVIN: That is a fish
2 oil. I mean, the way it is read here, it
3 looks like it is an n-3 fatty acid from fish
4 that is causing this shift in IQ. That is the
5 way you read that figure. So, whether I ate
6 it in fish or I took it as fish oil, if that
7 is what is happening, then I should buy fish
8 oil.

9 MEMBER PEARSON: Our literature
10 review was limited to whole food study.

11 MEMBER RIMM: Yes, this is Eric
12 Rimm.

13 Maybe we should consider taking
14 the figure out, either having a really nice
15 paragraph explaining what it is, what
16 contributed to this prediction model because
17 some of this could be from n-3 trials where
18 they just give a supplement, because I know
19 that is the advice that some OB/GYNs give,
20 because women are confused. They say, "Oh,
21 just take a supplement."

22 But we specifically wanted to

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1 focus just on those studies that looked at
2 seafood because there are some very well-done
3 studies that look at three and four and five
4 years out and do see a pretty strong
5 beneficial effect of children's cognitive
6 function.

7 MEMBER PEARSON: I will have to go
8 back and look, but I don't think these were
9 supplements. I think these were feeding
10 studies from some countries in which, islands,
11 et cetera, that basically ate almost all of
12 their proteins from fish. "Seychelles" I
13 know was a University of Rochester study on
14 this topic.

15 MEMBER NICKOLS-RICHARDSON: This
16 is Shelly.

17 You do see some benefit from
18 supplements, DHA supplement, and the Brenna
19 article does include a statement about some of
20 that. But, in large part, it really is the
21 fish consumption. So, we do have a little
22 segment on that in the nutrient supplements

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1 part that suggests that DHA supplementation
2 will provide some of those benefits, more so
3 for the cognitive development versus the
4 visual acuity, but then, in the spirit of food
5 intake, we refer back to fish intake as being
6 a way to achieve that same level of DHA.

7 VICE CHAIR FUKAGAWA: This is
8 Naomi.

9 I thought that the other purpose
10 of having this figure was to emphasize the
11 intake level because it is very different from
12 the standpoint of what is recommended by AHA,
13 et cetera, for cardiovascular disease. So, it
14 was to differentiate --

15 MEMBER PI-SUNYER: I have no
16 objection to having the figure, but I think it
17 needs to be put in context.

18 VICE CHAIR FUKAGAWA: Explained a
19 bit more, right.

20 MEMBER PI-SUNYER: Much more than
21 it is.

22 MEMBER PEARSON: I think that is

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1 an excellent point.

2 VICE CHAIR FUKAGAWA: And I wanted
3 to make one other comment about the fact,
4 about food safety and local food advisories.
5 Since most of our food supply is now global,
6 it becomes extremely important for us to also
7 be aware as to where in the world our fish
8 came from, such that we would know what the
9 potential contents of methylmercury or POPs
10 are.

11 Thanks.

12 MEMBER PEARSON: I think the
13 figure on, Naomi, just your point, you know,
14 we had talked about including or not including
15 this figure on page 45, line 1030. Certainly,
16 I pushed to keep it in because it almost is
17 too busy in the integration of some of these,
18 but certainly it does provide many options of
19 kinds of sources of fish-supplied omega-3 with
20 low risk. So, that one isn't left with the
21 housewife saying, well, I have to choose one
22 bad thing versus one good thing. There really

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1 are some opportunities to pick just good
2 things.

3 Cheryl?

4 MEMBER ACHTERBERG: This is
5 Cheryl.

6 Going back to that context piece
7 on the figure 2, I am wondering if that paper
8 can be emailed to each of us because what I
9 would like to look at, actually, it's the IQ
10 portion, so that I have some sense of what
11 level change are we talking about there, and
12 is it truly significant? It is made to look
13 significant here, meaning meaningful.

14 MEMBER PEARSON: The Y-axis is the
15 percentage in the lowest quartile.

16 MEMBER ACHTERBERG: Oh, I
17 understand that, but looking at the context,
18 in the context of child's IQ, and specifically
19 what those differences are against the regular
20 standard deviation for IQ I think is
21 important. So, a little bit more on that
22 context, but I am willing to jump in on that

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1 side of things, if I have the paper.

2 MEMBER PEARSON: Okay. Fair
3 enough.

4 MEMBER PI-SUNYER: Okay. I have
5 another comment. That has to do with your
6 suggestion of people having more MUFA. I am
7 sympathetic to that, but if you look at the
8 table you have on page 5, how are you going to
9 get more MUFA without getting more saturated
10 fat and more calories? I mean most of the
11 stuff that is bringing you oleic acid is also
12 bringing you saturates. So, I mean, the
13 translation is going to be very difficult
14 here.

15 MEMBER PEARSON: Yes, I think this
16 was one of the reasons for putting the food
17 tables in, is some of the issues. And your
18 question is, I think, a good one. I think
19 this is an issue that particularly the food
20 manufacturers, in terms of do you really have
21 to have pizza that has a lot of saturated fat
22 when it also has a lot of MUFA, do you really

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1 have to do that? And it has to do, obviously,
2 with the oils that are used, with the things
3 you put on the cheese, the kind of cheese you
4 use. All of those things are optional.

5 So, part of the issue, I think,
6 for some of these food source tables is a
7 challenge for manufacturers to give us what we
8 can fit within the guidelines.

9 MEMBER PEARSON: I think your
10 point is well-taken.

11 MEMBER PI-SUNYER: I think meat,
12 particularly.

13 MEMBER PEARSON: I think
14 translation is tough here.

15 MEMBER PI-SUNYER: Yes.

16 CHAIR VAN HORN: I would also just
17 like to suggest, because I have been going
18 back and forth between this chapter, the fatty
19 acid chapter, and the food safety chapter, in
20 terms of the references and the crosstalk,
21 again, between these two in terms of the
22 methylmercury and the recommendations for

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1 pregnant women. Some of them are
2 inconsistent.

3 So, you might want to just take a
4 look, and especially in terms of the
5 references, make sure they match up, because
6 there's references in one chapter that aren't
7 repeated. For example, the Ginsberg reference
8 might be appropriate in the other chapter as
9 well, so that you are looking at the same data
10 for both of these issues.

11 MEMBER PEARSON: Yes, we should do
12 that. We had some joint meetings. So, I
13 can't imagine that there really are any
14 unresolvable issues.

15 CHAIR VAN HORN: Sure, I'm sure
16 they are.

17 MEMBER PEARSON: It really has to
18 do with wording and --

19 CHAIR VAN HORN: Yes, it is just
20 dotting the "i's" and crossing the "t's" on
21 these two, yes.

22 MEMBER PEARSON: Yes, yes. So, we

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1 worked out all the other issues.

2 MEMBER SLAVIN: I just wanted to
3 follow up, too, with the nutrient adequacy
4 because it does overlap with that, and we want
5 to make sure of that, because I think things
6 are written in different places, but they will
7 be lost because they are in different
8 chapters, so to make sure there is consistency
9 there.

10 MEMBER PEARSON: Yes.

11 MEMBER APPEL: This is Larry
12 Appel.

13 There are a few points where you
14 lump together lipids, lipoprotein levels,
15 blood pressure, inflammation under
16 intermediate biomarkers and that kind of
17 terminology. I am a little bit concerned. I
18 know the n-6 PUFA field with blood pressure,
19 there really is no relationship. So, you have
20 it in your question, lipids, lipoproteins,
21 blood pressure and inflammation. Then, the
22 conclusion states improved health outcome

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1 without specifying.

2 I am wondering, quite honestly, I
3 think you might want to specify the lipids
4 rather than just putting in -- you know,
5 because people misinterpret and say, oh, you
6 know, it's good for everything, including
7 blood pressure. And I don't think so.

8 MEMBER PEARSON: I think we are a
9 bit into the process issues here.

10 MEMBER APPEL: Yes.

11 MEMBER PEARSON: Those were the
12 questions that were posed. And generally, a
13 lot of times, nothing was there for things
14 like inflammatory markers and things like
15 that. And other than there wasn't some
16 things, like you said for blood pressure --

17 MEMBER APPEL: Yes.

18 MEMBER PEARSON: -- there wasn't
19 any association. There was data, but there
20 wasn't any association. And then, for the
21 lipids and lipoproteins was generally what was
22 shown.

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1 So, I guess, methodologically, we
2 would want some guidance about that because we
3 didn't want to be accused of kind of changing
4 the question to fit the answer, because the
5 searches really did look at a wider swath of
6 things, but the overall conclusions -- also, I
7 think we were a little bit loathe to have a
8 different conclusion for each thing. So, we
9 were looking at general cardiovascular risk
10 status as an overall statement. But I think
11 we could --

12 MEMBER APPEL: I mean it is late
13 in the game. We had a question. We really
14 can't change it. But I am wondering, in the
15 conclusion, whether you could maybe ignore
16 blood pressure and maybe ignore inflammation
17 and just say with improved lipids or lipid
18 profile, something like that.

19 MEMBER PEARSON: Or maybe say
20 reduced cardiovascular risk as indicated by --

21 MEMBER APPEL: By lipids,
22 something like that.

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1 MEMBER PEARSON: Yes.

2 MEMBER APPEL: Because, otherwise,
3 they will think, oh, it's good for all these
4 things.

5 MEMBER PEARSON: Yes. Yes, but
6 that's what happened, is that the others were
7 pretty slim, not --

8 MEMBER APPEL: Well, they had been
9 done, but before 2005.

10 MEMBER PEARSON: Yes.

11 MEMBER APPEL: And there was no
12 evidence, and most people won't know --

13 MEMBER PEARSON: Right. That's
14 not where the issues are.

15 CHAIR VAN HORN: And this is
16 entirely predictable in the sense that each of
17 us played roles on each other's subcommittees
18 as well. So, the literature, it can't be
19 distinct for each chapter. It does have
20 implications across the board. And only when
21 we come together in a forum like this can we
22 kind of bring those things up to the surface.

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1 So, I think this is a totally appropriate
2 recognition of some of those additional
3 details that still can be resolved.

4 MEMBER NELSON: So, are we keeping
5 careful track of those changes that need to
6 happen? I mean these people are?

7 CHAIR VAN HORN: I have Anne
8 Rogers, I am sure, feverishly writing away
9 here. See her. Her arms is just on fire here
10 writing these things down.

11 (Laughter.)

12 MEMBER NELSON: Because I do think
13 those kinds of subtleties are really important
14 here.

15 CHAIR VAN HORN: Yes. Absolutely.
16 And everything is being recorded.

17 MEMBER PEREZ-ESCAMILLA: This is
18 Rafael Perez-Escamilla.

19 Tom, I have a question about the
20 unsalted nuts.

21 MEMBER PEARSON: I'm sorry.

22 MEMBER PEREZ-ESCAMILLA: Sorry for

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1 interrupting, Tom.

2 MEMBER PEARSON: Yes.

3 MEMBER PEREZ-ESCAMILLA: But the
4 question I have is about the unsalted nuts.
5 Is this because the studies were done with
6 unsalted nuts? Is it because you are
7 concerned about not promoting higher sodium
8 intake?

9 MEMBER PEARSON: This was --

10 MEMBER PEREZ-ESCAMILLA: Because
11 they are lightly salted, most --

12 MEMBER PEARSON: This was a
13 blatant attempt to escape Larry Appel's wrath.

14 (Laughter.)

15 MEMBER PEREZ-ESCAMILLA: Okay.

16 MEMBER PEARSON: Well, I think we
17 were talking about in the implications
18 frequently these are consumed as snack foods
19 with the salted form. Also, in other forms,
20 like peanut butter, there is tremendous
21 opportunities to go with less salt, which
22 oftentimes are not taken by the manufacturers.

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1 So, what we wanted to do in terms
2 of, in the same way that we are talking about
3 isocaloric, where calorie health issues are
4 not what we are talking about, we don't want
5 to be dragged into talking about the sodium
6 issue because that is really another working
7 group. We are talking about the fats and the
8 content of this food unadulterated by other
9 things that you could do to them. Really,
10 just talking about the risk associated with
11 the fatty acid constituents. So, that is what
12 we put.

13 So, it does kind of clutter up
14 things in terms of, you know -- but I think
15 the emphasis was that these could be an
16 unnecessary source of sodium. So, now we will
17 get some good words from Larry because we did
18 good.

19 MEMBER APPEL: Yes, you did great,
20 but it might be that the evidence focused on
21 nuts without specifying salt. So, you could
22 say, you know, you could drop "salted" and

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1 say, "In the context of other recommendations,
2 these should be unsalted versions," you know,
3 something like that --

4 MEMBER PEARSON: Yes.

5 MEMBER APPEL: -- which might be
6 technically more correct, you know.

7 MEMBER PEARSON: I think the
8 research was all over the board. I mean I
9 think there were all sorts of different -- I
10 mean there was just all the studies together
11 and some did and some didn't, and it really
12 wasn't -- but the idea for the recommendation
13 and conclusion was that this is what we are
14 talking about here. So, someone wouldn't say,
15 well, then, you can eat all the salted nuts
16 you want. That's not what we are talking
17 about.

18 MEMBER SLAVIN: This is Joanne,
19 and I want to just chime in here to kind of
20 take the heat off me later.

21 We had a lot of these whole food
22 questions, too, and they are really difficult

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1 because, when those studies are done, you are
2 counting servings of food, and it is as people
3 reported them as eaten. So, they're not
4 unsalted. You know, that's the reality.

5 So, I agree with Larry that
6 technically the answer is, in response to the
7 question, which the dietary recommendation
8 won't be to have salt all over the nuts, but
9 the studies as done in whole foods, that is
10 the way they are consumed, and that is just
11 part of the problem in doing these kinds of
12 whole food questions, that we kind of don't
13 like our answer, but when that's our question,
14 that's what we get.

15 MEMBER NELSON: But you can do the
16 context. You just put it in context.

17 MEMBER PEARSON: We had initially
18 put it in the implications only, and then it
19 was kind of recommended that it come up into
20 the recommendations as well. It was certainly
21 brought up early and often in the implications
22 section which we had, too.

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1 MEMBER SLAVIN: And it may be
2 better to have more of a policy that it
3 wouldn't be in the conclusion if you can't
4 tell from the question, but it could be in the
5 implication, just for consistency.

6 MEMBER NELSON: Except sometimes I
7 think you need, as we said earlier, there are
8 a couple of questions where you need some
9 context in the conclusion. I think that this
10 is one that you probably do. But it is pretty
11 simple. I mean, within the context of other
12 conclusions that we have here, it should be
13 without sodium.

14 MEMBER PEARSON: Well, as you saw,
15 we were the champions of context. I mean you
16 can see all the caveats we already have.

17 Anything else?

18 (No response.)

19 So, I have a couple of
20 announcements.

21 Shirley just hands me a note that
22 the Brenna/Lapillone paper is being printed,

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1 so you all will have it to look at.

2 I think this could be a very
3 important public health issue for us.

4 MEMBER RIMM: Yes, Joanne just
5 mentioned to me that that paper, that figure,
6 actually -- this is Eric Rimm -- was reprinted
7 from a Joseph Hibbeln article.

8 MEMBER PEARSON: Right.

9 MEMBER RIMM: So, it is actually
10 the Hibbeln article we should put in here,
11 instead of the Brenna article because Brenna,
12 I think, was just borrowing it.

13 MEMBER PEARSON: Because Hibbeln
14 isn't in here.

15 MEMBER RIMM: It's referenced in
16 here --

17 MEMBER PEARSON: Right. So, we
18 have the wrong reference --

19 MEMBER RIMM: But that figure
20 itself was originally printed by Joe Hibbeln.
21 Well, it is the right reference. He used it
22 also, but I think we should cite the original

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1 source.

2 MEMBER PEARSON: Right.

3 MEMBER APPEL: I think, though, I
4 can't at this point say include it or exclude
5 it, but I think you might consider excluding
6 it. It is so hit you over the head. It says
7 percent children. I don't know what the
8 Y-axis is. The Y-axis isn't explained.

9 MEMBER PEARSON: No, it is
10 quartile.

11 MEMBER APPEL: Percent children.

12 MEMBER PEARSON: It is the lowest
13 quartile, the percentage of kids that are in
14 the lowest quartile. So, if its more than 25
15 percent you're at risk. I think it is
16 straightforward.

17 MEMBER SLAVIN: But I agree with
18 Larry that, if you look at the last four
19 points, they are essentially the same, and you
20 have two at the end. So, I think it can be
21 really misinterpreted. So, I'm still I would
22 like to --

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1 MEMBER PEARSON: But I think there
2 is an asymptote above which it doesn't look
3 like there's any additional --

4 MEMBER RIMM: I mean we have a
5 similar figure a few pages before that for
6 these summaries of all the omega-3 articles
7 and cardiovascular disease. Not too
8 surprising, it looks very similar. There is
9 an asymptote at about 250 milligrams a day.
10 So, we should go back and look at the
11 original --

12 MEMBER PEARSON: Sure.

13 MEMBER RIMM: -- paper, just to
14 make sure, I agree. But if it is not clear,
15 or if it is too shocking, then we should take
16 it out.

17 MEMBER APPEL: Or is it a quartile
18 of that population or a standardized quartile?
19 So, I mean, this is a big deal.

20 MEMBER ACHTERBERG: That is what I
21 want to look at. Which kids? How was that IQ
22 measured? You know, looking at reliability,

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1 looking at that standard deviation, because
2 the implications here are huge, and we have to
3 pay attention not only to the nutrition side
4 of the equation, but that IQ side of the
5 equation in terms of quality of data and who
6 was sampled.

7 MEMBER PEARSON: Okay. Madam
8 Chairman, we are now 15 minutes early.

9 (Laughter.)

10 CHAIR VAN HORN: We are so proud
11 of you.

12 MEMBER PEARSON: We are 15 minutes
13 early of the original schedule.

14 CHAIR VAN HORN: Thank you to the
15 fatty acids group for catching us up.

16 Also, just to add to that final
17 discussion again, what we are doing now is
18 exactly what could be predicted, which is now
19 that we are all together and being able to
20 compare notes across these chapters, certain
21 things like these figures that maybe make
22 sense to the group that has been immersed in

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1 it for the last year and a half, and perhaps
2 doesn't come across the same way to everyone
3 else, does deserve a little additional
4 attention. So, just as we have said all
5 along, there are some unfinished issues that
6 we will continue to pursue after today before
7 this report is finalized.

8 Now, with that, what I would like
9 to do, Joanne, if you are up for this, is go
10 ahead with protein, and then we will take a
11 break before carbohydrate. Is that all right?

12 All right. So, Joanne Slavin,
13 take it away.

14 MEMBER SLAVIN: We are on to
15 protein. It is Joanne Slavin. I am the
16 Chair.

17 I want to thank my members, Cheryl
18 Achterberg, Xavier Pi-Sunyer, Linda Van Horn,
19 and also our wonderful staff, Jan, Eve,
20 Rachel, and Joan, for their assistance.

21 This protein presented a new
22 challenge because there was nothing. A lot of

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1 the other chapters there were sections in
2 2005. So, we started from scratch, and some
3 of the food groups are also in this. So, some
4 foods that we did as looking at foods, since
5 they were mostly protein foods, ended up in
6 this chapter. So, we have a bit of a mix of
7 types of studies here.

8 So, No. 1 question, animal protein
9 and health outcomes: what is the relationship
10 between intake of animal protein products and
11 selected health outcomes?

12 Some conclusions:

13 Modest evidence from prospective
14 cohort studies shows inconsistent
15 relationships between intake of animal protein
16 products, mainly red and processed meats, and
17 cardiovascular disease.

18 Our second conclusion: moderate
19 evidence found no clear association between
20 intake of animal protein products and blood
21 pressure in prospective cohort studies.

22 Limited inconsistent evidence from

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1 prospective cohort studies suggests that
2 intake of animal protein products, mainly
3 processed meats, may have a link to type 2
4 diabetes.

5 And there was insufficient
6 evidence available to link animal protein
7 intake and body weight.

8 Moderate evidence reports
9 inconsistent positive associations between
10 colorectal cancer and the intake of certain
11 animal protein products, mainly red and
12 processed meat.

13 Little evidence shows that animal
14 protein products are associated with prostate
15 cancer incidence. And what we had done with
16 removing the grades, we tried to get the three
17 descriptors in, and sometimes we had
18 difficulty changing the conclusion as it was.

19 So, in parens, that was a Grade III before.
20 So, limited is in there.

21 And we would certainly appreciate
22 anybody's suggestions for improving the

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1 wording on these.

2 Next, limited evidence from cohort
3 studies shows there is not an association
4 between an intake of animal protein products
5 and overall breast cancer risk. However, in
6 premenopausal and estrogen-receptor-positive
7 subjects, animal protein product intake may
8 alter risk for breast cancer.

9 So, that was the animal protein,
10 and we will talk now about plant protein and
11 health outcomes. What is the relationship
12 between vegetable protein and/or soy protein
13 and selected health outcomes?

14 Few studies are available, and the
15 limited body of evidence suggests that
16 vegetable protein does not offer special
17 protection against type 2 diabetes, coronary
18 heart disease, and selected cancers.

19 We have talked about this data at
20 previous meetings, and one of the problems in
21 the cohort studies that are available, there
22 are definitely very few vegans and very few

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1 vegetarians, and just the reporting in this
2 area is really difficult because sometimes
3 people will self-report as a vegetarian, but,
4 then, consume red meat or report consuming
5 animal products.

6 Moderate evidence from both cohort
7 and cross-sectional studies shows that intake
8 of vegetable protein is generally linked to
9 lower blood pressure.

10 Soy protein, we did soy protein
11 separately because there's many more feeding
12 studies and research in this area. Moderate
13 evidence suggests soy protein may have small
14 effects on total and LDL cholesterol in adults
15 with normal or elevated blood lipids, although
16 results from systematic reviews are
17 inconsistent.

18 A moderate body of consistent
19 evidence finds no unique benefit of soy
20 protein on body weight.

21 Limited evidence suggests that soy
22 protein may lower blood pressure in adults

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1 with normal blood pressure.

2 Then, just specifically vegetarian
3 diets and health outcomes: how do the health
4 outcomes of a vegetarian diet compare to that
5 of a diet which customarily includes animal
6 products?

7 Our conclusion: limited evidence
8 is available documenting that vegetarian diets
9 protect against cancer. However, there is
10 suggestive evidence that vegetarian, including
11 vegan, diets are associated with lower BMI and
12 blood pressure. Vegan diets may increase risk
13 of osteoporotic fractures.

14 Discussion and consensus?
15 Questions?

16 Eric?

17 MEMBER RIMM: This is Eric Rimm.

18 Can we go back to the slides on
19 red meat?

20 MEMBER SLAVIN: We can. Tell me
21 when you want to stop.

22 MEMBER RIMM: Well, no, right

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1 here. Stop here because this one says, for
2 the colon cancer, it says, "Moderate evidence
3 reports inconsistent positive
4 associations...."

5 Now can you go back a previous
6 slide to red meat?

7 Can I ask that "positive" be put
8 into the first conclusion on red meat?
9 Because this sounds like it is moderate
10 evidence and it is inconsistent, meaning -- I
11 don't even know the relationship.

12 MEMBER SLAVIN: Yes. I think what
13 happened, when we went in and made the changes
14 with these --

15 MEMBER RIMM: Yes, grades and
16 things like that.

17 MEMBER SLAVIN: -- with the
18 grades, leaving that, and putting the
19 moderate, you know, we tried to go with the
20 moderate, limited, strong descriptors.

21 MEMBER RIMM: Yes. Because it is
22 relatively positive for processed meats. So,

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1 maybe we can say, "Moderate evidence from
2 prospective cohort studies shows inconsistent
3 positive relationships." Because, otherwise,
4 the moderate and inconsistent, it is almost a
5 double negative.

6 MEMBER SLAVIN: No, it's I think
7 some of these, they get so weak with all the
8 descriptors, that that's --

9 MEMBER RIMM: Yes. Well, I wonder
10 if we could take out some of the descriptors
11 to make it --

12 MEMBER PEREZ-ESCAMILLA: I'm not
13 sure what "inconsistent positive relationship"
14 means.

15 MEMBER RIMM: Right.

16 MEMBER SLAVIN: Well, yes, I think
17 that's the problem, is that if it is
18 inconsistent, then it's -- yes, you are right.

19 That's where --

20 MEMBER PI-SUNYER: Why don't you
21 just say, "Moderate evidence shows positive
22 relationships"? Wouldn't the "moderate" cover

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1 it? Or do you think that is too strong?

2 MEMBER SLAVIN: If I go back, I
3 guess we need to, we probably need to go back
4 to what we were changing these from, which I
5 don't have in front of me, unfortunately,
6 right now. I guess I could go to -- because
7 before they were changed, where we were at,
8 just to make sure that we are not adding --

9 MEMBER RIMM: Yes, but I think
10 that recent meta-analyses that is in press was
11 pretty convincing that it is processed meats.

12 MEMBER SLAVIN: Correct.

13 MEMBER RIMM: So, you know, I
14 would say that that is less than inconsistent.
15 I mean it is more than just being
16 inconsistent though.

17 MEMBER ACHTERBERG: And this is
18 Cheryl, if I can add to it, too.

19 I don't have this analysis with
20 me, but I did some on this in terms of the
21 literature before. And when you break these
22 studies out, and you look at the whole, some

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1 show something; some don't. But when you look
2 at the sample sizes and the kind of designs,
3 my take on it was processed meats were
4 definitely related.

5 MEMBER SLAVIN: And I think for
6 certain areas there's differences in that,
7 too. But what we originally had was "Moderate
8 evidence from prospective cohort studies shows
9 inconsistent relationships between intake of
10 animal protein products and cardiovascular
11 disease, mainly red and processed meats."
12 That is where we were before.

13 MEMBER APPEL: This is Larry.

14 I think you do need to make it a
15 little bit more positive. I mean we have,
16 actually, a little bit of a problem in the
17 sense that the Total Diet chapter did a
18 literature review on vegetarian diets, and
19 most of them -- I don't have the actual
20 numbers -- showed a relationship with CVD.
21 So, I think that the context is it is pretty
22 likely, but it is not the most overwhelming

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1 evidence base.

2 MEMBER SLAVIN: And I think,
3 remember, too, how this was set up, that we
4 looked at animal protein products. So, it was
5 very broad, and the tables that are provided
6 in the chapter or in the portal, the other
7 ones, really, there was essentially no data
8 for other protein products. So, when you
9 look, you know, if you count up the number of
10 studies, it is not very strong.

11 Probably because of the way we
12 asked the question, not all studies look at
13 red and processed meats, either. So, there
14 are a couple of studies, but it is still
15 inconsistent for sure.

16 I think, as we go back into our
17 deliberations, too, there was at one point,
18 trying to say, well, we should just look at
19 meat and processed meat separately, and that
20 is not the way this review was done. So, that
21 this review was done on animal protein and
22 included everything. We have a bunch of

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1 studies, and it is all in the portal. I think
2 it will show clearly what we found.

3 MEMBER NELSON: This is Mim.

4 So, is it that it is inconsistent
5 with animal protein, and that there is a
6 modest evidence, though, when you break it
7 down into red and processed?

8 MEMBER SLAVIN: No.

9 MEMBER NELSON: Or it's
10 inconsistent across the board? Because I
11 think it is weird when you put -- I can't
12 figure out where the modifier here -- is it
13 inconsistent with red and processed meats? Or
14 is it inconsistent across the board?

15 MEMBER SLAVIN: There's none of
16 them that are consistent. I would say that
17 the more recent ones with red and processed
18 meat there's more, but that is not consistent,
19 either.

20 But the way we did this, if you go
21 in, there's certain things that come up on
22 these studies, depending on what type of food

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1 frequency and how people collect this
2 information. So, you have egg consumption.
3 There is white meat consumption. There is red
4 meat consumption. And there are people that
5 actually try to get at animal protein. So,
6 there are some studies that actually estimate
7 that. So, this is a very mixed dataset.

8 MEMBER PEARSON: Why can't you
9 just say there is no consistent evidence from
10 prospective cohort studies for relationships
11 between intake of animal proteins?

12 MEMBER NELSON: And leave out the
13 "red and processed meats"?

14 But that is what I am saying. Is
15 it inconsistent on just animal protein or is
16 there more evidence on red and processed
17 meats? Which I am hearing a disagreement in
18 the Committee. It sounds like there's sort of
19 inconsistent with animal protein, but more
20 evidence when you break it down into red and
21 processed meat.

22 MEMBER SLAVIN: I think there is

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1 more, but it is not consistent. And that's
2 the problem. It is definitely inconsistent.
3 There's none of those that you see, yes,
4 there's a relationship.

5 So, how to make this -- and all of
6 these, as we go through this, you will see
7 that every one of these were kind of, they are
8 different. Some of them have more data, but
9 the way we set this up, we have kind of our
10 exposure data is animal protein. So, it is
11 this broad range of exposure data.

12 And you're right that the types of
13 studies are very different. We tried to focus
14 on prospective studies.

15 MEMBER PEREZ-ESCAMILLA: Joanne,
16 this is Rafael Perez-Escamilla.

17 And this is not a comment for you,
18 but in general for the Committee because I
19 don't want to make things more complicated.
20 But when we use a term "inconsistent", it can
21 be inconsistent in terms of directionality; it
22 can be inconsistent in terms of some are

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1 statistically-significant and others are not;
2 it could be inconsistent in terms of effect
3 size. And it is really difficult, I think, to
4 know what we are dealing with.

5 MEMBER SLAVIN: Right. Yes.

6 MEMBER PEREZ-ESCAMILLA: Because
7 if we are talking about effect size,
8 statistical significance, but the vast
9 majority pointed in one direction; if we think
10 about a meta-analysis approach, the conclusion
11 may be very different than if it were
12 inconsistent because there is no relationship,
13 and some of them are positive, some negative,
14 and some neutral.

15 MEMBER SLAVIN: Yes, and I think
16 that is why there has been a movement away
17 from the word "inconsistent", but in this case
18 I think it is in there because it is the way
19 we asked the question; that is kind of where
20 we are.

21 I don't know, Linda, if you have
22 read through the summary of where we netted

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1 out, remembering this review. This was a
2 really hard review. I mean it was very
3 difficult because it hadn't been done before,
4 and we attempted to look at animal protein
5 products. And it was kind of in reference to
6 animal versus vegetarian, if you just asked
7 that question, what kind of results do you
8 get?

9 CHAIR VAN HORN: Right, but I do
10 think that, as Eric pointed out, when there
11 has been a specific animal protein documented,
12 which in this case has most frequently been
13 red and processed meat, those studies have
14 shown a positive association with
15 cardiovascular disease. At least that is what
16 it says in this chapter.

17 So, it would appear to me that,
18 if, in fact, going back to what Mim was
19 saying, you know, if the broader context is
20 animal protein, and there are inconsistent
21 data related to that, simply by virtue of the
22 way the data were collected, but, of all that

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1 data, the most consistent data appears to be
2 with animal protein, I mean with red meat and
3 processed meat, then I do agree that we need
4 to specify that independently, as you have
5 done in the chapter. I mean the chapter says
6 that. It is just the conclusion --

7 MEMBER SLAVIN: Yes. In the seven
8 articles, Eric, it looks like the nurses'
9 health study was not related to animal
10 protein, and Iowa women's health was not,
11 right.

12 MEMBER NELSON: But I think that
13 is what we are saying, is that it seems like
14 there is inconsistent with animal protein as a
15 whole, but there is more emerging or there is
16 more evidence that there is a positive
17 relationship with red and processed meat.

18 MEMBER SLAVIN: But I think we
19 probably didn't capture it or it may have to
20 do with previously -- if you look at the times
21 we looked, too, I am not sure, because we only
22 have, it looks like we had seven articles.

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1 So, that doesn't give us a lot of data.

2 MEMBER ACHTERBERG: Again, when
3 you look at methodologies that vary widely,
4 you are looking at food frequencies, and
5 sometimes they asked more detailed information
6 about what kind of meat people consumed, and
7 sometimes they didn't. But if I remember, and
8 I am doing this from memory, which is always
9 questionable, the larger studies did show a
10 relationship to processed meat, and a
11 smaller -- and I'm talking about tens of
12 thousands of people -- and the smaller studies
13 did not.

14 MEMBER SLAVIN: But I'm thinking,
15 too, Cheryl, that was stronger for colorectal
16 than it was for this area. Because of our
17 seven articles that we have here, the only
18 thing I see was when they substituted red and
19 processed meat for carbohydrate-dense foods,
20 then they found a relationship. So, yes.

21 MEMBER ACHTERBERG: I think you
22 may be right. The cardiovascular disease may

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1 be less clear.

2 But part of the problem with the
3 studies are the methodologies themselves and
4 how nuanced they were in finding out what kind
5 of meat and what kind of preparation people
6 used for those meats. And that is an
7 important future research note. We have to
8 collect that data, and it wasn't in most of
9 these studies.

10 MEMBER NELSON: This is Mim.

11 So, you couldn't put here there's
12 emerging evidence that within this category
13 red and processed meats --

14 MEMBER SLAVIN: I don't think we
15 have it in our review. So, if it is there,
16 we --

17 MEMBER NELSON: But Linda just
18 read it.

19 MEMBER SLAVIN: Well, I think in
20 cardiovascular disease, there really isn't
21 much in this review in those seven articles.

22 CHAIR VAN HORN: It says

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1 specifically, "A positive association between
2 red meat and processed meat in CVD mortality
3 was observed in the NIH AARP diet and health
4 study." And there's two references related to
5 that.

6 MEMBER SLAVIN: When they
7 substituted red meat for carbohydrate.

8 CHAIR VAN HORN: Yes.

9 MEMBER SLAVIN: So, in that type
10 of an analysis, they found it. But,
11 otherwise, it -- so, I think that is where
12 we're at. So, if we have some other
13 references that we could -- and I don't know,
14 Eric, what studies you're thinking of that we
15 missed in this.

16 MEMBER RIMM: Well, this is Eric
17 Rimm.

18 I think -- I don't know if I sent
19 this around to the whole Committee -- there is
20 an in press meta-analysis from a post-doc that
21 is working with Taheri Mozaffari, and it
22 actually summarized every paper on red meat

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1 and processed meat, and the association was
2 specifically for processed meat and
3 cardiovascular disease. So, it is in press.
4 I thought I sent it, but maybe I didn't. So,
5 I can send it to you to make sure that all the
6 articles are covered that are also in your
7 review.

8 But I mean it is hard to do it one
9 at a time, but it is when you put it all
10 together that I think the story is a little
11 bit stronger.

12 I'll send it to you.

13 MEMBER PEREZ-ESCAMILLA: I have
14 just a comment. Could you go to your last
15 slide, the one on vegetarian diet?

16 MEMBER SLAVIN: Sure. I just
17 wonder if anybody, you know, of these, and I
18 really appreciate even others that helped us
19 work through this, because each of these were
20 different endpoints, but they were essentially
21 the same data. I mean a lot of them are from
22 the same data. So, there is not a huge amount

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1 of studies here, amazingly enough.

2 I would say where, let's see, like
3 the colorectal cancer, I think that is the one
4 Cheryl was thinking of. There were more
5 positive, even though it wasn't consistent
6 there, there were more positive associations,
7 and it was more with red meat and processed
8 meat. So, that data was a little stronger.
9 But, otherwise, the rest is pretty limited.

10 So, which slide?

11 MEMBER PEREZ-ESCAMILLA: The last
12 one. You have the vegetarian diet.

13 MEMBER SLAVIN: Okay.

14 MEMBER PEREZ-ESCAMILLA: And you
15 have outcomes. And it is a very quick
16 question.

17 Because you have limited evidence
18 for cancer, and then you use a term, "however,
19 there is suggestive evidence...." So, that
20 means, suggestive evidence means it is
21 something stronger than limited or is it also
22 limited or is it moderate?

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1 MEMBER ACHTERBERG: The "limited"
2 here refers to quantity of work. So, there is
3 a very limited quantity of work to make
4 conclusions from. But when you look at it, it
5 is suggestive of.

6 MEMBER SLAVIN: Yes, there is
7 hardly any studies, in that most cohort
8 studies there's no vegans, and even the EPIC
9 study, where they really tried to include
10 people, it is still like 2 percent. You know,
11 it is a really low number. So, when you have
12 that few people in your cohort, and then you
13 try to look at things, there's not much to
14 see.

15 MEMBER PI-SUNYER: Can you change
16 that "there" to "it"? So, to know that you
17 are dealing with the same dataset? "However,
18 it is suggestive" rather than "however, there
19 is suggestive...." It sounds like that's
20 another dataset.

21 MEMBER SLAVIN: Yes, and I'm
22 thinking, I don't remember, Cheryl, through

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1 like our grades on this. I think that would
2 be that is not changing the data.

3 MEMBER ACHTERBERG: I think that's
4 fine.

5 MEMBER SLAVIN: Do you think
6 that's -- yes.

7 You know, there's a lot of lit, if
8 you go into this area, there's a ton of lit
9 reviews, and there's a lot of expert opinion,
10 but there's really very limited data. And
11 part of the reason is because, I know, Trish,
12 we've talked about this, that even in the
13 NHANES dataset people will say they're
14 vegetarians or vegans, and then they report
15 eating animal products. So, most people in
16 the U.S. for sure, like 98 percent, I think
17 the ADA position paper said it was less than 2
18 percent of people are actually vegetarians.
19 Then, within that, the vegan group is much
20 smaller. So, we have a real limitation on
21 data here, on numbers.

22 MEMBER APPEL: This is two

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1 comments. One is sort of a semi-process, but
2 it could create problems.

3 In the dietary patterns chapter,
4 we do a search on vegetarian diets and CVD and
5 total mortality, and we say there are five
6 papers, and they are all show a reduced risk
7 of CVD. One is a meta-analysis. I think we
8 need to go through those.

9 So, I am worried about one chapter
10 doing this, and then we have this big chapter
11 that is our focus that has one question that
12 is done a little bit differently. So, I think
13 this just has to be a note we have to
14 reconcile. So, that is one thing, and I don't
15 think we need to decide.

16 The second -- yes, go ahead.

17 MEMBER ACHTERBERG: May I answer
18 that?

19 We were boxed in by the question.

20 The question was vegetable protein. It
21 wasn't vegetarianism. It wasn't a vegetarian
22 diet. It was vegetable protein. And it was

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1 the question that tied our feet together.

2 MEMBER APPEL: But this conclusion
3 is about vegetarian diet. So, even if your
4 question started out --

5 MEMBER SLAVIN: Well, we actually
6 had another question on vegetarian diets that
7 was essentially a collapser, and part of it
8 was because we just didn't have data. I mean
9 if you look at that table, as I recall,
10 there's only like three studies that came up,
11 but we can go in. It will all be in the
12 portal, of what that was based on.

13 CHAIR VAN HORN: Well, I think
14 Larry's point is that one search on this same
15 question, i.e., vegetarian diets and
16 cardiovascular disease, yielded five studies,
17 five papers.

18 MEMBER SLAVIN: And that will be
19 in the portal, too, with an NEL review?

20 MEMBER APPEL: This is part of the
21 ambiguity of the dietary pattern section, is
22 that we went through the NEL process, but we

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1 did not have a conclusion about each of the
2 few questions we've had.

3 MEMBER ACHTERBERG: And what year
4 did that review start with, Larry?

5 MEMBER APPEL: I believe, Joanne,
6 it was unrestricted.

7 MEMBER ACHTERBERG: That's the
8 difference.

9 MEMBER APPEL: Yes.

10 MEMBER ACHTERBERG: That's the
11 difference. That's why we have three, and you
12 have five.

13 CHAIR VAN HORN: Okay.

14 MEMBER NELSON: This is Mim.

15 I wonder -- sorry to come back to
16 the contextual -- I mean I was thinking about
17 a conversation that we had with Cheryl last
18 night. If this is a place where, however, in
19 the context of an eating pattern that is lower
20 in animal protein or lower in animal products,
21 there's other health benefits that are seen.
22 I wonder if you do the contextual piece, so

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1 that it can band-aid it a bit, so that we are
2 not in conflict with the earlier.

3 And I think the same is going to
4 happen; we are going to see with the fruits
5 and vegetables that, if you are just focusing
6 on one little thing as opposed to a dietary
7 pattern that has lots of fruits and
8 vegetables, it is a different way that you are
9 addressing it. There might be a way to refer
10 back and put it into context of a pattern of
11 eating.

12 CHAIR VAN HORN: That was the
13 whole point of the Total Diet chapter, if you
14 think about it.

15 MEMBER NELSON: Well, I know, but
16 I am wondering, with these questions --

17 CHAIR VAN HORN: Yes.

18 MEMBER NELSON: -- if there is a
19 way to add a little bit of context to them,
20 then they are not in disagreement.

21 CHAIR VAN HORN: Right.

22 MEMBER SLAVIN: But I think one of

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1 the things, Mim, is the average person eats
2 animal products. Like your data, there are
3 very few vegetarians, vegans.

4 MEMBER NELSON: I am not saying
5 anything about that. I'm just saying, not
6 this question, the other question --

7 MEMBER SLAVIN: But, you know, if
8 you look at animal protein and vegetable
9 protein, almost everybody -- and then how do
10 you get at that? I think we made a pretty
11 good attempt to be inclusive. Let's look at
12 these questions that way, and it is only one
13 way of asking the question. So, yes.

14 MEMBER NELSON: Oh, yes, I know.
15 I think it is the boxed-in is the issue. I
16 mean, Cheryl, you said it. You get boxed-in
17 and then you can't look at it in context. I
18 just think that there may be reasons with the
19 conclusions here to add a tiny bit of context,
20 so that we don't look like we are
21 contradicting ourselves.

22 CHAIR VAN HORN: It might be

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1 useful at this point, because, of course, a
2 lot of this chapter was written before the
3 Total Diet chapter, since that was written at
4 the end, and maybe what we do is, again,
5 cross-reference these studies in a way that
6 suggests that, while the focus of this chapter
7 was on protein only, there are additional data
8 that advocate or provide further support for
9 the benefits of a vegetarian, more vegetarian
10 type of eating pattern, or something like
11 that. That way, you include both.

12 Yes, Tom?

13 MEMBER PEARSON: I am still
14 confused. I think for all of the sections I
15 think our wording, I don't think it is a
16 moderate or strong evidence issue. But under
17 the plant protein, the soy protein
18 conclusions, if you could go to the last one
19 there, don't you really want to say evidence
20 is limited that soy protein may lower blood
21 pressure? Isn't that what you want to say?

22 This suggests that there's limited

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1 evidence, suggests that it may be in fact so.

2 So, for many of these statements on limited,
3 I can't tell what you want to say, frankly.
4 So, I think, for all of us, if it limited, it
5 is a statement you can't support. There isn't
6 anything out there. It's inconsistent or --

7 CHAIR VAN HORN: Right.

8 MEMBER PEARSON: -- it's just not
9 existent. But I think we have to be clear
10 because this one suggests, if I were saying,
11 well, gee, it looks like there's a little of
12 evidence to say that this works --

13 MEMBER SLAVIN: This is a Grade
14 III, doesn't mean there isn't any evidence.
15 If you read through where that came from,
16 that's what it was. It was a Grade III. So,
17 that is how it got to limited.

18 MEMBER PEARSON: Well, but a Grade
19 III says that evidence is insufficient to
20 suggest that soy protein lowers blood
21 pressure. That is what a Grade III means.

22 MEMBER SLAVIN: And I think in the

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1 translation that is where we end up, I mean,
2 because --

3 MEMBER PEARSON: Well, I think the
4 translation is problematic then. I mean I
5 think we need to be standardized because I
6 can't --

7 CHAIR VAN HORN: Yes, what you are
8 hearing, I believe, is that one interpretation
9 of this is there are insufficient data to make
10 a strong relationship, point out a strong
11 relationship, whereas the other says, of the
12 data that is available, it looks like there's
13 a relationship, and those are very different
14 implications.

15 MEMBER PI-SUNYER: There were
16 three RCTs and they were all positive. That's
17 not bad.

18 MEMBER SLAVIN: For? Are you
19 talking about body weight or --

20 MEMBER PI-SUNYER: I am talking
21 about soy protein and blood pressure. You
22 have here three RCTs and they are all three

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1 positive on page 20. On page 20, you have
2 there are three RCTs, and they are all three
3 positive, as far as I can see. I guess Leiou
4 is negative, but the others --

5 MEMBER SLAVIN: Yes, it is
6 definitely mixed. Then, the conclusion is
7 that there's a little bit of data that
8 vegetable protein plays a role, that soy
9 protein is different. You know, better is not
10 there. So, it doesn't have a unique benefit.

11 I think that is probably where the conclusion
12 was a while ago, which is the last statement.

13 Yes, soy protein does not appear to have any
14 unique benefits in blood pressure control.
15 That is probably the perfect thing, but it
16 doesn't fit the format. So, it got lost
17 probably.

18 VICE CHAIR FUKAGAWA: This is
19 Naomi.

20 I really do think that we have
21 been boxed-in by trying to become too uniform,
22 and we are losing the nuances of the messages

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1 that we are trying to get across. I think
2 that is where we are getting stuck.

3 MEMBER PI-SUNYER: This is Xavier.

4 Maybe that last sentence, soy
5 protein does not appear to have unique
6 benefits in blood pressure control, would be
7 the right conclusion.

8 MEMBER PEARSON: I could
9 understand that.

10 CHAIR VAN HORN: That appears to
11 be what --

12 MEMBER SLAVIN: That is the best
13 statement.

14 CHAIR VAN HORN: Right.

15 MEMBER APPEL: This is Larry.

16 But that has to be placed in the
17 context of another conclusion, which is there
18 is moderate evidence that protein from
19 vegetable sources lowers blood pressure. And
20 then a qualifier to that is that soy protein
21 doesn't have any magical benefit.

22 CHAIR VAN HORN: So, it is just

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1 the same as lipids, yes, right.

2 MEMBER APPEL: You might want to
3 put those in the same conclusion, just to make
4 it --

5 MEMBER SLAVIN: But is somebody
6 keeping track of this? Because I think these
7 are subtleties that are important.

8 MEMBER PEARSON: I think -- this
9 is Tom -- the word "suggests", what is limited
10 evidence suggests, I think we need to --
11 limited evidence is available; limited
12 evidence is -- but when you put that
13 "suggests" as a positive connotation, to me,
14 limited evidence is available is a negative
15 connotation.

16 CHAIR VAN HORN: Yes. Or there is
17 limited evidence, and that's it.

18 MEMBER SLAVIN: And it is
19 different. So, I think that is why soy is
20 sitting out here by itself, is there's many
21 more feeding studies and intervention studies
22 as opposed to the vegetable protein, which is

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1 all EPI studies. So, that is, I think, why it
2 got split out. That was the goal in splitting
3 it out originally, but --

4 CHAIR VAN HORN: Right, but,
5 again, it draws unfair advantage, so to speak,
6 to soy, as though it did have some unique
7 properties related to vegetable protein, when,
8 indeed, we have no ability to state that
9 because other vegetable protein studies
10 haven't been published or we don't have access
11 to them. So, it is simply an issue of volume
12 and capacity.

13 MEMBER SLAVIN: And do we have
14 agreement, then, that the conclusions don't
15 have to have those three words? Because that
16 is kind of what we are agreeing to right here.

17 CHAIR VAN HORN: Yes.

18 MEMBER SLAVIN: So, does everybody
19 agree to that?

20 CHAIR VAN HORN: That is why we
21 started this discussion with that exact issue
22 because we knew there would be times, and this

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1 is one of them, where those don't apply well
2 enough.

3 MEMBER PEREZ-ESCAMILLA: This is
4 Rafael.

5 But I think this is an example
6 where the problem is not with the word
7 "limited"; it is with the word "suggests". I
8 really don't think that this has much to do
9 with the fact that we are boxed-in. I just
10 don't think we are. I think those base
11 reviews are mostly based on five categories.
12 We chose not to go into the fourth and the
13 fifth, and that is the language that the World
14 Cancer Research Fund used for the first three.

15 MEMBER SLAVIN: So, if we got rid
16 of "suggests" there, Rafael, would you be okay
17 with that?

18 MEMBER PEREZ-ESCAMILLA: That is
19 what we are trying to say, yes.

20 CHAIR VAN HORN: Yes, that is a
21 statement of fact, "limited evidence", there
22 is limited evidence that soy protein may lower

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1 blood pressure.

2 MEMBER SLAVIN: Yes, I think that
3 could easily go, yes.

4 CHAIR VAN HORN: Period.

5 MEMBER SLAVIN: "There is" was
6 already cut out. We have been down that path.
7 So, I have already been spanked for that, and
8 I don't like that one anyway.

9 (Laughter.)

10 So, I agree that is not every
11 strong.

12 CHAIR VAN HORN: No. Yes, take
13 out the word "suggests".

14 MEMBER SLAVIN: Just get rid of
15 "suggests", and then we're okay?

16 VICE CHAIR FUKAGAWA: This is
17 Naomi.

18 I wanted to get back to that
19 statement about vegan diets increasing the
20 risk of osteoporotic fractures because it
21 really is in the context of a low calcium
22 intake, not that the vegetable protein or that

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1 orientation increases --

2 MEMBER SLAVIN: Right, right.
3 Yes.

4 MEMBER NELSON: Does that really
5 need to be there?

6 VICE CHAIR FUKAGAWA: I think I
7 would either strike that statement out or
8 qualify it because vegan diets, it is really
9 the relationship to calcium intake, at least
10 my memory of those studies.

11 MEMBER SLAVIN: Those studies,
12 that is probably the strongest finding.
13 Actually, as I recall, it is stronger than the
14 lower BMI and blood pressure as a finding.

15 VICE CHAIR FUKAGAWA: Yes.

16 MEMBER SLAVIN: So, it kind of
17 needs to stay if they are there, really.

18 VICE CHAIR FUKAGAWA: But most of
19 this is EPIC, right?

20 MEMBER SLAVIN: Pardon?

21 VICE CHAIR FUKAGAWA: A lot of
22 this is the EPIC database?

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1 MEMBER SLAVIN: Absolutely. Yes.

2 VICE CHAIR FUKAGAWA: And that is
3 the correlation from the vegan diet with
4 fractures was largely related not so much to
5 protein per se as much as to calcium, but it
6 is interrelated.

7 MEMBER APPEL: This is Larry.

8 I don't think you want to say it,
9 but it is also potentially sodium because
10 increased sodium -- everything comes back to
11 sodium. No.

12 (Laughter.)

13 But increased sodium increases
14 calcarea, well-documented. Everybody knows
15 it. So, if you don't have a lot of calcium,
16 and vegetarians consume similar amounts of
17 sodium as everybody else, so it is actually a
18 double-whammy potentially.

19 CHAIR VAN HORN: That's right, it
20 is. And that is the other reason why, again,
21 the food modeling issue becomes so relevant to
22 each of these chapters, because no one is

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1 suggesting you can't be nutritionally adequate
2 on a vegan diet, including dietary calcium,
3 but you have to ensure that dietary calcium
4 sources are there.

5 MEMBER SLAVIN: And I think also,
6 Linda, just that the vegan is either great or
7 it is horrible, just like all diets. So, it
8 doesn't say that the diet is good. It can be
9 low in protein. It can be low in calcium. It
10 can be low in everything.

11 So, I think that is why that is up
12 there, that people --

13 MEMBER NELSON: This is Mim.

14 In the implication part, I am
15 assuming you say it is most likely because of
16 low calcium and other factors? I mean lower
17 protein, it may be because it is lower
18 protein, too, which may be a factor? All of
19 those factors, it may not be the vegan --

20 MEMBER SLAVIN: Yes, it is on page
21 23, the implications.

22 MEMBER NELSON: Okay.

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1 MEMBER SLAVIN: And I think these
2 were all cut out for lack of time. The point
3 there is few studies, a lot of amino acids,
4 obviously, differences between animal and
5 plant proteins, and limiting amino acids are
6 in there. And it is more complementary
7 protein. So, we probably need to make some
8 implications about other nutrients that could
9 be lacking.

10 MEMBER NELSON: Yes.

11 MEMBER SLAVIN: As it is, it is
12 not there.

13 MEMBER NELSON: Okay.

14 CHAIR VAN HORN: Or something
15 about, just a statement regarding attention to
16 nutrient adequacy is important in consuming a
17 vegan diet. All of them, it is not just -- I
18 mean it is iron; it is B12. There are other
19 nutrients that could be a problem in vegan
20 diets.

21 MEMBER SLAVIN: Right. And I also
22 think with the lower calories, as we tell

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1 people to lower calories and protein as both
2 the percentage and protein quality becomes
3 important. So, that is kind of a difficult
4 message to get across here, too.

5 MEMBER ACHTERBERG: So, to be
6 consistent with the nutrient adequacy chapter,
7 what we probably need to say in the
8 implications is there are certain nutrient
9 concerns related to vegan diets, comma, give
10 them the list, right? Then, that ties back to
11 the other chapter.

12 MEMBER APPEL: This is Larry.
13 Could we go to the conclusion on
14 animal products and breast cancer risk,
15 because there is some language in it that is a
16 bit difficult?

17 MEMBER SLAVIN: Yes.

18 MEMBER APPEL: So, it is the
19 second part, the "however, in premenopausal
20 and estrogen-receptor-positive subjects,
21 animal protein product intake may alter
22 risk...." So, first, I need directionality,

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1 but, then, there are other two aspects of
2 this.

3 It is estrogen-receptor-positive
4 is a clinical; that is a cancer subgroup.
5 Okay? That typically is post-menopausal
6 women. Then you have premenopausal before
7 that. So, are you talking about in
8 premenopausal women without breast cancer and
9 estrogen-receptor-positive women with a prior
10 history of breast cancer? Because it doesn't
11 really make sense to me. I just don't
12 understand it.

13 MEMBER SLAVIN: I don't know if,
14 Cheryl, you want to talk? And then, I can
15 follow up.

16 MEMBER ACHTERBERG: This is
17 Cheryl.

18 This really comes out of the AICR
19 report as much as anything else. Breast
20 cancer, there are lots of different kinds of
21 breast cancers.

22 MEMBER APPEL: Sure.

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1 MEMBER ACHTERBERG: Put it that
2 way. And so, when you look at particular
3 kinds of breast cancer, there is a relation
4 for these two types, those two different
5 types.

6 MEMBER SLAVIN: In certain studies
7 that measured that.

8 MEMBER APPEL: But is this limited
9 to women who have had breast cancer? Because
10 it is also funny, too, because premenopausal
11 women tend to have estrogen-receptor-negative,
12 and then you say estrogen-receptor-positive.
13 So, it looks like you're accompanying --

14 MEMBER ACHTERBERG: It is two
15 different kinds. It is two groups.

16 MEMBER SLAVIN: So, premenopausal
17 women with breast cancer and estrogen-
18 receptor-positive subjects with breast cancer,
19 there was some link there. Otherwise, there
20 was nothing.

21 MEMBER RIMM: Then you could say
22 "then, also in". Instead of saying "and",

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1 just say, "in premenopausal and also in
2 estrogen-receptor-positive".

3 MEMBER ACHTERBERG: That would
4 help.

5 MEMBER APPEL: Or, "however, in
6 women who have had breast cancer" --

7 MEMBER SLAVIN: But this is all
8 cohort studies, EPI. So, it is all breast
9 cancer people for sure.

10 MEMBER WILLIAMS: When you say,
11 "alter risk", do you mean "increase risk"?

12 MEMBER APPEL: See, this is funny.
13 The first half reads like primary prevention,
14 animal protein and whether you develop breast
15 cancer, and the second half looks like it is
16 dealing with people who have disease. You
17 don't get estrogen-receptor-positive unless
18 you have a disease and you have been biopsied.

19 It is a very --

20 MEMBER SLAVIN: That's true.

21 MEMBER APPEL: Yes.

22 MEMBER SLAVIN: That's true.

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1 There's two, you know, like, overall, there's
2 no risk. If you would just look at breast
3 cancer and animal protein products, it
4 doesn't, as Eric would say, nothing lights up.

5 But there are some studies where, when they
6 looked at premenopausal with certain types of
7 animal protein --

8 MEMBER APPEL: It's incidence.
9 It's still incidence.

10 MEMBER ACHTERBERG: Yes, it's
11 incidence, yes.

12 MEMBER RIMM: It's among the
13 subject people who get estrogen -- sorry. It
14 is still incidence. This is not survival
15 among people with breast cancer. It is
16 looking at, if you stratify -- overall, there
17 is no association. If you stratify and say I
18 am just going to look in premenopausal women
19 or women who ultimately got estrogen-receptor-
20 positive breast cancer, in that group there is
21 an association.

22 MEMBER APPEL: Okay. Now I get

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1 it. But, then, it should be, "however, in
2 premenopausal women animal protein intake may
3 increase the risk of estrogen-receptor-
4 positive breast cancer."

5 MEMBER SLAVIN: Only if they have
6 breast cancer. I mean that is what is
7 confusing, yes.

8 MEMBER APPEL: Oh, okay, but I
9 think this is --

10 MEMBER SLAVIN: Yes. And when you
11 look at this literature, it is really hard to
12 come up with a conclusion here because,
13 overall, no difference, and there's just these
14 two couple of studies that actually measured
15 this. So, most studies don't measure it. So,
16 there's only a little bit of data, but that's
17 the only relationship.

18 So, I don't know if it is better
19 not even to have it because it may confuse
20 more than enlighten where we are at here.

21 MEMBER ACHTERBERG: I guess this
22 is "Survivor". I want to see it in there.

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1 (Laughter.)

2 Thank you.

3 I think maybe what we ought to be
4 saying is, "however, animal protein product
5 intake may increase risk for premenopausal
6 breast cancer and for estrogen-receptor-
7 positive breast cancer." That's what the
8 evidence says.

9 MEMBER NELSON: This is Mim.

10 That is not in conflict with the
11 first statement? Because the first statement
12 says, overall, there is no relationship.

13 MEMBER ACHTERBERG: For overall
14 cancer, if you lump it all together.

15 MEMBER NELSON: It says breast
16 cancer.

17 MEMBER SLAVIN: Right, right.

18 MEMBER ACHTERBERG: But it's lots
19 of different diseases. So, if you lump it all
20 together, you don't see it.

21 MEMBER PI-SUNYER: Yes, but
22 premenopausal women includes a lot of the

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1 women. So, they would be included in your
2 first sentence, and you are including them
3 also in --

4 MEMBER NELSON: I think the
5 question is, the second one is only, correct,
6 estrogen-positive-receptor types of cancer.

7 MEMBER SLAVIN: You know what? It
8 might be good, Mim, if we just split it.

9 MEMBER NELSON: I think it has to
10 be split.

11 MEMBER SLAVIN: It would be
12 clearer because, as it is right now, it is too
13 confusing.

14 MEMBER NELSON: Just do two
15 sentences, period, full stop, and then --

16 MEMBER SLAVIN: And then, maybe
17 like in one large prospective study blah, that
18 that's exactly what --

19 MEMBER NELSON: Yes, I think if
20 you do that, there's more clarity.

21 MEMBER SLAVIN: Yes. Yes.
22 Because, as it is, it is too confusing.

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1 MEMBER NELSON: Yes.

2 CHAIR VAN HORN: Okay, that would
3 be good. So, are you able to make those
4 distinctions, Cheryl, Mim? Just make two
5 separate bullets out of that.

6 MEMBER SLAVIN: Are you guys
7 taking notes? I'm taking some notes.

8 MEMBER NELSON: This is not my --

9 MEMBER PEARSON: So, the first
10 part is going to read, "Evidence from cohort
11 studies shows no association...."

12 MEMBER NELSON: "Limited
13 evidence".

14 MEMBER PEARSON: Well, it is the
15 same problem.

16 MEMBER NELSON: Yes.

17 MEMBER PEARSON: "Limited" doesn't
18 help me there.

19 MEMBER NELSON: Well, it would
20 say --

21 MEMBER PEARSON: "Evidence from
22 cohort studies shows that there's not an

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1 association...."

2 MEMBER SLAVIN: It was a Grade
3 III.

4 MEMBER PEARSON: So, we are back
5 to the double entendre here. So, "limited"
6 doesn't help me. It is, "Evidence from cohort
7 studies shows that there's not an association
8 between intake of animal protein...."

9 MEMBER NELSON: But I think it is
10 okay to say there is limited evidence. Isn't
11 there?

12 MEMBER SLAVIN: But if you want to
13 get rid of "limited", I think it is okay
14 because there's no association -- you know, I
15 think this is, when you are modifying nothing,
16 what have you got?

17 MEMBER NELSON: No, but if you do
18 that --

19 MEMBER SLAVIN: No?

20 MEMBER NELSON: -- then you could
21 have three studies that say there isn't a
22 relationship or you could have fifty. If

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1 there was fifty, there would be strong
2 evidence that there's no relationship. If
3 there's a couple of studies that show no
4 relationship, but there's limited evidence. I
5 think you have got to be a little careful.
6 Otherwise, you don't know if there's tons of
7 evidence that shows there's no relationship or
8 there's very small amount of evidence that
9 shows there's no relationship.

10 MEMBER SLAVIN: You can see No. 2
11 was prostate cancer. When we tried to put
12 these in this different format, that is why
13 that one looks -- that one, there is virtually
14 nothing there. So, there is not much
15 evidence, and it is a Grade III.

16 MEMBER NELSON: Isn't there
17 moderate evidence that there's no --

18 MEMBER SLAVIN: There's not.

19 MEMBER NELSON: -- relationship?

20 MEMBER SLAVIN: No.

21 MEMBER NELSON: There's only a
22 couple of studies?

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1 MEMBER SLAVIN: Yes. And I think
2 this "limited", "little", all these things,
3 what are they describing? I think Rafael is
4 saying that that's the problem we're having.
5 You know, are we describing the number of
6 studies, the types of studies? There's so
7 many descriptors here.

8 MEMBER NELSON: But that's where
9 consistent or inconsistent comes into play.

10 MEMBER PEARSON: See, what it is
11 is that evidence from a limited number of
12 cohort studies shows there's not an
13 association between animal protein --

14 MEMBER SLAVIN: I think there's
15 quite a few, though, Cheryl, right? I don't
16 have it right in front of me, but --

17 MEMBER NELSON: But you just said
18 there were three.

19 MEMBER SLAVIN: That's for
20 prostate, yes.

21 MEMBER NELSON: Oh.

22 MEMBER SLAVIN: Breast, there's

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1 much more.

2 MEMBER NELSON: That's why I said
3 I think it is a moderate, I thought there was
4 a moderate amount of studies that show there's
5 no relationship.

6 MEMBER PEARSON: You didn't tell
7 me, then, there is limited evidence. You said
8 there's a lot of studies; there's a lot of
9 evidence. So, this statement isn't true.

10 MEMBER ACHTERBERG: There are six
11 studies on the breast cancer. And again --

12 MEMBER SLAVIN: Since 2004.

13 MEMBER ACHTERBERG: Since 2004.
14 And different studies evaluated different
15 outcomes. So, in some cases they looked at
16 pre- and post-menopausal; in other cases they
17 didn't. In some cases they looked at estrogen
18 sensitivity; in other cases they didn't.

19 So, when you look at the
20 literature, it is spotty.

21 MEMBER PEARSON: I wasn't talking
22 about the second --

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1 MEMBER SLAVIN: So, maybe mixed
2 evidence, I mean because all the studies are
3 done differently. That is why I think for
4 cancer on a lot of these things --

5 MEMBER PEARSON: So, inconsistent
6 evidence.

7 MEMBER NELSON: Well, if you say
8 "inconsistent" --

9 MEMBER SLAVIN: But it is
10 consistent that animal protein products aren't
11 the link.

12 MEMBER NELSON: Yes, but, then, I
13 wouldn't say "mixed" or "inconsistent" because
14 it sounds like --

15 MEMBER SLAVIN: Like you are
16 talking about the study.

17 MEMBER NELSON: There is either a
18 limited amount of evidence or there is a
19 moderate amount of evidence. It is one or the
20 other that shows there's no relationship. I
21 mean that's it.

22 MEMBER ACHTERBERG: Well, if you

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1 look at the paragraphs on the bottom of page
2 15 and 16 in our notebooks, you will see how
3 this breaks out.

4 MEMBER APPEL: This is Larry.

5 I mean I pulled up this report,
6 you know, the big, thick one that actually did
7 everything. Can we just lift their
8 conclusion? Because they actually say that no
9 conclusion was reached on the relationship of
10 meat, poultry, or whatever, and breast cancer,
11 and just cite the report, rather than --

12 CHAIR VAN HORN: Except there were
13 three new studies that were reviewed because
14 that report ended in 2007 or 2008, I think,
15 and we have now studies from 2009, three
16 studies from 2009 and one from 2008, one from
17 2007.

18 MEMBER NELSON: Then it sounds
19 like it is more moderate. It sounds like
20 there is a moderate amount of evidence that
21 shows there's no relationship.

22 MEMBER SLAVIN: Yes, and I think

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1 that what there is is what we have talked
2 about, that it might depend on your status; it
3 might depend on what type of meat. You know,
4 there's a little bit of data that has come in
5 since 2004 that wouldn't exactly go along with
6 that. You know there might be some lights
7 that are lighting up that we would miss. So,
8 I think that is why we wrote it the way we
9 did, but we could just say there's limited or
10 we can say moderate evidence that there is not
11 an association with overall breast cancer
12 risk.

13 I don't know, Cheryl, you have
14 been on this, too.

15 MEMBER ACHTERBERG: Yes, I guess I
16 will go along with the overall, but some
17 evidence suggests a differential effect,
18 depending --

19 MEMBER NELSON: Yes, that's good.
20 Then I think you should qualify it. Put
21 "overall", and then qualify where there is
22 some evidence.

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1 MEMBER ACHTERBERG: That is kind
2 of what we tried there.

3 MEMBER SLAVIN: Right.

4 MEMBER ACHTERBERG: That is almost
5 exactly what we tried to do.

6 MEMBER NELSON: But it may need to
7 be there's a moderate amount of evidence, and
8 then you come to full stop. Then you say, you
9 know, from a couple of emerging studies or
10 new studies there's evidence with X, Y, and Z.
11 Then it is just clearer, the nuances.

12 I agree with Naomi a lot. I think
13 we have to be really careful. We get to like
14 distill it down so far that -- the nuances are
15 actually what are some of the most interesting
16 parts here.

17 MEMBER SLAVIN: How about if we go
18 with "Evidence from cohort studies shows there
19 is no association between intake of animal
20 protein products and overall breast cancer
21 risk."? And then full stop, and then,
22 "however", yes, kind of where we are at there.

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1 MEMBER NELSON: But I think you
2 need either a limited or moderate for the no
3 association. We are saying, if it is pretty
4 consistent, but it is either limited or
5 moderate, you can put one of those in for the
6 no association overall. Then, it qualifies,
7 you know, there's either a couple of studies
8 or there's quite a few.

9 VICE CHAIR FUKAGAWA: So, after
10 your full stop -- this is Naomi -- you could
11 say, "however, in selected populations" or "in
12 subgroups of patients with...."

13 MEMBER SLAVIN: And then just
14 parens maybe?

15 VICE CHAIR FUKAGAWA: Yes.

16 MEMBER SLAVIN: Premenopausal.

17 VICE CHAIR FUKAGAWA: Yes, with
18 breast cancer because that is the point,
19 right, they have breast cancer?

20 MEMBER SLAVIN: Yes.

21 VICE CHAIR FUKAGAWA: They have
22 breast cancer --

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1 MEMBER SLAVIN: Right.

2 VICE CHAIR FUKAGAWA: -- which is
3 why we know they are one way or the other.

4 MEMBER SLAVIN: Right.

5 VICE CHAIR FUKAGAWA: They are
6 survivors.

7 MEMBER SLAVIN: Right.

8 VICE CHAIR FUKAGAWA: Then, in
9 that case, you know, there may be a
10 relationship.

11 MEMBER SLAVIN: Right. Right.

12 CHAIR VAN HORN: Yes, that
13 clarifies. Yes, that would be good.

14 MEMBER SLAVIN: Excellent. Other
15 questions on this?

16 MEMBER APPEL: This is Larry.

17 I wonder, I don't know if we had a
18 plan after the CVD, you know, how to deal with
19 that. I just want to make sure that we do
20 because I am a little bit worried because I
21 have that piece in the dietary patterns
22 section.

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1 MEMBER SLAVIN: And it probably
2 will come up with milk, too. We haven't
3 gotten there yet.

4 CHAIR VAN HORN: Well, we added
5 the word "positive", thanks to Rafael. I
6 think he wanted to include the word "positive"
7 relationship between intake of animal protein
8 products, mainly red and processed meat, and
9 cardiovascular disease, because there was no
10 direction provided. That was the point that
11 was made earlier.

12 MEMBER APPEL: So, is that just
13 the resolution? Just add "positive" to that
14 question, and then --

15 CHAIR VAN HORN: That was what we
16 came up with. Now, if somebody wants to come
17 up with an alternative to that?

18 MEMBER RIMM: Because it matches
19 the colon cancer.

20 CHAIR VAN HORN: Right, the
21 cardiovascular disease.

22 MEMBER NELSON: So, we will say,

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1 "inconsistent positive"? Is that how it is
2 going to read?

3 CHAIR VAN HORN: It says,
4 "moderate evidence from prospective cohort
5 studies shows inconsistent positive
6 relationships between intake of animal protein
7 products...."

8 MEMBER SLAVIN: Yes, I think
9 modifying "positive" with "inconsistent" is
10 not helpful.

11 CHAIR VAN HORN: So, take out --

12 MEMBER RIMM: So, maybe we put the
13 "positive" further down by the red meat and
14 processed.

15 CHAIR VAN HORN: Okay.

16 MEMBER SLAVIN: But I think for
17 this one we don't have much data on it,
18 unfortunately.

19 MEMBER NELSON: I think we are
20 going around in circles.

21 MEMBER SLAVIN: I think we should
22 get through the milk, too, because I think we

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1 have similar issues.

2 CHAIR VAN HORN: Okay. This will
3 be another one on the table that needs to --

4 MEMBER SLAVIN: But do people feel
5 like "inconsistent positive", is that at all
6 clear?

7 MEMBER NELSON: You can't do that,
8 no. You can't do that.

9 CHAIR VAN HORN: That's useless.

10 MEMBER NELSON: It's useless.

11 CHAIR VAN HORN: You can't do both
12 together. It is too much of an oxymoron.

13 MEMBER SLAVIN: Okay. Let's see,
14 soy, discussion and consensus. Well,
15 discussion, but how about protein-related food
16 groups and health outcomes, milk and milk
17 products?

18 You know, remember, this was our
19 first try. So, I am going to back up and tell
20 my Committee how much I appreciate it, and our
21 staff. It was really difficult to look at
22 whole foods, and a lot of this was whole

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1 foods.

2 So, what's the relationship
3 between intake of milk and milk products and
4 selected health outcomes?

5 These are our conclusions:

6 Strong evidence demonstrates that
7 intake of milk and milk products provides no
8 unique role in weight control.

9 Moderate evidence indicates that
10 the intake of milk and milk products is linked
11 to improved bone health in children. Limited
12 evidence suggests a positive relationship
13 between the intake of milk and milk products
14 and bone health in adults, but results are
15 inconsistent due to variability in the
16 outcomes considered. So, we split that
17 because the data are quite different.

18 Moderate evidence shows that
19 intake of milk and milk products is protective
20 against cardiovascular disease.

21 A moderate body of evidence
22 suggests an inverse relationship between the

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1 intake of milk and milk products and blood
2 pressure.

3 And, you know, I wanted to note
4 here, like for Tom's, with putting all these
5 things together, collapsing, we have not
6 collapsed these. One of the reasons we didn't
7 collapse them is because we got different
8 results. So, we have kind of kept all these
9 things separate at this point.

10 Moderate evidence shows that milk
11 and milk products are associated with lower
12 incidence of type 2 diabetes in adults.

13 Limited evidence is available
14 showing intake of milk and milk products is
15 associated with reduced risk of metabolic
16 syndrome and may even be protective in certain
17 population groups.

18 Insufficient evidence is available
19 to assess the relationship between intake of
20 milk and milk products and serum cholesterol
21 levels.

22 And implications are here, but I

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1 would be happy to -- just that milk is,
2 obviously, milk and milk products are
3 nutrient-rich, and if people consume them,
4 they get all these nutrients.

5 But questions?

6 MEMBER PEARSON: Can we go to the
7 metabolic syndrome one?

8 MEMBER SLAVIN: Yes.

9 MEMBER PEARSON: Go to the
10 metabolic syndrome one.

11 So, "Limited evidence is available
12 showing intake of milk and milk products is
13 associated with reduced risk...."

14 MEMBER SLAVIN: Now, remember that
15 we did this really similar to the way you
16 would have done the chocolate or the nuts.
17 This is done strictly as the way the review
18 was done was on food groups. So, not
19 nutrients; food groups, milk and milk
20 products, and everything comes up, you know.
21 So, we are searching for yogurt, cheese, milk
22 intake.

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1 MEMBER PEARSON: But you say that
2 limited evidence is there for reduced risk of
3 metabolic syndrome, and then you say it may
4 even be protective.

5 MEMBER SLAVIN: Yes.

6 MEMBER PEARSON: That is
7 redundant.

8 MEMBER SLAVIN: Well, there are
9 some studies that show that milk -- you know,
10 remember it is the usual problem with whole
11 foods, that a lot of times people that eat
12 whole foods do other things well.

13 MEMBER PEARSON: For this sentence
14 to make sense, it would have to say, "Limited
15 evidence is available showing intake of milk
16 and milk products is associated with an
17 increased risk of metabolic syndrome and may
18 even be protective in certain groups."

19 Because, otherwise, you say you
20 have limited evidence to say there's reduced
21 risk, and then it my be protective. That is
22 the same thing said over again.

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1 MEMBER SLAVIN: Yes, I think there
2 were different -- it is kind of why we split
3 the children versus adults. There were
4 differences in age groups. So, we may need to
5 think about that. There wasn't a lot of data,
6 as I recall, that came up with that.

7 MEMBER PEARSON: But you see my
8 point?

9 MEMBER SLAVIN: Yes. No, I do.

10 MEMBER PEARSON: So, I would think
11 this would make sense if you said that,
12 "Limited evidence is available showing intake
13 of milk and milk products is associated with
14 increased risk of metabolic syndrome and may
15 even be protective in certain population
16 groups." I can understand that.

17 MEMBER SLAVIN: Well, yes, I would
18 have to go back and look at these studies.

19 MEMBER NELSON: But wouldn't the
20 way to do it is that certain subgroups may
21 even get more benefit than others? Isn't
22 that --

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1 MEMBER PEARSON: I am concerned
2 about saying there's no evidence that there's
3 reduced risk and then some groups would be
4 protected.

5 MEMBER NELSON: But it says there
6 is reduced risk.

7 MEMBER PI-SUNYER: I don't
8 understand why you want to increase risk.

9 (Laughter.)

10 MEMBER PEARSON: No, I think I
11 said because it is the limited evidence part.

12 MEMBER SLAVIN: And what we had
13 was one systematic --

14 MEMBER PEARSON: She's saying the
15 same thing twice.

16 MEMBER SLAVIN: Yes, we have one
17 systematic review with a meta-analysis, one
18 prospective cohort, and three cross-sectional
19 studies. That is our data.

20 MEMBER NELSON: This is Mim.

21 After "metabolic syndrome" you
22 should just have a full stop, period.

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1 MEMBER PEARSON: Right.

2 MEMBER NELSON: It's there's
3 limited evidence at the moment. There's a few
4 studies that are pointing in the right
5 direction, and that's it, full stop.

6 MEMBER PEARSON: Yes.

7 MEMBER SLAVIN: Yes, that's fine,
8 I think. I don't think that will change it.
9 I think there were subgroup differences in
10 this meta-analysis. So, that is why it comes
11 up. That was a large source of our data.

12 MEMBER NELSON: But that can come
13 out in your paragraphs, you know, when you
14 talk about it.

15 MEMBER SLAVIN: That's fine.

16 Yes, Rafael?

17 MEMBER PEREZ-ESCAMILLA: This is
18 Rafael.

19 Do most of these studies control
20 for caloric intake in terms of how to
21 interpret these.

22 MEMBER SLAVIN: These studies, no.

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1 No. Remember, the way this was searched was
2 just food groups and disease. So, health
3 outcome, milk and dairy products. So, they
4 are all types of studies. So, they are
5 prospective studies. I am not even thinking,
6 Cheryl, there aren't going to be any feeding
7 studies because these are just studies looking
8 at health risk, health outcome.

9 MEMBER PEREZ-ESCAMILLA: Right.
10 But in terms of the cohort studies, they could
11 have controlled for caloric intake.

12 MEMBER SLAVIN: They might adjust
13 or --

14 MEMBER PEREZ-ESCAMILLA: Right.

15 MEMBER APPEL: They probably did
16 adjust.

17 MEMBER SLAVIN: Yes.

18 MEMBER PEREZ-ESCAMILLA: Right,
19 because I think that is important in terms of
20 interpreting is this a property of milk versus
21 just a general food intake patterns that tends
22 to be lower in calories among people who

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1 consume more dairy. I mean I don't know what
2 the answer is, but for interpreting that --

3 MEMBER SLAVIN: And you know, I
4 think this is another example of the salted
5 nuts, that most of this data looks at all
6 dairy products, you know, cheese, yogurt, and
7 sometimes they try to separate out low and
8 high fat, but a lot of times they don't. It
9 is just dairy group intake.

10 VICE CHAIR FUKAGAWA: This is
11 Naomi.

12 So, the phrase "may even be
13 protective in certain population groups" will
14 be deleted?

15 MEMBER SLAVIN: Yes.

16 VICE CHAIR FUKAGAWA: Okay.
17 Because the support for that are really cross-
18 sectional studies.

19 MEMBER SLAVIN: Right.

20 VICE CHAIR FUKAGAWA: Right. So,
21 that is what makes potentially the difference.

22 MEMBER SLAVIN: Larry?

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1 MEMBER APPEL: Yes, this is Larry.

2 When I saw the conclusion about
3 vascular disease, it sort of hit me over the
4 head because I serve on so many Heart
5 Association committees, and we never think of
6 milk as being, insufficient milk as being a
7 risk factor for heart disease or stroke. So,
8 I did go back to like the systematic review
9 and the meta-analysis that were cited, and
10 there are some issues with it.

11 One is the systematic review
12 totally misinterprets one of my studies.

13 (Laughter.)

14 It attributes the DASH study to
15 milk, which is common, but a problem.

16 Then, I looked at the meta-
17 analysis, and there is a paragraph that is
18 really interesting. It says that the study by
19 Frank Hu, a nurse health study, says, if you
20 have low-fat milk products, you see a benefit.

21 If you consume regular milk products, you
22 have increased risk. And they said, if you

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1 include both estimates in our meta-analysis,
2 there is significant heterogeneity and you
3 can't make a conclusion.

4 So, that means that these results
5 are really probably dependent, or could be
6 dependent, on type of milk, and we don't
7 acknowledge that. I am a bit worried, you
8 know, about this.

9 So, I can see people jumping on
10 drink more milk to prevent CVD, but we are not
11 really, I don't think -- I just don't see that
12 we can make that statement. I think somehow
13 we have to qualify this, also, about low-fat
14 milk.

15 You might even say that, even
16 though there is an inconsistent approach to
17 low-fat versus full-fat milk, and in some
18 studies that investigated it they had opposite
19 relationship -- I think you can cite this one
20 paper from the meta-analysis and just leave it
21 at that because I think that --

22 MEMBER SLAVIN: Well, you know, I

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1 think, Larry, the one paper we have on the
2 serum cholesterol is that cheese intake was
3 protective for cholesterol. And there's three
4 studies in that. So, we left that as
5 inconsistent.

6 But I think dairy products, you
7 know, you eat a dairy product. They are all
8 different. There's protein. There's other
9 bioactives. So, it could be having nothing to
10 do with any of the compounds we're talking
11 about.

12 This is, I think, the frustration
13 to look at whole foods. I mean we all want to
14 talk about whole foods, but when you look at
15 data, it creates some confusion like this.

16 Yes, Mim?

17 MEMBER NELSON: Well, but I think
18 you are absolutely right. I mean that is the
19 wonderful thing about the research we do, is
20 it is really complicated and fun. But I
21 wonder about the 2015 Guidelines, that they
22 don't focus on any single food groups

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1 whatsoever, and they just focus on food
2 patterns; we will probably be better off
3 because you can't isolate any of these things
4 out of the diet.

5 I mean that is, I think, the
6 problem. You know, you can look at certain
7 things. I just think we have to be very
8 careful because it is hard to look at these
9 things in isolation.

10 MEMBER APPEL: But getting back, I
11 am not quite sure how to deal with this
12 because the moderate term, actually, I think
13 is stronger than what it might be.
14 Unfortunately, the literature review actually
15 stopped at this one.

16 I am wondering if there's a fair
17 or something like this.

18 (Laughter.)

19 Because I do worry about this. I
20 don't know about Linda or other people who are
21 CVD, you know, epidemiologists, how we --

22 CHAIR VAN HORN: This is when,

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1 looking at the grade, it is Grade III. So,
2 before we did away with the grades, we were --

3 MEMBER SLAVIN: You mean not for
4 cholesterol. For cardiovascular it is II.

5 CHAIR VAN HORN: Yes, yes, II.
6 This is a II, right. So, it is stronger.

7 MEMBER SLAVIN: And I also think
8 our accepting these systematic reviews, we are
9 depending on other people's interpretation.
10 So, even though it is a timesaver, and I know
11 why we do it with all these questions, I
12 understand Larry's concern that people tend
13 to -- they do the best they can, but a lot of
14 times it tends to overstep what is there.

15 MEMBER RIMM: Yes, this is Eric.

16 Maybe one of the concerns is that
17 we are sort of dichotomizing, saying it is
18 either good or bad. I think the effect
19 estimate, if it is protective, is quite small.

20 I mean the meta-analyses I have seen and the
21 summaries that I have seen, the relative risks
22 are really they may be below one, and maybe

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1 they misinterpreted Frank's and Larry's wrong,
2 but I think the relative risks are pretty
3 small.

4 MEMBER SLAVIN: Well, they are
5 talking about a 10. They said here was a 10
6 to 15 percent reduction in ischemic heart
7 disease and 20 percent in stroke, who reported
8 drinking the most milk relative to those
9 drinking the least.

10 MEMBER RIMM: Well, maybe it is
11 just in the interpretation of people who wrote
12 the previous reviews and how they pull out the
13 exposure data.

14 MEMBER APPEL: This is Larry.
15 You know, the relative risk was
16 .84 for stroke. That is within the range of
17 easily what is confounding, you know, 20
18 percent. This is not like a .4 or --

19 MEMBER SLAVIN: And I think all
20 these food group questions, it is exactly what
21 you said, Mim, that you don't just live on
22 milk; you live on a combination of milk and

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1 grains. And when you try to sort it out,
2 whether it is a nutrient sort or a food group
3 sort, you know, the data is different, and we
4 don't want to overinterpret it, but we can't
5 ignore it, either.

6 MEMBER RIMM: This is Eric.

7 I know that Shelly and I have
8 talked about this briefly. But did you, then,
9 compare this to milk and calcium in prostate
10 cancer? Because I know that it is about the
11 same thing, and I don't think it is covered
12 here, but it is sort of about the same thing
13 in a positive level. Maybe there wasn't any
14 -- was there systematic reviews there? That
15 is coming up.

16 MEMBER SLAVIN: No. I think no.

17 MEMBER RIMM: I am just concerned
18 about having all 65-year-old men drinking
19 three cups of dairy a day, trying to reduce
20 their risk of heart disease based on this
21 relatively-strong statement.

22 MEMBER SLAVIN: What's in the AICR

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1 about that?

2 MEMBER RIMM: The prostate cancer,
3 yes.

4 MEMBER NICKOLS-RICHARDSON: Milk
5 and prostate -- this is Shelly -- milk and
6 prostate cancer is in that AICR report. So,
7 if you want to look at Larry's book --

8 MEMBER APPEL: For a dollar.

9 (Laughter.)

10 MEMBER NICKOLS-RICHARDSON: -- if
11 I recall, it's not really strong at all.

12 I looked it up for Eric.

13 MEMBER NELSON: So, is that one
14 going to stay as moderate or is it going to be
15 fair, or what is it going to be in the context
16 of a pattern of eating that is high in dairy,
17 milk?

18 MEMBER NICKOLS-RICHARDSON: It is
19 definitely moderate. Our Committee came up
20 with a II. Yes, if we are going to go with
21 those words, then -- and we may, you know, as
22 we get to other questions that also have

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1 inconsistent, like fruit and vegetable --

2 MEMBER RIMM: No, actually, it
3 says it's pretty strong, actually.

4 MEMBER APPEL: But I think we need
5 to add a qualifier to this one.

6 MEMBER SLAVIN: For this, we only
7 looked at milk, milk and health outcomes. So,
8 that is the way it was done. So, it is a new
9 look at -- and if you go back to 2005, there
10 was a section on dairy products that were
11 reviewed.

12 I think, for implications, we
13 could clearly put things into that, too,
14 because right now most of the implications, I
15 guess they are, yes, talked about here. It is
16 just that our review would support
17 recommendations for milk and milk products,
18 and there's some data on, if people drink milk
19 as a young child, they are more likely to
20 continue to take in milk. And also, if you
21 don't, you know, like milk is just one food
22 product. These are the nutrients that it

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1 provides. So, if you choose not to take it
2 in, then there would be shortfalls
3 potentially, as the way food intake patterns
4 are modeled, that you have got to make sure
5 you cover those.

6 A lot of the things like soy milk
7 and rice milk and the alternatives don't have
8 the same nutrient composition. So, make sure
9 people understand that.

10 MEMBER PI-SUNYER: I want to just
11 ask Larry, what do you think is the downside
12 of saying that milk --

13 MEMBER APPEL: Well, we're --

14 MEMBER PI-SUNYER: I mean the
15 downside is that people may drink a little
16 more milk, but that's okay, isn't it?

17 MEMBER APPEL: This is milk. It's
18 not saying, you know, there are no
19 qualifications to this. I mean I am looking
20 at this.

21 They basically selected the risk
22 estimate for low-fat milk, included that in

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1 it, and said we omitted the estimate for whole
2 milk, which was 1.67 as the risk of CVD and
3 stroke. So, that is significant
4 heterogeneity. That is pulling out a piece of
5 evidence that would potentially affect your
6 overall risk estimate.

7 So, I could potentially live with
8 this if we modified it in some way to say,
9 "but there is evidence that there is
10 difference effects by different types of
11 milk," but a qualifier.

12 This is people who are going to
13 start drinking, you know -- who knows? --
14 whole milk, full-fat cheese.

15 MEMBER RIMM: Larry, this is Eric
16 Rimm.

17 Just to answer Xav's question for
18 something that you and I should be concerned
19 about, the WCRF conclusion is that diets high
20 in calcium are probable causes of prostate
21 cancer. There's limited evidence suggesting
22 that high consumption of milk and dairy

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1 products is a cause of prostate cancer.

2 So, it is true that in our society
3 milk is a pretty strong marker of calcium
4 intake, and there is pretty strong, consistent
5 evidence now that high calcium, as marked by
6 milk, is associated with increased prostate
7 cancer risk. So, that would be my concern
8 about having people having a little bit more
9 milk.

10 MEMBER NICKOLS-RICHARDSON: But I
11 believe that there is another statement in
12 there, that milk is not --

13 MEMBER SLAVIN: Is not related,
14 yes, when you look at milk as --

15 MEMBER NICKOLS-RICHARDSON: Yes,
16 milk is not related. The calcium and vitamin
17 D is different.

18 MEMBER PI-SUNYER: That may be in
19 high-calcium-eaters, but most of Americans are
20 low-calcium-eaters.

21 MEMBER NELSON: So, this is Mim.

22 Staying out of the fray here, but

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1 maybe a suggestion. Is there the
2 preponderance of the evidence with the CVD
3 with low or nonfat dairy products versus all-
4 comers, ice cream, cheese? Or you are saying,
5 Joanne, that there is equal, the whole range,
6 and the low fat, nonfat isn't more protective?

7 MEMBER SLAVIN: Well, I think it
8 is the way studies have been done, Mim. So,
9 in the past, people looked at fats. They
10 looked at saturated fats. They don't look at
11 food.

12 So, when you do it this way and
13 say let's look at food, a lot of times the
14 data, epidemiological data is not clear. Is
15 this low fat? And milk intake has changed big
16 time over 20 years. People are much more
17 likely to have low fat. So, I don't think we
18 have that data. We don't have feeding studies
19 where we give people skim milk and full-fat
20 milk and show --

21 MEMBER NELSON: But I thought,
22 Larry, that you just presented their findings,

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1 that if it was low or nonfat, it was below
2 one, and if it was above -- I mean, right?

3 MEMBER APPEL: That's right.

4 MEMBER NELSON: I mean that seems
5 like that is worthy --

6 MEMBER APPEL: It was for low-fat
7 milk, it was .78; for full milk, it was 1.67.

8 MEMBER NELSON: Yes, I mean that
9 is a big difference. You don't think that's
10 worthy of qualifying this statement?

11 MEMBER APPEL: I think we need to
12 qualify it. I mean, even if you just say
13 there is some evidence, just to cut the edge
14 off of this, because --

15 MEMBER SLAVIN: I guess my
16 concern, too, is we want to make sure it gets
17 into the NEL review. Cheryl and I have talked
18 about that. We have been very true to the
19 system. We really want all the papers in the
20 review, and if it is going to be added, we
21 want it in, so the public can access it. You
22 know, we really want all the data there for

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1 everyone to see. So, it is fine to add it,
2 but it needs to get into the review.

3 MEMBER PEARSON: But this is Tom.

4 I mean, within our whole context
5 of caloric restriction in an obese pediatric
6 population, isn't it logical to say that you
7 should pick a low-calorie form of milk?

8 MEMBER NELSON: I mean it is the
9 same as salt. I mean we have the nuts.

10 MEMBER PEARSON: Yes, absolutely.

11 MEMBER NELSON: I mean it was
12 nuts. But we are saying in the context of the
13 whole diet, it should be salt-free.

14 MEMBER SLAVIN: Right.

15 MEMBER NELSON: It seems like we
16 could do a similar qualifier here, that in
17 the --

18 MEMBER SLAVIN: Yes. No,
19 absolutely. I think for implications it is
20 not a problem.

21 MEMBER PEARSON: And a C level of
22 evidence is fine with me. It is just common

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1 sense.

2 MEMBER NELSON: But this is going
3 to be added to the conclusion in the nut one.

4 I mean I think it should be added here to the
5 conclusion of this one. I mean I think there
6 are some nuances that we have to add to some
7 of these questions in order for them to be not
8 misinterpreted.

9 CHAIR VAN HORN: Yes, I would
10 agree with that. We have to do justice to the
11 data, but we have to make sure that it is
12 implicit that the nutrition issues related to
13 this that address the adequacy and calorie
14 concerns are also evident.

15 MEMBER PEARSON: I mean I would be
16 very concerned, again, of the conclusion being
17 lifted out of context.

18 MEMBER SLAVIN: Yes, and I don't
19 know, Larry, since you have looked at that
20 systematic review, does it do much for low
21 versus high fat? I mean it doesn't really
22 take it on or --

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1 MEMBER APPEL: No, this is the
2 only one where they say that this -- you have
3 to select how to use this study. Because if
4 you use one estimate, you get heterogeneity
5 and you can't combine. If you use the other
6 estimate, we're fine. So, they use the one
7 estimate; they're fine, and that is an easy
8 way out of the game. But heterogeneity is
9 actually part of what we would want to report.
10 You know, there are differences.

11 MEMBER NELSON: But my sense for
12 the wordsmithing here is maybe we don't worry
13 about that at the moment, but in the context
14 of the American diet, where we are right now,
15 that it would be low in nonfat dairy foods
16 that we would be talking about, similar to the
17 salt. We are not advocating all nuts. And I
18 think you do that, and then, you are staying
19 clear to the science; you are just adding a
20 little bit of a nuance here.

21 MEMBER SLAVIN: But I also think,
22 culturally, we get into problems because a lot

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1 of groups really do like high-fat dairy, and
2 whether it is yogurt or milk for their kids, I
3 think it creates a problem. You can take your
4 added fats in different ways. So, I think
5 from dairy, some people don't want to take it,
6 they don't want skim milk and they won't drink
7 any milk. So, I don't want to be so
8 restrictive that people don't drink milk.

9 MEMBER NELSON: So, are we saying
10 that across the board then for cultural
11 reasons, we don't care whether it is nonfat or
12 low fat?

13 MEMBER SLAVIN: No, I think we
14 care, but it is one of your sources of fat.
15 So, you can make that choice. You know, it
16 kind of gets into this flexibility of we don't
17 want people to not drink any dairy products or
18 eat dairy products if they can only have fat-
19 free or low-fat, that still the nutrients in
20 that group are important.

21 So, depending on the diet, you can
22 make those diets work if you choose to not

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1 have other added fats in your diet.

2 MEMBER NELSON: But that is across
3 the board with all our recommendations.

4 MEMBER ACHTERBERG: With all due
5 respect, I think one of the positions we
6 started out the entire report with is that all
7 of our recommendations would be for the most
8 nutrient-dense form to decrease SoFAAs. So, I
9 think we need to go back to that. Everything
10 we put in this report should be in its most
11 nutrient-dense form.

12 MEMBER NELSON: Yes, then you can
13 choose, if you want some ice cream because you
14 can fit it in, you can. But I think that,
15 otherwise, we are in conflict.

16 MEMBER WILLIAMS: This is Chris.

17 I just wanted to mention that for
18 children whole milk is one of the top six
19 sources of solid fats. And the solid fats and
20 added sugar are 40 percent of calories for
21 children. So, it is significant.

22 CHAIR VAN HORN: Okay. Well, I

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1 think we really need to move on. So, again,
2 this is one of those that we are going to need
3 to resolve, but perhaps not right this second.

4 And yet, I think all of the points that have
5 been made are extremely important, and having
6 consistency across the report will be very
7 important, too.

8 MEMBER RIMM: Linda, can I just
9 add one thing?

10 CHAIR VAN HORN: Yes.

11 MEMBER RIMM: This is Eric.

12 I mean I don't want to drop the
13 prostate cancer thing completely. Obviously,
14 it is too late to do an NEL review, but that
15 AICR report does have sort of a nice summary
16 line that we could -- can we quote that?

17 MEMBER SLAVIN: But I think
18 Shelly's point is it is nutrient-based, not
19 food-based, so it doesn't fit.

20 MEMBER RIMM: Well, it is milk-
21 based, too. They say there's limited evidence
22 from six to eight studies that milk causes

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1 prostate cancer.

2 I hate to just look at one side of
3 the coin, just at the --

4 MEMBER SLAVIN: But we didn't look
5 at cancers at all with dairy. So, if we are
6 going to bring in that -- you know, we didn't
7 do cancer with our questions. We did lots of
8 health outcomes, but we didn't do --

9 MEMBER RIMM: But are we at risk
10 then for looking at just one side of the coin?

11 I mean maybe it is too late. It is just it
12 is too bad, since there are a few things in
13 the AICR report --

14 CHAIR VAN HORN: Yes, I don't
15 think we can begin to accommodate things we
16 didn't look at. You know, if we didn't look
17 at dairy and prostate cancer, then we can't
18 now suddenly put it in.

19 MEMBER RIMM: We probably didn't
20 because the WCRF report, we probably said, oh,
21 it is out there already. But it would be a
22 shame to completely forget it because they do

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1 summarize the cancer very nicely for milk in
2 four sentences. You know, there are two
3 cancers that are linked to milk consumption.

4 CHAIR VAN HORN: Larry?

5 MEMBER APPEL: This is Larry.

6 I mean I thought that at the front
7 end we said we are not going to do much with
8 cancer because we have this recent report. I
9 know like that for salts, I mean I did lift a
10 section on salt and gastric cancer. I just
11 took the sentence and just inserted it in a
12 contextual setting.

13 MEMBER RIMM: I did the same for
14 alcohol and breast cancer. I didn't do the
15 whole review over it, but I wanted to take a
16 few sentences. You can't just focus on things
17 that --

18 CHAIR VAN HORN: Okay. So, that
19 sounds like a precedent then. You know, that
20 if, in fact, a topic like this has already
21 been addressed, lifting it literally from the
22 ACIR report, then we could, in fact, do the

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1 same with this one.

2 MEMBER PEARSON: And place it in
3 contextual materials for that chapter.

4 CHAIR VAN HORN: Yes, in the
5 context. It is not a conclusion statement,
6 but it is in the context, yes. Okay.

7 MEMBER SLAVIN: Our last protein
8 question --

9 CHAIR VAN HORN: Right, yes.

10 (Laughter.)

11 MEMBER SLAVIN: -- was, what is
12 the relationship between the intake of dried
13 beans and peas and selected health outcomes?

14 This has been tough because dried
15 beans and peas sound quite inedible to people,
16 and they were called legumes. They have gone
17 through many different "who am I and how do
18 you eat me?" We are not talking about eating
19 them dry, but that is the way they are looked
20 at in USDA. So, dried beans and peas.

21 There's very little research, and
22 you can see limited evidence is the word of

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1 the day here. So, we looked at three
2 endpoints: body weight, serum lipids, and
3 type 2 diabetes.

4 No. 1, limited evidence exists to
5 establish a clear relationship between intake
6 of dried beans and peas and body weight.

7 As I go through here, too,
8 remember that the average person intakes, it
9 is kind of like vegetarianism in any type of
10 dataset; most people don't eat very many.

11 Limited evidence suggests that
12 dried beans and peas have unique abilities to
13 lower serum lipids. They do have soluble
14 fiber. Soluble fiber is accepted as lipid-
15 lowering. So, they are typically on lists of
16 having the potential to lower serum lipids,
17 but there are very few studies that support
18 that they, themselves, have that role.

19 And then, limited evidence is
20 available to determine a relationship between
21 intake of dried beans and peas in type 2
22 diabetes.

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1 Discussion? Yes?

2 MEMBER PEARSON: Could we, under
3 that serum lipid one, say, "Limited evidence,"
4 "There is limited evidence that dried beans
5 and peas have unique ability to lower serum
6 lipids", period? Again, that suggests it is a
7 positive suggestion.

8 MEMBER SLAVIN: Yes. No, I
9 think --

10 MEMBER PEARSON: You are saying
11 there aren't any studies.

12 MEMBER SLAVIN: Right.

13 MEMBER PEARSON: So, just say it.
14 "There is limited evidence that dried beans
15 have unique ability...."

16 MEMBER SLAVIN: Yes. And, you
17 know, as I look at those two, both the serum
18 lipids and the type 2 diabetes, theoretically,
19 beans are always on lists that would be useful
20 for those, but that's it. They haven't been
21 studied.

22 So, absolutely. I have no problem

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1 getting rid of that.

2 MEMBER ACHTERBERG: I will make my
3 pitch. I have tried for a long time.

4 (Laughter.)

5 This is Cheryl.

6 We should be saying, "cooked dried
7 beans and peas".

8 MEMBER SLAVIN: Or something else.

9 MEMBER ACHTERBERG: Because we
10 specifically excluded fresh peas, peas in
11 their pods, snow peas. I mean we specifically
12 excluded certain kinds of beans and peas. So,
13 why not just describe it as cooked dried beans
14 and peas? And we will be more clear.

15 CHAIR VAN HORN: That seems like
16 something we could do consistently throughout
17 the report.

18 MEMBER NELSON: I agree because it
19 is in the integrated and translation chapter.

20 CHAIR VAN HORN: Yes.

21 MEMBER NELSON: And I am thinking
22 dried beans just like I eat them every night,

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1 but I don't eat them dried.

2 (Laughter.)

3 CHAIR VAN HORN: Thank goodness.
4 We're glad about that, Mim.

5 MEMBER NELSON: So, I would
6 advocate for cooked dried beans, and I would
7 be happy to --

8 CHAIR VAN HORN: Okay. Anne
9 Rogers is noting this duly. So, she is going
10 to take that on.

11 Going back to the other point that
12 Tom just made, though, I am a little unsure
13 that we said exactly what we mean. Are we
14 saying that there is limited evidence
15 regarding a relationship between dried beans
16 and peas and serum lipids? That's the point,
17 isn't it, that there is only limited evidence,
18 period? It is not --

19 MEMBER SLAVIN: Well, there are
20 really no studies.

21 CHAIR VAN HORN: Okay. Yes, we've
22 got to say it that way.

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1 MEMBER PI-SUNYER: This, to me,
2 suggests that there is some evidence.

3 CHAIR VAN HORN: Yes, that's my
4 point, and I am hearing two different things.

5 MEMBER SLAVIN: There is some. I
6 mean it is just, if you look, there is
7 systematic -- there is probably one of those
8 things where there's more systematic reviews
9 than there is research. So, there are
10 studies, but it is not -- I am trying to
11 remember what we have.

12 One of the problems you have in
13 EPI, you have very little EPI data because
14 people don't eat these products.

15 CHAIR VAN HORN: Right. That's
16 the problem. Yes.

17 MEMBER SLAVIN: In NHANES you
18 don't have any data; people don't eat it. So,
19 the studies you have are really short-term
20 feeding studies.

21 MEMBER NELSON: There are some.

22 MEMBER SLAVIN: Yes, but they

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1 don't show much. Obviously, we don't have
2 any, of the things we looked at, there really
3 isn't anything out there.

4 CHAIR VAN HORN: Well, and when it
5 is substituted, for example, for red meat and
6 processed meat, and high saturated fat-
7 containing foods, you are going to see an
8 impact, you know, but it is not necessarily
9 dried beans and peas.

10 MEMBER SLAVIN: But it hasn't
11 been. You know, like, yes, it hasn't been
12 studied.

13 CHAIR VAN HORN: It is anything
14 that would substitute for that. So, we just
15 need to clarify that a little bit, I think.
16 It is still a little --

17 MEMBER ACHTERBERG: And Cheryl
18 again.

19 I just don't understand why we
20 don't have more info about cooked dried peas
21 and beans, because there is a significant
22 population segment in this country that eats

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1 beans five, six, seven days a week. It is
2 just amazing that we don't have these data.

3 CHAIR VAN HORN: A lot of it is
4 funding. But some of it is also --

5 MEMBER ACHTERBERG: I just want
6 that in the transcript somewhere for someone
7 to read.

8 (Laughter.)

9 MEMBER SLAVIN: You know, I think
10 what has come up, too, Cheryl, is just the
11 calories associated with that. I know with
12 some of our modeling, that to get the same
13 amount of protein, you actually eat more
14 calories. So, it almost goes in conflict to
15 our calorie message. And also, a lot of
16 people eat beans refried. I mean they do.
17 So, there's a lot of fat that comes along
18 with --

19 MEMBER RIMM: It's going to be
20 good fat, though.

21 (Laughter.)

22 MEMBER SLAVIN: Potentially.

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1 CHAIR VAN HORN: Cook them in fish
2 oil and we're all set.

3 (Laughter.)

4 Okay. I think, with that, thank
5 you. Thank you very much.

6 We are now, again, behind a
7 little. So, let's take a 15-minute break, and
8 please return full of energy, so we can push
9 on with carbohydrates.

10 Thank you.

11 (Whereupon, the foregoing matter
12 went off the record at 3:04 p.m. and resumed
13 at 3:29 p.m.)

14 CHAIR VAN HORN: Okay, welcome
15 back, everyone.

16 I think we are in for the last
17 roundup now. We are going to proceed with the
18 carbohydrates chapter and Joanne Slavin.

19 Thank you.

20 MEMBER SLAVIN: Thanks, Linda.

21 I would like to acknowledge my
22 members of the Subcommittee: Cheryl

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1 Achterberg, Xavier Pi-Sunyer, Linda Van Horn.

2 And our staff: Jan Adams, Eve Essery, Rachel
3 Hayes, and Joan Lyon.

4 The first question: what are the
5 health benefits of dietary fiber?

6 Dietary fiber from whole foods
7 protects against cardiovascular disease,
8 obesity, and type 2 diabetes and is essential
9 for optimal digestive health.

10 This conclusion was based on an
11 NEL review that was published in 2008 and
12 updated in our report.

13 Second, what is the relationship
14 between whole grain intake and selected health
15 outcomes?

16 This built on 2005, and these were
17 our conclusions. We looked at three:
18 cardiovascular disease, type 2 diabetes, and
19 body weight. And these are our conclusions:

20 A moderate body of evidence from
21 large prospective cohort trials shows that
22 whole grain intake, which includes cereal

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1 fiber, protects against cardiovascular
2 disease.

3 Consumption of whole grains is
4 associated with reduced incidence of type 2
5 diabetes in large prospective cohort studies.

6 And this is another example of going from the
7 old conclusion to the new; we put "limited"
8 there just because there was no other data,
9 and the reviews of that were mixed. So,
10 feeding studies, those types of studies, there
11 was very little there.

12 And then, limited evidence shows
13 that intake of whole grains and grain fiber is
14 associated with lower body weight. This is
15 also an example of there's a lot of cross-
16 sectional studies, but pretty inconsistent
17 data.

18 I think the implications, we know
19 that people aren't getting enough whole grains
20 and fiber, and this balance within rich and
21 fortified grains. So, we want to encourage
22 both fiber-rich whole grains and enriched

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1 grains balance, and it gets back to nutrient
2 adequacy, the folic acid and other things that
3 are in enriched grains. So, to keep a balance
4 there to provide all the nutrients.

5 And in general, looking at some of
6 the modeling, total grains typically are
7 overconsumed. So, we don't want to recommend
8 more in this. For the average person, we are
9 talking about switching to more of the fiber-
10 rich whole grains rather than eating more
11 grains in general.

12 And the last conclusion there is,
13 going from 2005 to 2010, the reviews, there is
14 a real lack of standards for whole grain foods
15 and measurement of whole grain content, and
16 there's a lot of inconsistencies there. So, I
17 think for the future, coming up with
18 definitions, agreeing on definitions, agreeing
19 on labeling for foods, and measurement of
20 whole grains will be essential for bringing
21 some more clarity to this area.

22 Have we got discussions, consensus

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1 on those two topics, fiber and whole grains?

2 CHAIR VAN HORN: I just think it
3 is important for all those listening, because
4 of the time this group has spent talking about
5 that very thing, just to reiterate that this
6 is not a matter of adding additional grains,
7 but, rather, being specific and selective
8 about the types of grains and choosing the
9 whole grains because of their added
10 contributions, both nutrients and fiber, et
11 cetera, but without exceeding the calorie
12 limits that have been established.

13 MEMBER SLAVIN: Yes, I think the
14 Committee was concerned just about the number
15 of products that are coming out that are whole
16 grain that don't seem to have any whole grain
17 in them, and to make sure that there are
18 standards to prevent that and not mislead the
19 public.

20 Any other questions, whole grains
21 or fiber? Tom?

22 MEMBER PEARSON: This is Tom

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1 Pearson.

2 The recommendation, "Limited
3 evidence shows that intake of whole grains and
4 grain fiber is associated with lower body
5 weight." So, you've got two systematic
6 reviews, pooled analysis of 15 observational
7 studies, pooled analysis of 20 studies, eight
8 other studies, all of which are showing
9 statistically-significant reductions in BMI.
10 What's so limited about it?

11 MEMBER SLAVIN: I think what was
12 limited, and this is where we at one point
13 decided to get rid of cross-sectional studies,
14 and most of those studies are mixed; you know,
15 cross-sectional studies are in them. So, that
16 created some differences in our conclusion on
17 that.

18 Some of the other studies where
19 they had the best measures of whole grains, so
20 in the British studies they actually have
21 grams of whole grain in their database and
22 seven-day food records. In those studies,

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1 they saw no relationship. So, some of the
2 strongest studies saw no relationship. The
3 cross-sectional studies are pretty consistent,
4 though.

5 MEMBER PEARSON: But, even with
6 that, so the Williams review had five RCTs and
7 four observational studies.

8 MEMBER SLAVIN: Well, I think the
9 problem with the Williams is it is also with
10 legumes. If you read that study, it is not
11 just whole grains. So, it is legumes and
12 whole grains. So, trying to sort that out,
13 that meta-analysis isn't as clear as it might
14 look.

15 And you know, I think, also, we
16 have one RCT that has looked at different
17 endpoints, not finding any difference, which
18 isn't too surprising short-term.

19 But, you know, we are happy to --
20 this conclusion, we tried really hard to make
21 it represent the data that we have in our
22 review. And I am very open to suggestions on

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1 how to -- I think for the type 2 diabetes, we
2 have two review articles and very little data.

3 So, that one is different. There seems to be
4 a little more data on weight, but it is not --

5 MEMBER PEARSON: I mean this gets
6 to Linda's point before, is that there are
7 carbohydrates and then there are
8 carbohydrates. And if, in fact, there is a
9 door open to say that there is a form of
10 carbohydrates with evidence for weight
11 reduction, geez, we should drive our truck
12 through it.

13 MEMBER SLAVIN: Well, you know, I
14 think part of it, too, is in Chris' you
15 noticed in kids, with fiber you didn't see it.

16 She didn't find an association. I think when
17 we get to Cheryl's on fruits and vegetables, a
18 lot of times with weight you don't see a
19 relationship with different types of
20 carbohydrates, and, overall, carbohydrates
21 tend to be protective.

22 So, in trying to take total

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1 carbohydrates and say which ones are most
2 protective, I don't know, we can probably get
3 to it in fruits and vegetables, but I think
4 for adults it is pretty strong for fiber; it
5 is okay for whole grains, but it is not -- you
6 know, I think a lot of it really does have to
7 do with our inability to differentiate whole
8 grains and measure whole grains, and that if
9 we don't fix that problem, we will continue to
10 have unclear data.

11 You know, it will come up with
12 glycemic index, too. A lot of our measures
13 for carbohydrate quality aren't helping us too
14 much.

15 MEMBER RIMM: This is Eric.

16 I guess I agree with Tom's comment
17 that, if you look at your first two
18 paragraphs, which are very nicely written, for
19 body weight it does suggest there's about 15
20 to 20 studies that show very strong evidence
21 that a diet high in whole grains and fiber
22 lowers BMI. Anything beyond that, I realize

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1 there may be some small short-term trials, but
2 if you are looking at weight gain, it is
3 always going to be troublesome.

4 I mean I would be worried if this
5 is -- can you go back one slide to the
6 previous conclusions?

7 MEMBER SLAVIN: Yes, absolutely.
8 Yes.

9 MEMBER RIMM: I mean it almost
10 looks like we are throwing that away, saying
11 the other stuff is stronger.

12 MEMBER SLAVIN: Yes, I think you
13 are right. I think, when limited evidence
14 came in the front, I don't think that came
15 with -- because it was a Grade III, so it was
16 just stuck there.

17 MEMBER RIMM: I mean I would say
18 that the evidence for body weight is as strong
19 as the cardiovascular disease evidence. I
20 mean this looks like it is 20, 25, 20
21 prospective studies which are long-term, which
22 is what you have to look at for body weight.

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1 You, obviously, know the data much
2 better than anybody in this room.

3 MEMBER SLAVIN: Yes. No, I think
4 that because of the change in the way these
5 are written, that "limited" is not really the
6 right word. I think we could go --

7 MEMBER NELSON: So, could it be
8 parallel to the cardiovascular disease?

9 MEMBER SLAVIN: It is not as good
10 as the cardiovascular as far as the data, I
11 would say. But I think it is okay to be
12 moderate.

13 MEMBER PEARSON: I mean just to
14 say that we had in the fat study many fewer
15 than 20 studies, and we called it moderate. I
16 mean an RCT or two and three or four
17 observational studies. Good enough for us,
18 you know.

19 MEMBER SLAVIN: Yes.

20 MEMBER RIMM: So, the other thing
21 is just a wording. It says, "prospective
22 cohort trials". Do you mean observational

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1 studies? Are those really prospective cohort
2 studies? There's not lots of trials that look
3 at fiber.

4 MEMBER SLAVIN: Yes, I think that
5 is exactly right; it shouldn't say, "trial".

6 MEMBER RIMM: So, if you just take
7 out "trials", it just --

8 MEMBER SLAVIN: Yes.

9 MEMBER NELSON: This is Mim.

10 You are saying, then, the third
11 one will be changed to "moderate evidence
12 shows"?

13 MEMBER SLAVIN: Yes.

14 MEMBER NELSON: Okay.

15 MEMBER SLAVIN: I think that is
16 okay because I think grain fiber, I am looking
17 at that. That really does strengthen that.

18 MEMBER NELSON: Okay.

19 MEMBER SLAVIN: So, I think that
20 "moderate evidence" there would be consistent.

21 MEMBER NELSON: Great. Thanks.

22 CHAIR VAN HORN: And the other

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1 thing is we sort of fast-forwarded over the
2 first slide, but going back to what Tom's
3 wording was, you know, there is Class IA
4 evidence that dietary fiber from whole foods
5 protects against cardiovascular disease,
6 obesity, and type 2 diabetes. I mean that is
7 a really powerful statement.

8 That, I think, sets the stage. It
9 is, as you were saying, the need for providing
10 systematic, standardized definitions of what
11 whole grains are because fiber is so much
12 better defined at this point than whole grains
13 that the epidemiologic evidence is,
14 understandably, confounded by some of those
15 findings. But when you look at dietary fiber,
16 there's no question and, as Shelly pointed out
17 in nutrient adequacy, it is one of the biggest
18 shortfall nutrients that we have in our diet.

19 So, the emphasis on those foods in this
20 context seems totally appropriate.

21 MEMBER NELSON: Can I just follow
22 up then?

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1 To the first slide, when you say,
2 "What are the health benefits of dietary
3 fiber?", there is not going to be a qualifier
4 to that that says there is strong evidence?

5 MEMBER SLAVIN: Well, what
6 originally happened here, Mim, and this kind
7 of goes back to history, this was not an NEL
8 review because we had -- the American Dietetic
9 Association published one in 2008. So, we
10 just built on that. So, when we originally
11 wrote these conclusions, since it wasn't an
12 NEL conclusion, we didn't do it in the same
13 way. So, actually, much of that is a Larry --

14 MEMBER NELSON: But there's
15 several. I mean like the Physical Activity
16 Guidelines report is what is forming the
17 basis. We do say there's strong evidence. We
18 give it, you know, we are just sort of
19 transferring that. So, I wonder if this
20 should have a qualifier to give it the umph
21 that it needs.

22 Linda, what --

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1 MEMBER PI-SUNYER: Except for a
2 lot of the data is moderate, not strong.

3 MEMBER SLAVIN: Yes. Right. If
4 you go into the evidence-based review, not all
5 of those would have gotten a Grade I. You
6 know, they would get a Grade II.

7 MEMBER NELSON: So, then, I am
8 confused with what Linda just said, but, then,
9 I will defer to the fiber expert.

10 MEMBER SLAVIN: Part of it is, I
11 think, just diabetes, and it comes across -- I
12 think we will get it in glycemic index, too,
13 that that a lot of times will be a II, not a
14 I, or even a III.

15 We could put -- I don't think that
16 would be wrong. The reason it is not there is
17 because we didn't do an NEL review in this
18 sense.

19 Cheryl, help me out.

20 MEMBER ACHTERBERG: Well, I just
21 wanted to add the observation that not all
22 grains are created equal and not all fiber is

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1 equal, either. That is confounding a lot of
2 this literature.

3 MEMBER SLAVIN: Yes.

4 MEMBER APPEL: This is Larry.

5 Is this one of those where it was
6 just updated after 2005, too?

7 MEMBER SLAVIN: You mean for
8 fiber?

9 MEMBER APPEL: Yes, for fiber and
10 whole grains. Because I went to the 2005
11 report, and they actually have some major
12 studies with long followup.

13 MEMBER SLAVIN: Right.

14 MEMBER APPEL: And they come to a
15 much stronger conclusion.

16 MEMBER SLAVIN: No, this one was
17 actually only updated from 2006, which was
18 when the ADA started. So, it was even past
19 that. But, yes, you are right, everything
20 that is already in there is the basis for the
21 fiber recommendation. So, we could pull more
22 of it forward, yes.

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1 MEMBER NELSON: I think that
2 you've got to look at that, then.

3 MEMBER SLAVIN: But there's no
4 question. I mean we have, you know, Shelly's
5 got it. It's food intake is low. We have
6 dietary recommendations. Fiber is a nutrient.
7 I don't think there's any real question that
8 we need more.

9 MEMBER NELSON: But it is more the
10 strength of the evidence. We are saying that
11 there's moderate.

12 MEMBER SLAVIN: No, it is not
13 moderate. I think for whole grains, when we
14 are talking about whole grains, it is
15 different than fiber, yes.

16 MEMBER NELSON: Yes.

17 MEMBER WILLIAMS: This is Chris.

18 Joanne, it says in your writeup
19 that the ADA review gave it a Grade II, which
20 would be moderate. So, I think you could use
21 that word or even moderately strong.

22 MEMBER SLAVIN: Yes, but, you

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1 know, it is different because it is a
2 nutrient. So, I think that is why it netted
3 out here, and we really wanted to make the
4 point of whole foods, that the data that is
5 out there, the epidemiological data, which is
6 summarized in 2005, is based on food intakes
7 of fiber and foods.

8 MEMBER NELSON: But you think they
9 are saying -- Larry, you just read that --
10 that it's really strong evidence, that they
11 are saying in 2005?

12 MEMBER SLAVIN: For fiber.

13 MEMBER NELSON: For fiber? Which
14 is what this one is, isn't it? I mean dietary
15 fiber.

16 MEMBER APPEL: Well, no, this was
17 whole grains and obesity.

18 MEMBER NELSON: Oh, okay.

19 MEMBER SLAVIN: Okay.

20 MEMBER APPEL: Yes, this is whole
21 grains and --

22 MEMBER SLAVIN: Yes, both fiber

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1 and whole grains were done in 2005.

2 MEMBER NELSON: And they have
3 stronger evidence?

4 MEMBER APPEL: Well, I mean we
5 didn't, obviously, use the classification, but
6 they reached, "consuming at least three
7 servings of whole grains per day can help
8 reduce the risk of diabetes and CHD and helps
9 with weight maintenance."

10 It actually -- and I remember the
11 discussion -- it was one of the stronger sort
12 of nutrient/weight relationships that we voted
13 on.

14 MEMBER SLAVIN: And I think since
15 then, if you look at the studies, it is more a
16 mix than it was then, but, yes, it has gotten
17 weaker, and a lot of it is probably because of
18 lack of definitions. And the ones where they
19 have the best definitions, they don't see the
20 relationships when they measure it. So, I
21 think it is okay where it is at.

22 All right. I am going to let

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1 Cheryl, pass this down, since she worked on
2 this topic, and let her handle this.

3 MEMBER ACHTERBERG: Okay. The
4 next question pertains to vegetables and
5 fruits.

6 What is the relationship between
7 the intake of vegetables and fruits, not
8 including juice, and selected health outcomes?

9 So, our first set of conclusions:

10 Consistent evidence suggests at
11 least a moderate inverse relationship between
12 vegetable and fruit consumption with
13 myocardial infarction and stroke, with
14 significantly larger, positive effects noted
15 above five servings of vegetables and fruits
16 per day.

17 Next, reflecting on past research
18 on dietary patterns, there has been found a
19 significant relationship. But looking at the
20 literature since 2005, insufficient evidence
21 is available to assess the relationship
22 between vegetable and fruit intake per se and

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1 blood pressure or serum cholesterol.

2 Evidence for an association
3 between increased vegetable and fruit intake
4 and lower body weight is modest with a trend
5 towards decreased weight gain over five-plus
6 years in middle adulthood; no conclusions can
7 be drawn from the evidence on the efficacy of
8 increased vegetable and fruit consumption in
9 weight loss diets.

10 There's limited and inconsistent
11 evidence suggesting an inverse association
12 between total vegetable and fruit consumption
13 and the development of type 2 diabetes.

14 And evidence also indicates that
15 some types of vegetables and fruits are
16 probably protective against some cancers.

17 For implications then, vegetables
18 and fruits are nutrient-dense and relatively
19 low in calories. In order to meet the
20 recommended intakes, Americans should
21 emphasize vegetables and fruits in their daily
22 food choices, without added solid fats, sugars

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1 starches, or sodium, to maximize health
2 benefits.

3 Significant favorable associations
4 between vegetable and fruit consumption and
5 health outcomes appear to be linked to a
6 minimum of five servings per day and positive
7 linear effects may be noted at even higher
8 consumption levels. While the impact of
9 increased vegetable and fruit consumption is
10 unclear for some chronic diseases and markers,
11 improvements in preventing CVD and certain
12 cancers may occur with increase consumption of
13 these foods.

14 So, we can now open the floor for
15 discussion.

16 MEMBER PEREZ-ESCAMILLA: Cheryl,
17 this is Rafael.

18 Thanks for all this work. I know
19 this is a lot of evidence you have gone
20 through.

21 In terms of your conclusion
22 regarding fruits and vegetables and body

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1 weight, the issue here is that when you look
2 at the randomized controlled trials that have
3 lowered energy density by increasing fruit and
4 vegetable intake, you get very consistent
5 results that that helps with weight loss among
6 people trying to --

7 MEMBER ACHTERBERG: In the first
8 six months, and then when you look at 12 and
9 18 months, it fades away entirely.

10 MEMBER PEREZ-ESCAMILLA: Okay,
11 because the data that I reviewed, which was
12 mostly the first one to two years of followup,
13 it was still seen towards the end of those
14 trials. So, I am wondering if you looked only
15 at studies that have tried to isolate fruits
16 and vegetables or if you looked at the same
17 energy density studies that I looked at that
18 were interpreting them in a different way.

19 MEMBER ACHTERBERG: Yes, I am not
20 exactly sure. We would almost have to take it
21 study by study, head to head.

22 MEMBER PEREZ-ESCAMILLA: Yes.

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1 MEMBER ACHTERBERG: But, as I know
2 the literature, most of the effect in terms of
3 weight faded. It was not sustained over time.

4 MEMBER PEREZ-ESCAMILLA: Okay.

5 CHAIR VAN HORN: But this is
6 really important, and it is exactly the same
7 situation that we were facing in the
8 comparison between the science safety chapter
9 on fish and fatty acid chapter on fish, and
10 wanting to be sure that those references are
11 equally matched.

12 MEMBER ACHTERBERG: Yes.

13 CHAIR VAN HORN: I think maybe
14 this is an additional point of comparison
15 where we want to be sure that what Rafael's
16 criteria were matched yours. Especially if we
17 are citing the same studies, we need to report
18 them the same way.

19 MEMBER ACHTERBERG: And I suspect
20 a lot of the hitch here is trying to separate
21 the effect of vegetables and fruit per se as a
22 caloric condition versus, if you add more

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1 vegetables and fruits, are there other
2 adjustments in the dietary pattern that, then,
3 lower the --

4 MEMBER PEREZ-ESCAMILLA: Which are
5 the ones I looked at. I looked at those that
6 lowered energy density by increasing fruit and
7 vegetable intake.

8 CHAIR VAN HORN: Okay, and that is
9 important. So, can you two --

10 MEMBER ACHTERBERG: We'll have to
11 compare studies head to head.

12 MEMBER PEREZ-ESCAMILLA: Yes.

13 CHAIR VAN HORN: That would be
14 very helpful.

15 Mim?

16 MEMBER NELSON: It seems to me --
17 this is Mim -- there's another issue, and I
18 dealt with this with some of the behavior
19 questions. Also, are you looking at it as a
20 weight loss tool or are you looking at the
21 association of fruits and vegetables and body
22 weight in the population?

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1 I know with the behavior
2 questions, with the exception of the self-
3 monitoring, we ended up not looking at like
4 snacking and breakfast and other things as a
5 tool for weight loss. It was more the
6 associations with a healthier eating pattern
7 that we ended up going with because,
8 otherwise, it is very different data.

9 I wonder if any of that is going
10 on in this, except for potentially some of the
11 really longer-term trials that are more
12 looking at some more distal outcomes. I don't
13 know.

14 Because the question is whether it
15 is really associated with, you know, better
16 weight status than it is whether it is a tool
17 for weight loss to me.

18 MEMBER ACHTERBERG: Well, as I try
19 to be very specific in this conclusion, in
20 terms of weight gain, you really see the
21 effect in middle adulthood. That is where
22 there was the strongest effect in long-term

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1 studies, much less so at younger ages. But
2 when it came to weight loss, at least as I
3 recall the studies, the effect faded out
4 rather quickly.

5 MEMBER NELSON: But that probably
6 makes sense because it is isocaloric. I mean
7 that makes sense. So, then, you know, I think
8 we have to be careful about what we are
9 looking at here.

10 MEMBER SLAVIN: I am going to come
11 in here -- it is Joanne -- because the way
12 this was set up was fruit and vegetable intake
13 and different outcomes. So, body weight, we
14 opened it up to that, and there are probably
15 studies on dietary patterns that didn't come
16 into this review. So, that is the way it
17 happened.

18 And if you look at the data, it is
19 not very impressive, and it is probably not
20 too surprising. You know, it is just not very
21 strong.

22 MEMBER NELSON: For weight loss?

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1 MEMBER SLAVIN: No, for body
2 weight. I mean it is just body weight, fruit
3 and vegetable intake, is there a relationship?

4 It was opened very broadly. So, we tried
5 hard to get data into the dataset.

6 And it is the same question with
7 this whole food. It is looking at a whole
8 food that has lots of different nutrients, is
9 associated with different dietary patterns,
10 but in a whole food approach like this, and
11 you ask the question, the data is not strong.

12 It is a Grade III.

13 MEMBER NELSON: So, is it
14 possible, then -- sorry to be the context
15 queen over here or the champion, but is there
16 a possibility -- you said it, Cheryl, in your
17 remarks, but it is not written here, that with
18 the exception of -- patterns of eating that
19 are high in fruits and vegetables do show the
20 benefit. Again, I know that is not exactly
21 what you looked at, but it supports other
22 searches that were done.

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1 MEMBER ACHTERBERG: That's what I
2 was trying to do. I was trying to tip my hat,
3 so to speak, to dietary patterns, which are
4 different because of the whole context, to
5 fruits and vegetables per se.

6 MEMBER NELSON: Right.

7 MEMBER ACHTERBERG: When you look
8 at just the vegetable and fruit data --

9 MEMBER NELSON: Right.

10 MEMBER ACHTERBERG: And the other
11 thing, as you look at these studies, some are
12 domestic; some are international. They are
13 eating different kinds of vegetables and
14 fruits. The patterns are really very
15 variable. So, it is hard to find a consistent
16 thread that works across all of this in a
17 general sense.

18 Ultimately, the bottom line is it
19 is the patterns that matter, and we don't have
20 a clue -- this is a little bit of an editorial
21 -- but we don't have a clue about mechanisms.

22 MEMBER PEARSON: You know, with

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1 some of the foods, we went down to some
2 specifics, like with the nuts, you know, we
3 were talking about pistachios and peanuts, et
4 cetera. I just wonder, your evidence against
5 cancers, gosh, specifically cancer in the
6 mouth, pharynx, larynx, and esophageal, you
7 know, 16 of 18 cohort studies of carrot
8 consumption, 16 of 16 case controlled studies
9 -- I am afraid that people are going to blow
10 off this fruits and vegetables thing as not
11 being the quality of evidence that may be in
12 certain very microcosms.

13 MEMBER SLAVIN: But, you know, I
14 think I will come in here because I think like
15 fruits are mostly sugar. You wouldn't expect,
16 if we dumped fruit on people's diet, that
17 there would be -- you know, why would anything
18 improve? So, I think that people have been
19 expecting more than is there.

20 And if you look at the recent EPIC
21 study on cancer and fruits and vegetables, it
22 is not very strong. So, if anything, more

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1 recent data isn't as strong as where people
2 thought it was.

3 I am with Cheryl that the dietary
4 patterns, it is a great pattern; it fits a
5 nutrient adequacy, no question about it that
6 way. But, for disease prevention, it is
7 not --

8 MEMBER PEARSON: No, I am just
9 saying that all cancers are specific diseases.

10 That is the problem with grouping all of
11 them.

12 MEMBER SLAVIN: Right.

13 MEMBER PEARSON: So, if it doesn't
14 work in one cancer, it doesn't work in
15 pancreas cancer, it doesn't mean it doesn't
16 work in alimentary tract cancers, which the
17 things are actually traveling over.

18 So, as you look at your review,
19 you have scores of studies, all of which are
20 positive, and you are saying, well, maybe.

21 MEMBER ACHTERBERG: No, I am
22 saying definitely some fruits and vegetables

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1 have a very strong preventive effect for some
2 cancers. That is the only way I can condense
3 this.

4 MEMBER PEARSON: Right.

5 MEMBER ACHTERBERG: Beyond that,
6 you have to get very specific. So, berries
7 are good for gum and esophageal mouth cancer;
8 tomatoes, prostate cancer. It gets very
9 specific.

10 And it is very difficult to make a
11 general statement, which is why I said some --
12 it is really vegetables more often than fruits
13 -- but some vegetables and fruits, if you had
14 a mix-and-match test with some cancers.

15 MEMBER SLAVIN: And I think, also,
16 Cheryl, point out that this was not a review
17 by our Committee.

18 MEMBER PEARSON: Right.

19 MEMBER SLAVIN: We went with the
20 ACIR report and summarized that.

21 MEMBER ACHTERBERG: Yes.

22 MEMBER SLAVIN: So, it is not an

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1 independent review.

2 MEMBER ACHTERBERG: And that
3 report points out that the data have gotten
4 weaker over time as well.

5 MEMBER NELSON: This is Mim.

6 You couldn't take out the
7 "probably"? It can't be that some types of
8 vegetables and fruits are protective against
9 some cancers?

10 MEMBER ACHTERBERG: Actually, the
11 AICR report, I mean the older report said
12 probably, and they have backed off and said
13 "may". I really had to rely on the ACIR
14 report.

15 MEMBER NELSON: Okay.

16 MEMBER ACHTERBERG: And I
17 suggested, and I know it is a big debate
18 because of the length of the report, but there
19 is one table in that report that I think, if
20 we could add to our report, would be really
21 helpful, which lists the different kinds of
22 cancers --

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1 MEMBER SLAVIN: And how mixed the
2 results are.

3 MEMBER ACHTERBERG: I think it
4 would be a helpful addition if we could find
5 the space in the report to add that.

6 VICE CHAIR FUKAGAWA: This is
7 Naomi.

8 I would like to get back to the
9 question about body weight because the issue
10 of increasing plant-based proteins or plants
11 and vegetables and fruits in our diets is one
12 of our cross-cutting, overarching themes. I
13 think Rafael's analysis in the energy balance
14 side with respect to energy density being so
15 important, and that in many ways vegetables
16 and fruits help us achieve that lower energy
17 density whole food pattern, or whatever you
18 want to call it.

19 So, therefore, I do think that we
20 must find a way to reconcile these kinds of
21 conclusions that suggest that we really don't
22 know much about the effects, although I

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1 understand what you are saying in terms of how
2 you ask the question, but I think we are sort
3 of getting ourselves tied.

4 MEMBER ACHTERBERG: Two words that
5 have been stripped out of this report that I
6 guess I am fond of in trying to explain some
7 of the results are "per se".

8 The issue here is vegetables and
9 fruits per se, meaning alone with and
10 independent of the diet, other components of
11 the diet, don't have certain effects. But in
12 a dietary whole pattern, you will see effects.
13 That is the difference.

14 And that is a function, I think,
15 of the way the questions were posed, and, in
16 effect, we were restricted when we looked at
17 the data to answer a question. In hindsight,
18 some different questions would have yielded
19 some different answers.

20 MEMBER NELSON: This is Mim.

21 I might recommend to that, that
22 you do nuance the conclusion here to put some

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1 of that context in this, because I think it is
2 exactly how you stated it. But when it is so
3 narrow, it loses the contextual piece to this,
4 and that's really a shame.

5 Because I think, No. 1, we really
6 don't eat vegetables and fruits per se in
7 isolation. We do eat them in part of a
8 pattern of eating.

9 So, I think that it is a tough
10 place because you have gotten cornered because
11 it is so focused, which is really interesting.

12 But if we don't, then, put the context around
13 it, it really looks completely in conflict
14 with everything else that we are coming up
15 with.

16 MEMBER APPEL: Yes, this is Larry
17 Appel.

18 Yes, this chart is actually quite
19 good.

20 MEMBER ACHTERBERG: It is.

21 MEMBER APPEL: And maybe we should
22 try to figure out how to include it.

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1 But I think that the statement
2 about some cancers looks pretty timid compared
3 to at least the bar graphs here, which show a
4 probable relationship with mouth, pharynx,
5 larynx, esophagus, and stomach for both fruits
6 as well as non-starchy vegetables.

7 MEMBER ACHTERBERG: For those
8 cancers, yes, but when you look at pancreatic
9 and --

10 MEMBER APPEL: Yes. No, I realize
11 that. No, no, no, no. But that's all we did
12 in 2005. You know, we just said it's these.
13 We didn't go beyond the evidence, but the
14 evidence --

15 MEMBER PEARSON: Epithelial cell
16 alimentary tract cancers, I mean those are all
17 essentially the same --

18 MEMBER ACHTERBERG: So, the
19 suggestion would be two statements about
20 cancer. One that might pertain just to the
21 alimentary tract cancers, and then, otherwise,
22 we could say some cancers, some vegetables and

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1 fruits. Is that what you are saying or
2 suggesting?

3 MEMBER APPEL: Well, you could
4 just be specific about the positive ones and
5 not try to sort of like dance around the
6 others. I mean it is pretty clear. You could
7 say those ones I just mentioned with fruit and
8 non-starchy vegetables --

9 MEMBER ACHTERBERG: Right.

10 MEMBER APPEL: -- and leave it at
11 that.

12 CHAIR VAN HORN: This goes right
13 along the same lines as what we were
14 discussing earlier where we said we are
15 lifting things right out of this report to be
16 able to make a statement in this report.

17 MEMBER SLAVIN: I kind of would
18 think, though, Cheryl, that if, for
19 completeness, if we could actually get the
20 whole figure in because there are lots of
21 cancers where there is no relationship and
22 lots of fruits and vegetables where there

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1 isn't. So, it is just a complicated, you
2 know, it is this huge grid. Otherwise, I
3 don't think it is complete. It is very biased
4 to just pick.

5 MEMBER NELSON: Back to the other
6 sort of contextual issue, do you think it is
7 possible to add to the conclusion here a
8 little bit of context around, "notwithstanding
9 dietary patterns that are rich in vegetables
10 and fruits do show benefit," or something
11 along those lines? Use your "per se" and,
12 then, "notwithstanding" or something along
13 those lines.

14 I think, then, it is more in
15 keeping with the rest of the report and
16 others. Otherwise, it is hard -- I mean we
17 are having a hard enough time dissecting this.
18 Think about others that might read this and
19 trying to understand the nuances.

20 MEMBER ACHTERBERG: Well, I might
21 add, too, again, our Committee had a lot of
22 different research recommendations, half of

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1 which were stripped out of the report for
2 space. So, at least one or more of those
3 recommendations spoke to the need of more
4 nuanced research, separating out different
5 kinds of vegetables and fruits, doing work
6 that would drive at mechanisms more, and tying
7 that to particular cancers.

8 Because we can't understand the
9 impact of a dietary pattern until, frankly, we
10 develop more and better science. But I think
11 those statements were stripped out of the
12 report.

13 MEMBER NELSON: But it is more
14 than just cancer. I mean it is cardiovascular
15 disease, hypertension --

16 MEMBER ACHTERBERG: It is all of
17 them.

18 MEMBER NELSON: Yes.

19 MEMBER ACHTERBERG: You know, is
20 it the allium vegetables? If you look at the
21 European studies, that is what they emphasize.

22 If you look at Asian studies, it is a

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1 completely different set compared to what we
2 eat here in the United States.

3 I think, just based on my
4 knowledge of botany, these are very, very
5 different kinds of substances found across
6 these different kinds of vegetables and
7 fruits. They are going to work differently.
8 That is the context here I think that matters
9 most, is we don't know very much about it.

10 VICE CHAIR FUKAGAWA: This is
11 Naomi.

12 I do think, though, that we must
13 be cautious about going down the road of
14 potentially opening up a huge area of research
15 that, again, becomes reductionist, because,
16 then, we could go down to every potentially
17 active molecule that occurs in a plant or in
18 combination and its reaction with the plant
19 and an animal product, and we won't really
20 necessarily move the field forward.

21 MEMBER ACHTERBERG: I don't
22 disagree, but take, for example, there's a

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1 fair amount of work done on garlic and its
2 cousins relative to cancer. What happens
3 there is different than what happens if you
4 eat a tomato.

5 I think there are some very
6 important research questions that need to be
7 posed and examined. That is all I am
8 suggesting, not the 66 different proteins that
9 are found in a single strawberry seed.

10 CHAIR VAN HORN: Okay. In the
11 interest of time, I think we ought to move
12 forward. We still have to finish
13 carbohydrates and then go on to sodium,
14 potassium, and water.

15 So, I do agree that taking a look
16 and comparing the evidence is definitely
17 important, so that we are consistent about
18 that. Lifting the table out of the ACIR
19 report seems like it does justice to more of
20 this. Coming up with recommendations for
21 research, that absolutely is appropriate here.

22 And anything else, I think we are going to

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1 have to deal with later.

2 Larry, did you have something
3 else?

4 MEMBER APPEL: I don't want to
5 perseverate on this, but the insufficient
6 evidence of fruit and vegetable and blood
7 pressure, is there a way we could just
8 asterisk this based on data after 2005? I
9 mean we are ignoring the best studies in this
10 one, and I just don't think it looks right.

11 CHAIR VAN HORN: Right, totally.
12 You know, to eliminate or ignore the landmark
13 studies that have already been done, you know,
14 it seems like that would be unfortunate.

15 MEMBER ACHTERBERG: I think we
16 have referred to that, and if we just write
17 what I spoke, it should address that because
18 those were dietary pattern issues.

19 CHAIR VAN HORN: Great.

20 Okay. Joanne?

21 MEMBER PI-SUNYER: Okay. We go on
22 to glycemc index.

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1 Could I have the next slide,
2 please?

3 So, the first question was: what
4 is the relationship between glycemic index and
5 glycemic load and selected health outcomes?

6 The first conclusions are:

7 Strong and consistent evidence
8 shows that glycemic index and glycemic load
9 are not associated with body weight and do not
10 lead to a greater weight loss or better weight
11 maintenance.

12 And the second, that abundant,
13 strong epidemiological evidence demonstrates
14 there is no association between glycemic index
15 or load and cancer.

16 And the second set of conclusions:

17 A moderate body of inconsistent
18 evidence supports a relationship between high
19 glycemic index and type 2 diabetes. Strong,
20 convincing evidence shows little association
21 between glycemic load and type 2 diabetes.

22 Due to limited evidence, no

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1 conclusion can be drawn to assess the
2 relationship between either glycemic index or
3 load and cardiovascular disease.

4 CHAIR VAN HORN: Okay. I think we
5 have spent a fair amount of time on this
6 already. Is there any further comment to be
7 made?

8 (No response.)

9 Okay. We will move ahead.

10 MEMBER SLAVIN: All right.
11 Carbohydrates and health outcomes, sugar-
12 sweetened beverages.

13 In adults, what are the
14 associations between intake of sugar-sweetened
15 beverages and energy intake?

16 And, in adults, what are the
17 associations between intake of sugar-sweetened
18 beverages and body weight?

19 And this is another example where
20 in the energy balance the associations with
21 children were found and reported. So, we are
22 going to need to get these at least

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1 crosstalking here.

2 So, the conclusions:

3 Limited evidence shows that intake
4 of sugar-sweetened beverages is linked to
5 higher energy intake in adults.

6 And conclusion two: moderate
7 epidemiologic evidence suggests greater
8 consumption of sugar-sweetened beverages is
9 associated with increased body weight. In
10 isocaloric conditions, added sugars, including
11 sugar-sweetened beverages, are no more likely
12 to cause weight gain than any other source of
13 energy.

14 And implications: added sugars,
15 as found in sugar-sweetened beverages, are not
16 different from other calories, and reducing
17 intake is recommended to reduce calories. And
18 intake of caloric beverages, including sugar-
19 sweetened beverages, sweetened coffees and
20 teas, energy drinks, and other drinks high in
21 calories and low in nutrients should be
22 reduced in consumers needing to lower body

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1 weight.

2 So, we can go back to any
3 questions on the conclusions or implications.

4 Eric?

5 MEMBER RIMM: This is Eric.

6 I think it is something we did
7 sort of talk about before. This sentence on
8 "in isocaloric conditions," it makes it sound
9 like we have suddenly become experimentalists.

10 And the question really is, what is the
11 impact of foods? Is it associated with weight
12 gain?

13 I mean you could say, "in
14 isocaloric conditions," you know, saturated
15 fat probably wouldn't do it and anything
16 wouldn't in isocaloric conditions. It is not
17 like it is --

18 MEMBER SLAVIN: And I think, Tom,
19 I don't know how you figured out how to do it
20 in the fat. Because most of the studies, when
21 you are controlling energy intake, to make it
22 clear that that it is the way the study is

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1 done, as opposed to free-living, yes. There
2 are really two whole types of studies here.

3 MEMBER NELSON: But I wonder, is
4 that more of an implication than it is a
5 conclusion? Because it seems to me --

6 MEMBER RIMM: It is a contextual
7 issue. It is not even --

8 MEMBER SLAVIN: Yes, because most
9 of the studies here are these types of
10 studies, and they don't show any differences.

11 So, it really is a large body of our evidence
12 is right there. So, if that goes away, then
13 our conclusion -- that is what our data is.
14 Most of our data is that.

15 MEMBER WILLIAMS: Joanne, those
16 are feeding studies, aren't they, mostly?

17 MEMBER SLAVIN: They are usually,
18 yes, they are all different types. People try
19 to get at this in different ways, but they are
20 really different studies, but they typically
21 try to control calories, yes.

22 MEMBER NELSON: Right, but that

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1 is, again, back to the issue of the
2 relationship between sugar-sweetened -- which
3 is your first sentence, that there is a
4 relationship or there seems to be an
5 association versus -- I mean, if you put
6 anything in isocaloric, people aren't going to
7 lose weight or gain weight. I mean it doesn't
8 matter what it is. I mean it is a little bit
9 of a "duh". I don't mean to say that
10 negatively, but if you put someone in a CRC
11 and you feed them and you give them sugar-
12 sweetened beverages or you give an apple, and
13 it is the same calories, it's not going to
14 matter.

15 MEMBER SLAVIN: You know, I think,
16 too, Mim, it does come out in the
17 macronutrient chapter also that, obviously, a
18 calorie is a calorie. So, this is kind of
19 making the same point, and the studies clearly
20 show that. I don't know why people wouldn't
21 think that, but there's a lot of people that
22 don't think that.

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1 MEMBER NICKOLS-RICHARDSON: This
2 is Shelly.

3 I think that this second sentence
4 is true to the science that you looked at.
5 And while my issue is what I said before, that
6 I don't think that America in isocaloric
7 condition is in energy balance. So, that is
8 where I think that the epidemiologic data
9 makes a little more sense or seems to suggest
10 a different outcome.

11 But looking strictly at the
12 studies that you reviewed, that second
13 statement is correct, based on that science.
14 So, it is hard to reconcile the first sentence
15 with the second sentence, and then to look at
16 the other data like the Marriott paper that
17 suggests that the sugar-sweetened beverages
18 then have a negative effect on micronutrient
19 intake.

20 So, it is not that this is wrong.
21 It is just it is hard to live with that
22 statement because America is not in that type

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1 of controlled conditions.

2 MEMBER SLAVIN: Right, and I think
3 I kind of wanted --

4 MEMBER RIMM: Especially since the
5 first conclusion says they eat more calories
6 if they drink sugar-sweetened beverages.

7 MEMBER SLAVIN: Yes, like the
8 first one in energy intake in adults, there's
9 really very little data there at all. That is
10 why it is limited. That is why that is not
11 strong.

12 And I know when I talked, listened
13 to Chris', 12 out of 18 didn't show a
14 relationship. So, I guess I wouldn't consider
15 that strong. I would consider it more
16 moderate.

17 So, I think this whole area, we
18 probably need to compare, because kids versus
19 adults, obviously, probably kids are more
20 likely to consume, too. So, it could be that
21 the findings would be different for adults or
22 kids. But, right now, they are pretty

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1 inconsistent, the two conclusions.

2 Yours is strong though, and it is
3 12 out of 18. So, I think we are going to
4 have to -- you know, that is pretty mixed.

5 MEMBER WILLIAMS: The strength was
6 a little bit different, but not that
7 significantly.

8 MEMBER SLAVIN: Yes.

9 MEMBER NELSON: I guess I am
10 worried about the implication of what this
11 conclusion could be conferred as. I know that
12 in your implication statement you talk about
13 they are empty calories, et cetera. I just am
14 a little nervous about that, not a little, but
15 quite nervous.

16 MEMBER SLAVIN: I will let some of
17 my other Committee people talk.

18 MEMBER PI-SUNYER: Yes, I mean I
19 think everybody would wish that this was
20 different, but it isn't different. And you
21 know, you can interpolate. You could have
22 more sugar and less rice, and you would be all

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1 right.

2 MEMBER SLAVIN: Yes, and I think
3 it comes out in our chapter, too, that
4 carbohydrates --

5 MEMBER PI-SUNYER: People try to
6 demonize sugar, but --

7 MEMBER SLAVIN: It is not strong.
8 The relationship of sugar and body weight is
9 not there. It is not --

10 CHAIR VAN HORN: Yet. I do think
11 that there's some preliminary evidence. In
12 fact, I was looking in my bag to see if I
13 brought it with me. There's definitely animal
14 experimental studies going on now in terms of
15 looking at high fructose corn syrup versus
16 sucrose versus other things.

17 MEMBER SLAVIN: Yes, but, you
18 know, we have stayed away from animal studies.

19 CHAIR VAN HORN: Yes. No, no, no.
20 All I am suggesting is, to go back to what
21 Mim is saying, that at this point in time we
22 can only report what we have. But as far as

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1 where this literature is going, I can
2 guarantee you, then, in 2015 there will be a
3 rich literature on this subject because
4 everybody is interested in it.

5 So, you know, I think we have to
6 place it in the context that is truthful. I
7 do think that the evidence, from what I looked
8 at, I think Christine is absolutely right, in
9 children the data seem to be stronger. But
10 what we report on here has to be back to
11 calories are calories.

12 MEMBER NELSON: But we don't say
13 in kids that isocalorically, you know, we
14 don't say that because we wouldn't say that.

15 MEMBER SLAVIN: But I wonder for
16 them, if you look at our body of evidence,
17 most of our studies are those studies. We
18 didn't have a lot. We have some. We tried to
19 use the systematic reviews that were out
20 there. They were really mixed.

21 So, if you look at the studies
22 that are in our report, it is quite different

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1 from Chris' report, the number of studies, the
2 types of studies.

3 MEMBER NELSON: But I think with
4 the first part of the second bullet, I think
5 it is probably fine. I am nervous about how
6 it is going to get interpreted.

7 MEMBER WILLIAMS: I agree. I just
8 think that second part of the second bullet,
9 the two parts are in conflict.

10 MEMBER SLAVIN: I don't think they
11 are because they are completely different
12 studies.

13 Can we make it a third bullet?

14 MEMBER NICKOLS-RICHARDSON: This
15 is Shelly.

16 I think in the implication it is
17 clear, though, that a place to reduce calories
18 is sugar-sweetened beverages. So, those two
19 statements in that second bullet are correct
20 based on the science. They just don't mesh
21 well. And I think the implication is the
22 place to make it clear what that second part

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1 really means.

2 MEMBER PEARSON: Yes, following up
3 on what Linda was talking about, obviously,
4 there are industry efforts to replace sugar
5 with high fructose corn syrup --

6 MEMBER CLEMENS: It is the other
7 way around.

8 MEMBER PEARSON: I'm sorry.
9 Right, to go back with sugar rather than high
10 fructose. Is there enough evidence to even
11 comment on high fructose corn syrup?

12 MEMBER SLAVIN: No.

13 MEMBER PEARSON: I am just
14 wondering if that is worth stating.

15 MEMBER CLEMENS: There was a big
16 review on this --

17 MEMBER SLAVIN: Yes, it was just
18 published --

19 MEMBER CLEMENS: -- about two
20 years --

21 MEMBER SLAVIN: Well, there was
22 actually a recent one published in 2010 that

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1 is in there, too.

2 And fructose is no different in
3 studies on weight loss. You know, because,
4 typically, high fructose corn sweeteners
5 aren't any really higher than sucrose. So, if
6 you feed strictly fructose, you see
7 differences in animal studies. I think that's
8 the data there.

9 MEMBER PEARSON: My point is that
10 a positive study isn't always needed to make a
11 significant result. So, a comment that this
12 isn't an issue is probably worth -- because no
13 one else knows that. So, everyone is --

14 MEMBER PI-SUNYER: That it is not
15 an issue to substitute sugar for high
16 fructose --

17 MEMBER PEARSON: Right. A calorie
18 is a calorie is what you are saying.

19 MEMBER SLAVIN: Yes, it is a wash.

20 MEMBER PEARSON: But the point is
21 that is not what is out there in the press and
22 in the market and every other place. We are

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1 trying to advise the American people about
2 what to think. So, I am wondering --

3 MEMBER SLAVIN: I think it is in
4 the background in the carbohydrates, but it
5 isn't front and center here at all.

6 MEMBER ACHTERBERG: It sounds like
7 we are creating an implication now. So, you
8 might want to add that.

9 MEMBER SLAVIN: Yes.

10 MEMBER ACHTERBERG: That to
11 educate the American public --

12 MEMBER SLAVIN: That
13 carbohydrates --

14 MEMBER PI-SUNYER: We can put it
15 in the implications.

16 MEMBER SLAVIN: Yes, we could put
17 that in the implications for sure.

18 VICE CHAIR FUKAGAWA: This is
19 Naomi.

20 But don't we have to consider that
21 the different forms of sugars can have
22 different metabolic effects? So, it may be

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1 equivalent, if you are substituting for the
2 effect on body weight, but there are other
3 aspects of one's metabolism that could be --

4 MEMBER SLAVIN: The only one we
5 have in there is that Stan Hope study where
6 they gave high fructose. So, we do have that
7 study. Very few studies, but it is in there,
8 what we could find, yes.

9 MEMBER PI-SUNYER: No, fructose is
10 very different, but not many people eat just
11 fructose. It is either sugar or high fructose
12 corn syrup. It is not isolated fructose.

13 MEMBER SLAVIN: So, your exposure
14 is the same. It is just the amount as opposed
15 to --

16 CHAIR VAN HORN: Okay. Shall we
17 move on?

18 MEMBER SLAVIN: Well, do we want
19 another implication? Does anybody --

20 MEMBER CLEMENS: Yes, add an
21 implication.

22 MEMBER SLAVIN: Okay.

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1 CHAIR VAN HORN: I think as Shelly
2 pointed out, to clarify this as two separate
3 bullets with an implication on it, I think
4 makes sense. They are two different points.

5 MEMBER SLAVIN: All right.

6 MEMBER APPEL: I have a question.

7 MEMBER SLAVIN: Yes.

8 MEMBER APPEL: The evidence has
9 improved since 2005, Xav, wouldn't you at
10 least agree to that?

11 MEMBER PI-SUNYER: Yes.

12 MEMBER APPEL: Okay. Because I
13 think there was a Schultz study, and then we
14 had a public --

15 MEMBER PI-SUNYER: It has improved
16 a little bit, but not a huge amount.

17 MEMBER APPEL: But it has
18 improved.

19 MEMBER PI-SUNYER: Yes,
20 definitely.

21 MEMBER APPEL: But there are four
22 cohort studies that Joan showed me, and each

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1 of them are positive, you know, for a
2 relationship. So, I am wondering if we should
3 comment that the recent evidence is stronger
4 than previous evidence on this relationship
5 because I think that is true.

6 MEMBER PI-SUNYER: Yes, we had a
7 very hard time.

8 MEMBER APPEL: We had a hard time,
9 but it is actually easier now. So, I am
10 wondering if we should actually comment here.

11 Part of the problem was that there
12 was crappy type of evidence. It is all cross-
13 sectional, and people were confused. But the
14 evidence is in a direction, a trajectory that
15 you just pointed out. Somehow that concept I
16 think has to get weaved into this.

17 MEMBER SLAVIN: Yes, and I do
18 think it is another problem with trying to get
19 at exposure. You know, carbohydrate measures
20 are terrible. So, an overall carbohydrate,
21 total carbohydrate is linked to lower body
22 weight. That is the environment you are in

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1 now.

2 MEMBER APPEL: And the other thing
3 is that there has been a change in the types
4 of how the exposures are done. They are
5 looking at change. So, the Schultz study and
6 our study looked at change, going from where
7 you are to increasing or decreasing. When you
8 look at change as an exposure, you see a
9 relationship. That is probably, I think, the
10 biggest difference. It is the change in
11 methods over time that has led to these
12 relationships.

13 MEMBER NELSON: Do you think there
14 is a way -- this is Mim -- in that second
15 bullet or the first bullet to say that, while
16 still moderate, there is more evidence to make
17 it a stronger -- or something like that? Is
18 that what you're --

19 MEMBER APPEL: I think so because
20 this is not like it has been moderate; it has
21 been moderate. I mean we have seen over five
22 years an improvement in the quality of

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1 evidence on this front. It is not gigantic,
2 but we went from pretty mediocre to now having
3 a consistent, but relatively -- relatively few
4 to compare it to others, but these are higher-
5 quality studies than we have seen before.

6 MEMBER SLAVIN: And I think if you
7 just look at intake of added sugars or sugar-
8 sweetened beverages and weight or body weight,
9 that doesn't show you much. You do have to
10 look at change. You know, there's different
11 ways of getting there, but just the usual way,
12 those studies are not supportive.

13 MEMBER NELSON: Right, but the
14 stronger design is change over time.

15 MEMBER SLAVIN: Well, it is a
16 different design.

17 MEMBER NELSON: Right.

18 MEMBER SLAVIN: And to explain it
19 in this is the problem. I think that's --

20 MEMBER NELSON: But I don't think
21 you have to. You can just say that there's
22 more data than there was in 2005 or it is

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1 stronger evidence than there was.

2 MEMBER SLAVIN: It is
3 disappointing how little there is, though, for
4 such an important topic, I think. When we get
5 into the strength of the evidence, it would be
6 nicer if we had --

7 MEMBER NELSON: I think it would
8 be great to have more, but I think what we are
9 just saying is that there is more stronger
10 evidence than there was before. That is all.

11 MEMBER SLAVIN: I think moderate
12 is really pretty generous, yes.

13 MEMBER APPEL: We are not
14 advocating changing for moderate.

15 MEMBER SLAVIN: But that is really
16 what the four studies are. That sentence is
17 based on those four studies, and I think it
18 explains it pretty well. That is really what
19 it is talking about, because those are the
20 studies that that is based on. The other
21 studies don't find it at all. So, I think it
22 is already there. We could write it a

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1 different way.

2 MEMBER NELSON: And these change
3 studies are included in those four studies?

4 MEMBER SLAVIN: That's the four
5 right there.

6 MEMBER NELSON: Okay.

7 MEMBER SLAVIN: That's the
8 moderate evidence.

9 MEMBER NELSON: Okay, but, then,
10 it is stronger than it was in 2005, though.
11 It adds to the literature.

12 MEMBER SLAVIN: But before it
13 wasn't there, no.

14 MEMBER ACHTERBERG: I gnashed my
15 teeth over this for a long time. Joanne did
16 the initial work, and it just was hard, but I
17 had to come around. I had to say that's what
18 it says; that's where the science is.

19 CHAIR VAN HORN: Okay. So, we
20 want to just make sure we are being specific
21 about the science, and I think Shelly's point
22 is still the driving force here, to be very

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1 clear and separate those two points, and make
2 sure that they stand alone. And the idea of
3 growing evidence is certainly important, too,
4 because that is going to happen.

5 MEMBER APPEL: I really think that
6 that is an important concept because it has
7 changed. It is not moderate over all time.
8 This is better methods --

9 CHAIR VAN HORN: Right, this is
10 for now. This is what we have found.

11 MEMBER NELSON: It was limited
12 before, and now it is moderate.

13 CHAIR VAN HORN: Exactly.

14 MEMBER SLAVIN: Yes, right, which
15 it says, right.

16 MEMBER NELSON: I don't see it
17 there, but --

18 MEMBER APPEL: I don't see the
19 change.

20 MEMBER NELSON: I don't see the
21 change.

22 CHAIR VAN HORN: You could say,

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1 "now exists," or something like that, that
2 just illustrates there's a time situation
3 here.

4 MEMBER NELSON: Yes, it is a time
5 course.

6 CHAIR VAN HORN: Yes.

7 MEMBER APPEL: Improved quality of
8 evidence, now considered moderate.

9 MEMBER NELSON: Yes, exactly.
10 That is the way to do it. It is just a slight
11 modification. No? You guys aren't in --

12 MEMBER SLAVIN: I think it is
13 really confusing. We have worked on this one
14 a lot. I think the Subcommittee knows that we
15 have tried long and hard to get this one where
16 it should be. The word is the moderate
17 epidemiologic -- you know, it was a --

18 MEMBER NELSON: We agree with all
19 of that.

20 MEMBER SLAVIN: Now suggests?

21 MEMBER APPEL: The evidence now
22 suggests.

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1 MEMBER SLAVIN: That's fine. Yes,
2 that's fine.

3 MEMBER NELSON: Yes, that would
4 help a little bit.

5 CHAIR VAN HORN: At least it puts
6 it in a time course at this point.

7 MEMBER NELSON: Exactly, "per se"
8 and "now".

9 (Laughter.)

10 CHAIR VAN HORN: Okay, Joanne.

11 MEMBER SLAVIN: Okay. Non-caloric
12 sweeteners. Are non-caloric sweeteners
13 related to energy intake and body weight?

14 These are our conclusions:

15 Moderate evidence shows that using
16 non-caloric sweeteners will affect energy
17 intake only if they are substituted for
18 higher-calorie foods and beverages. So these
19 are the types of studies where calories are
20 controlled.

21 A few observational studies
22 reported that individuals who used non-caloric

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1 sweeteners are more likely to gain weight or
2 be heavier. This does not mean that non-
3 caloric sweeteners cause weight gain; rather,
4 that they are more likely to be consumed by
5 overweight and obese individuals.

6 Yes, so this dataset is also not
7 what you would like to see. You know,
8 obviously, if we want people to not use
9 sweeteners and we want them to use non-caloric
10 sweeteners, it would be nice to have some data
11 that shows it is linked to lower body weight.

12 There is not much out there. But,
13 theoretically, we have to believe calories,
14 that if you controlled everything else and
15 switched over, you should lose weight. But
16 there is not a ton of research to support
17 that.

18 MEMBER NELSON: But I think
19 there's a couple of like moving/shifting
20 things in these three bullets or the three
21 concepts.

22 So, can I just ask a simple

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1 question? Just sort of in the population as a
2 whole, is there any benefit, does there seem
3 to be a benefit for consuming foods and
4 beverages that have artificial sweeteners?
5 For body weight?

6 MEMBER PI-SUNYER: Not over water.

7 MEMBER SLAVIN: Right. Right.

8 MEMBER NELSON: Yes, I mean, I
9 will tell you one of my greatest fears with
10 our report at the moment, the unintended
11 consequences, because we are talking so much
12 about added sugar. I mean I am advocating it,
13 but we are talking so much about added sugars
14 and solid fats, that all we are going to see
15 is the food supply become completely replete
16 with artificial sweeteners. And it is a
17 concern of mine.

18 I mean I know we talk about
19 minimally-formulated and processed, and things
20 like that, but I, for one, don't think there
21 is any evidence to say that will help to bring
22 down body weight. That would be my

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1 hypothesis.

2 So, I think that we have got to be
3 careful how we word this so that we aren't
4 just promoting artificial sweeteners in the
5 food supply.

6 MEMBER CLEMENS: This is Rog.

7 As a food tech scientist here, I
8 assure you, Mim, that we won't see the
9 artificial sweeteners take a boom.

10 Carbohydrates, with the high
11 fructose corn syrup, or sucrose, they all have
12 very definitive, functional properties in the
13 entire food supply. So, we won't see the boom
14 that you're thinking about.

15 MEMBER NELSON: Well, we saw it
16 before with fat substitutes when we said fat
17 was bad. So, I am a little bit concerned,
18 but --

19 MEMBER PI-SUNYER: Also, isn't it
20 true that, Larry, in your water chapter you
21 say water is better than the other stuff?

22 MEMBER APPEL: What am I being

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1 accused of here?

2 (Laughter.)

3 MEMBER PI-SUNYER: I don't
4 remember, but I thought you said that the
5 preference is water.

6 MEMBER APPEL: Oh, yes, but that
7 is a contextual statement. We tried to do a
8 literature search with water and weight, and
9 we couldn't find anything. So, we just made a
10 contextual statement that, when people drink
11 fluids, they should preferably drink water or
12 low-calorie or no-calorie fluids.

13 MEMBER NELSON: Well, I am
14 wondering, similar to the sugar-sweetened
15 beverages, the one before where the cohort
16 studies show a relationship, but if you do an
17 isocaloric there's no difference.

18 I mean, in a sense, I wonder, the
19 first bullet here basically says it will help
20 if you are really good about decreasing
21 calorie intake and substituting. I don't
22 think people are very good at that.

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1 MEMBER SLAVIN: Well, I think the
2 way this is set up, though, the bottom are the
3 EPI studies, and the top here are the feeding
4 studies. Your best data is going to be, if
5 you control everything, obviously, people
6 would lose weight in that setting.

7 Now in the free-living, what
8 happens is what exactly happens down there.
9 If you look in an EPI study who is using
10 artificial sweeteners, it tends to be
11 overweight and obese individuals.

12 MEMBER NELSON: It is really?

13 MEMBER SLAVIN: But it doesn't
14 cause that.

15 MEMBER NELSON: Right.

16 MEMBER SLAVIN: You know, it is an
17 association, and that is where you are with
18 your data.

19 MEMBER NELSON: Although there is
20 this emerging evidence that this increase in
21 the sweet sort of taste has been an issue, and
22 that it could be caused by, not caused

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1 necessarily, but a contributor from all these
2 sweeteners. It's a hypothesis.

3 CHAIR VAN HORN: That is no
4 further along than what we were just about
5 high fructose corn syrup. So, I think we have
6 to take it as it is.

7 MEMBER SLAVIN: Move on? All
8 right.

9 It looks like we got all the fun
10 ones, but here's liquids versus solids. What
11 is the impact of liquids versus solid foods on
12 energy intake and body weight?

13 What we have is, evidence is
14 conflicting that liquid and solid foods differ
15 on their effect on energy intake and body
16 weight. However, liquids in the form of soup
17 may lead to decreased energy intake and body
18 weight.

19 That is the data. You know, the
20 soup data is kind of interesting, but that is
21 an example of a liquid that, if people have it
22 before, they tend to eat less at a subsequent

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1 meal. But when you control calories, liquid
2 versus solid, the studies that are out there
3 really don't show differences in energy intake
4 or body weight.

5 I can see people looking at their
6 clocks.

7 So, any questions?

8 MEMBER APPEL: Yes. This is
9 Larry.

10 And maybe this is a distinction
11 that I am not even sure I know. But you say
12 impact of liquids versus solid foods. Is it
13 calories from liquids versus calories from
14 solids? Because that is what we studied in
15 our study.

16 MEMBER SLAVIN: Yes, right.
17 Right.

18 MEMBER APPEL: And there was a
19 difference, and then it got attenuated over
20 time.

21 MEMBER SLAVIN: Right. Yes. No,
22 your study was probably the one that did it

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1 that way. Everybody else, most of the
2 controlled feeding studies people have tried
3 to balance liquids versus solids in these
4 mostly satiety, short-term-type studies.

5 And obviously, people see it is a
6 liquid; it is a solid. I mean they can see
7 it, too.

8 So, there aren't great data,
9 but --

10 MEMBER APPEL: So, is it
11 conflicting? Conflicting means liquids are
12 better than solids, and solids better than
13 liquids. Or is there insufficient evidence to
14 conclude?

15 MEMBER SLAVIN: Yes.

16 MEMBER APPEL: So, sometimes
17 solids look better --

18 MEMBER SLAVIN: Yes.

19 MEMBER APPEL: -- or liquids look
20 better than solids?

21 MEMBER SLAVIN: Yes. And if you
22 look at the studies, they are all in the -- we

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1 tried to find anything we could, and there was
2 no consistent design there at all. So, yes, I
3 would have to say it is conflicting.

4 And I am happy, we are happy to
5 consider other ways of talking about it
6 because there are a couple of fairly well-done
7 soup studies that did show that. So, that is
8 in our evidence review.

9 All right. Discussion and
10 consensus?

11 And then, other related topics.
12 Unfortunately, we have too many topics, but I
13 will go quickly through this. These were some
14 non-NEL searches we did.

15 Role of carbohydrates, fiber,
16 protein, fat, and food form on satiety. Lots
17 of things affect satiety.

18 These are done in laboratory
19 settings to control for variables. It may not
20 be generalizable.

21 Fiber seems to be more satiating
22 than low-fiber foods. Sometimes when fiber is

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1 added, you don't see the same effect. Small
2 changes in macronutrient content of the diet
3 probably don't significantly alter satiety.

4 And that is all reviewed in there.

5 Prebiotics/probiotics. We did a
6 short review on this. We concluded gut
7 microflora play a role in health. Research is
8 developing.

9 There are foods that are high in
10 prebiotics and foods that are high in
11 probiotics. As part of accepted diet
12 patterns, they are fine, but there's not
13 enough data that says prebiotics or probiotics
14 should be recommended.

15 And that's it. Questions?

16 (No response.)

17 Larry?

18 CHAIR VAN HORN: Larry, go for it.

19 And you are next, Larry. Just remember that.

20 MEMBER APPEL: All right. So,
21 let's see. Okay. So, we had questions on
22 sodium, potassium, and water. I am going to

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1 also provide the implications, because what I
2 did was really, or our Committee -- oh,
3 actually, one second.

4 I think we do need to acknowledge
5 everybody on our group. Yes, they did a
6 terrific job.

7 Actually, while I enjoyed our
8 stimulating conversations at nine o'clock on
9 Friday morning, I am looking forward to having
10 my nine o'clock morning. Yes, okay.

11 But they did a terrific job of
12 keeping us on task and, also, a lot of fun,
13 especially on the dietary patterns work that
14 we did.

15 Okay. So, we had questions on
16 sodium, potassium, and water. So, the first
17 question on sodium: what is the effect of
18 sodium intake on blood pressure in children
19 and in adults? And we have a two-part
20 conclusion.

21 The first: a strong body of
22 evidence has documented that in adults, as

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1 sodium intake decreases, so does blood
2 pressure.

3 And then the second conclusion: a
4 moderate body of evidence has documented that,
5 as sodium intake decreases, so does blood
6 pressure in children, birth to 18 years of
7 age.

8 And I think if there is anything
9 that I am sort of on the fence, it is whether
10 this is moderate or moderately strong for the
11 children because the best study was a clinical
12 trial, and it showed a result. It was the
13 Andover-Exeter trial, and it was just a lot --
14 and the meta-analysis, overall, the meta-
15 analysis was good, but there were a lot of
16 small studies. So, I would put a moderate
17 body of evidence.

18 Now I put the stuff, the more
19 meaty aspect of this in the implications,
20 which I am going to go through. I think these
21 are important, so I am going to read through
22 these.

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1 So, the projected health benefits
2 of a reduced sodium intake are substantial and
3 include fewer strokes, cardiovascular disease
4 events, and deaths, as well as substantially
5 reduced healthcare costs. And there have now
6 been three to four major, independent
7 projections of benefits, and they all reached
8 that conclusion or pieces of that.

9 In view of these potential
10 benefits and the currently very high intake of
11 sodium in the general population, children and
12 adults should reduce their sodium intake as
13 much as possible by consuming fewer processed
14 foods that are high in sodium and by using
15 little or no salt when preparing or eating
16 foods.

17 To Roger's suggestion, I modified
18 the "processed foods that are high in sodium,"
19 rather than just saying, "processed foods".
20 Okay.

21 All right. So, implications, two:
22 the current food supply is replete with

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1 excess sodium. Many foods contribute to the
2 high -- this is very important -- many foods
3 contribute to a high intake of sodium. While
4 some foods are extremely high, the problem of
5 excess of sodium reflects frequent consumption
6 of foods that are only modestly increased in
7 sodium.

8 A major new concern is the excess
9 sodium added to products such as poultry,
10 pork, and fish through injections or
11 marination. Efforts to quantify the amount of
12 sodium from this type of processing is
13 warranted.

14 Finally, an important determinant
15 of sodium intake is calorie intake. Hence,
16 efforts to reduce calorie intake might also
17 lower sodium intake.

18 All right. Three: in 2005, the
19 Dietary Guidelines for Americans recommended a
20 daily sodium intake of less than 2,300
21 milligrams for the general adult population
22 and an intake of 1,500 milligrams for

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1 hypertensive individuals, Blacks, and middle-
2 aged and older adults. Because the latter
3 groups together now comprise nearly 70 percent
4 of U.S. adults, the goal should be 1,500
5 milligrams per day for the general population.

6 Given the current U.S. marketplace
7 and the resulting excessively high sodium
8 intake, it will be challenging to achieve the
9 lower goal. This reduction should occur
10 incrementally, from 2,300 to 1,500 over time.

11 A recent Institute of Medicine report has
12 provided a roadmap to achieve gradual
13 reductions in sodium intake. That is just a
14 reference to the recent report from about two
15 to three weeks ago.

16 Fourth, because early stages of
17 blood pressure-related atherosclerotic disease
18 begin during childhood, both children and
19 adults should reduce their sodium intake.
20 Individuals should increase their consumption
21 of dietary potassium because increased
22 potassium intake helps to attenuate the

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1 effects of sodium on blood pressure.

2 So, I think I should stop there,
3 and then we have potassium and water.

4 There has been a lot of discussion
5 on this already.

6 CHAIR VAN HORN: Yes, I was just
7 going to say I think you did such an excellent
8 job of this earlier that most of us have
9 probably spent some time with it.

10 But are there any new thoughts
11 among the panel that need to be stated?

12 (No response.)

13 I think you really have done a
14 comprehensive job of very clearly stating what
15 the issues are.

16 MEMBER PI-SUNYER: The only
17 question, the only comment I would put is
18 where you say, "Hence, efforts to reduce
19 caloric intake might also lower sodium
20 intake," I would just say, "Hence, reducing
21 calorie intake will lower sodium intake."
22 Isn't that true? Make it more positive.

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1 MEMBER APPEL: Yes, you can do
2 that. I think it is basically 2 milligrams of
3 sodium per calorie.

4 MEMBER PI-SUNYER: Right. So, it
5 will happen?

6 MEMBER APPEL: It will happen,
7 yes. It's modest.

8 MEMBER PI-SUNYER: It makes it
9 positive.

10 MEMBER APPEL: Okay.

11 MEMBER PEARSON: This is Tom.

12 I am glad you put the IOM report
13 in there. It is just to say, I mean, the
14 ranks are closed on this issue. Yes, the army
15 is formed, and now we have got to get to work.

16 MEMBER APPEL: All right. So,
17 let's move on to potassium. Okay.

18 What is the effect of potassium
19 intake on blood pressure in adults?

20 And the conclusion: a moderate
21 body of evidence has demonstrated that a
22 higher intake of potassium is associated with

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1 lower blood pressure in adults.

2 Not much data in children, and we
3 didn't really review it.

4 So, implications: increasing
5 dietary potassium intake can lower blood
6 pressure. A higher intake of potassium also
7 attenuates the adverse effects of sodium on
8 blood pressure. Other possible benefits
9 include a reduced risk of developing kidney
10 stones and decreased bone loss.

11 In view of the health benefits of
12 adequate potassium intake and its relatively
13 low current intake by the general population,
14 increased intake of potassium is warranted.
15 The IOM set the AI for potassium for adults at
16 4,700 milligrams per day. Available evidence
17 suggests that Blacks and hypertensive
18 individuals especially benefit from an
19 increased intake of potassium.

20 There's some more contextual
21 information in that, and it could be removed,
22 but it is a summary of what also is covered

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1 later on.

2 Any discussion?

3 (No response.)

4 I mean the reality is that it is
5 fruits and vegetables. So, we are not really
6 telling people to take pills.

7 Okay. All right. Now here's the
8 most controversial one. Okay. Water.

9 (Laughter.)

10 Hold onto your seats. I am going
11 to put the armor on for this one.

12 Okay. What amount of water is
13 recommended for health?

14 We actually did, just to remind
15 people, we did literature searches on water
16 and chronic disease. We also brought in
17 experts who were involved with the IOM report
18 who are true card-carrying experts on water.
19 They said the literature really hasn't changed
20 since 2005.

21 And also, none of the evidence on
22 water, except for very little is based on sort

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1 of clinical trial-type evidence or
2 epidemiologic. There are a few studies. So,
3 it is a different kind of evidence on
4 hydration.

5 But, anyway, rather than a grade,
6 with approval from the NEL staff and
7 hierarchy, we crafted this conclusion.
8 There's no grade.

9 Based on an extensive review of
10 the evidence, an IOM panel in 2004 concluded
11 that the combination of thirst and usual
12 drinking behavior, especially the consumption
13 of fluids with meals, is sufficient to
14 maintain normal hydration. However, because
15 water needs vary considerably, and because
16 there is no evidence of chronic dehydration in
17 the general population, a minimum intake of
18 water cannot be set.

19 Implications: in order to prevent
20 dehydration, water must be consumed daily.
21 Healthy individuals who have routine access to
22 fluids and who are not exposed to heat stress

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1 consume adequate water to meet their needs.
2 Purposeful drinking is warranted for
3 individuals who are exposed to heat stress or
4 perform sustained physical activity. In view
5 of the ongoing obesity epidemic, individuals
6 are encouraged to drink water and other fluids
7 with few or no calories.

8 It is sort of apple pie kind of
9 stuff. Okay.

10 MEMBER PEREZ-ESCAMILLA: Larry,
11 this is Rafael.

12 In terms of water, fluids, and
13 hydration, is there a need to make a special
14 statement for elderly individuals?

15 MEMBER APPEL: Yes. There were
16 some public comments on this issue. We also
17 did a literature search as well.

18 In the end, among healthy elderly
19 -- we are not talking about elderly who have
20 limited access to fluids or elderly who have
21 cognitive issues where there are problems --
22 there is really no evidence of dehydration.

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1 The evidence is pretty well summarized in the
2 IOM report.

3 MEMBER PEREZ-ESCAMILLA: Several
4 summers ago, there was a fairly substantial
5 number of casualties in France of elderly
6 individuals during a heat wave during the
7 summer.

8 MEMBER APPEL: Yes. Well, we
9 cover that in that statement: "Purposeful
10 drinking is warranted for individuals who are
11 exposed to heat stress or who perform
12 sustained...."

13 But do you think we need to
14 qualify this? Because that is sort of like an
15 extreme type of thing. I mean, when that
16 happens, you need to stop --

17 MEMBER PEREZ-ESCAMILLA: I mean
18 only if the evidence supports that the elderly
19 may be at higher risk. If not, that's fine
20 with me. I mean it is just my understanding
21 was that the elderly were at a higher risk of
22 their thirst mechanism not responding in

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1 proportion to temperature increases.

2 VICE CHAIR FUKAGAWA: This is
3 Naomi.

4 I tend to agree that the normal,
5 healthy, older individual does have some
6 alterations in their ability to sense thirst.

7 So, therefore, they may wait longer.

8 MEMBER PI-SUNYER: But the French
9 heat wave was kind of a natural experiment,
10 and hundreds died, hundreds of elderly people
11 in that heat stress. So, you might quote that
12 as a natural experiment.

13 VICE CHAIR FUKAGAWA: This might
14 be something that we should also put in the
15 section, I guess our introduction or our -- I
16 can't remember that section, Anne, where we
17 talk about older persons.

18 MEMBER PI-SUNYER: Well, put it in
19 the implications.

20 MEMBER APPEL: I mean I can add a
21 sentence here. We do have heat stress.

22 MEMBER PI-SUNYER: You could put

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1 one for individuals, particularly older
2 persons or something.

3 MEMBER APPEL: Okay. It gets a
4 little bit complicated. Yes, yes. Well, I
5 mean we are not here wordsmithing. I will
6 add, somehow weave in the concept here. Yes,
7 okay.

8 And if my staff could find a
9 reference to the French -- I think there are
10 two. I mean there's the Chicago heat wave --
11 it wasn't nearly as bad as the one in France
12 -- and then France.

13 CHAIR VAN HORN: There are also
14 some data somewhere that suggest that the
15 elderly, because of concerns about
16 incontinence, self-selectedly avoid fluid.
17 So, that compounds the problem sometimes in
18 the elderly. So, there is that issue, but it
19 goes far away from what you are trying to do
20 here.

21 MEMBER APPEL: There are a few
22 things here. There are kidney issues with

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1 reduced ability to concentrate. There may be
2 cognitive issues. There are people on
3 diuretics, and sort of a whole host of things.

4 So, how do you put this in --

5 MEMBER PI-SUNYER: Well, I just
6 think they are a subgroup in greater risk.
7 So, somehow it would be good to make that
8 point.

9 CHAIR VAN HORN: Okay. Well,
10 thank you very much.

11 And speaking of drinking, Eric,
12 would you like to talk to us about alcohol?

13 (Laughter.)

14 At this late hour, that is
15 sounding really interesting.

16 MEMBER RIMM: Talk into the
17 microphone.

18 All right. So, I also would like
19 to thank the Subcommittee, Larry, Tom, and
20 Naomi, as well as my colleagues on the staff,
21 Rachel Hayes, Patricia Guenther, Jean Altman,
22 Patricia MacNeil, and Shirley Blakely for

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1 helping us tremendously with this review.

2 Although none of us have said it,
3 we all actually thank Anne Rodgers for
4 slapping us around and keeping us in shape and
5 making sure we get things to her.

6 (Laughter.)

7 But, actually, it is amazing how
8 nice she was about doing it. So, anyway,
9 sorry. It has nothing to do with the alcohol
10 chapter per se.

11 (Laughter.)

12 So, here are the questions that we
13 have, and we did a little bit of wordsmithing.

14 What is the relationship between
15 alcohol intake and weight gain?

16 And here we wanted to say there
17 was moderate evidence, but we also have the
18 word "moderate drinking" in the sentence at
19 the same time. So, we put moderate evidence
20 at the front and then said:

21 Evidence suggests that among free-
22 living populations moderate drinking is not

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1 associated with weight gain. However, heavier
2 consumption over time is associated with
3 weight gain.

4 Implications for this:

5 Alcoholic beverages provide
6 calories, but are not a good source of
7 nutrients.

8 Consumption beyond two drinks a
9 day may lead to weight gain.

10 And consumption of less than two
11 drinks a day does not appear to be associated
12 with weight gain at a faster rate than non-
13 drinkers. Faster weight gain, yes.

14 The second question is on
15 cognitive decline. What is the relationship
16 between alcohol intake and cognitive decline
17 with age?

18 And again, our conclusions, we
19 said, first, were moderate evidence.

20 Evidence suggests that, compared
21 to non-drinkers, individuals who drink
22 moderately have a slower cognitive decline

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1 with age.

2 For limited evidence, here we say,
3 although limited, evidence suggests that heavy
4 or binge drinking is detrimental to age-
5 related cognitive decline.

6 So, so far, these conclusions have
7 mirrored each other.

8 The implications for cognitive
9 decline is:

10 Alcohol, when consumed in
11 moderation, does not appear to quicken the
12 pace of typical age-related loss of cognitive
13 function.

14 And heavy drinking and episodes of
15 binge drinking impair short- and long-term
16 cognitive function and should be avoided.

17 For coronary heart disease, we
18 actually, at a late date, we chopped stroke
19 out of this because, I would say now and I am
20 not summarizing here, but there's a number of
21 chronic disease endpoints actually and acute
22 endpoints that we write about as contextual

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1 issues at the beginning because they have been
2 summarized before. So, they are non-NEL
3 reviews. So, we have done things, for
4 instance, on breast cancer, on cirrhosis, on
5 other hepatic diseases, on stroke. So, at the
6 beginning of this chapter, for those of you
7 who waded through it, there are some non-NEL
8 summaries based on recently-published reviews.

9 So, because of that, we actually
10 took stroke out of this because the data on
11 drinking and drinking patterns was much
12 clearer for coronary heart disease.

13 So, what is the relationship
14 between alcohol intake and coronary heart
15 disease? This is sort of brought forward from
16 the 2005 Guidelines.

17 There is strong evidence, evidence
18 consistently demonstrates that, compared to
19 non-drinkers, individuals who drink moderately
20 have lower risk of coronary heart disease.

21 And, we now have brought forward
22 the recent results from a recent meta-analysis

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1 on drinking patterns. It is that there was
2 insufficient evidence to determine if drinking
3 patterns were equally predictive of risk,
4 although there was moderate evidence to
5 suggest that heavy or binge drinking is
6 detrimental.

7 The implications of this (and I
8 guess this is where Shelly and Rafael brought
9 out some very good points that helped us
10 actually reshape the chapter a bit and reshape
11 how it is written), is that an average daily
12 intake of one to two alcoholic beverages is
13 associated with low risk of coronary heart
14 disease among middle-aged and older adults.
15 And for this, we assumed that most of the
16 epidemiological studies, actually, we were
17 able to see that most of the epidemiological
18 studies were asking people to report their
19 average weekly consumption.

20 Therefore, we thought the
21 guidelines should be based more on weekly
22 consumption, and not specifically on daily

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1 consumption because most people in the United
2 States do not drink daily. So, our assumption
3 was that this guideline would be on average
4 weekly consumption, and that meant up to seven
5 drinks a day for women -- sorry -- up to seven
6 drinks a week for women -- (laughter) -- it is
7 getting late in the day -- and 14 drinks a
8 week for men with no binge drinking, where
9 heavy or irregular binge drinking is defined
10 as four drinks a day for women and five drinks
11 a day for men. And again, we would reiterate
12 here, avoid binge or heavy irregular drinking.

13 What is the relationship between
14 alcohol intake and bone health?

15 Again, our overall conclusion is
16 there is moderate evidence here, and evidence
17 suggests a J-shaped association between
18 alcohol consumption and incidence of hip
19 fracture, although there was a suggestion that
20 heavy or binge drinking was detrimental to
21 bone health. That is actually both acutely
22 and chronically.

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1 There is -- implications for this
2 conclusion is:

3 There is insufficient evidence
4 from epidemiological data to make a strong
5 conclusion related to patterns of alcohol
6 intake and bone health.

7 However, it is very likely that
8 the increased risk of fracture among
9 individuals who drink more than one to two
10 drinks per day on average is due to accidents
11 that follow heavier consumption. That will
12 actually tie into our conclusion on
13 unintentional injury.

14 Unintentional injury. What is the
15 relationship between alcohol intake and
16 unintentional injury?

17 Here we felt there was strong
18 evidence. Substantial evidence demonstrates
19 that drinking in excess increases the risk of
20 unintentional falls, motor vehicle accidents,
21 and drowning. We actually added drowning, I
22 believe, from the 2005 because there actually

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1 is a growing body of evidence on drinking and
2 swimming.

3 When alcohol is consumed in
4 moderation, the evidence for risk of
5 unintentional injury is less well-established
6 for activities such as driving, swimming,
7 athletic performance, but abstention from
8 alcohol is the safest for these activities.
9 Again, we are trying to reiterate the obvious,
10 but that alcohol can cause injuries, and if
11 participating in these types of activities,
12 that you should abstain.

13 One that we all have talked about
14 in a little bit more detail and have
15 interviewed some experts on is: does alcohol
16 consumption during lactation have adverse
17 health effects?

18 Here, what is the relationship
19 between alcohol consumption and the quality
20 and quantity of breast milk available for the
21 offspring?

22 And the second part of this

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1 question is: what is the relationship between
2 alcohol consumption and post-natal growth
3 patterns, sleep patterns, and/or psychomotor
4 patterns of the offspring?

5 Here, we felt for the conclusions,
6 for the first question, that there is moderate
7 evidence. Here there is: consistent evidence
8 shows that when a lactating mother consumes
9 alcohol, alcohol enters the breast milk, and
10 the quantity of milk produced is reduced,
11 leading to reduced milk consumption by the
12 infant. That is obviously just acutely when
13 the woman is drinking.

14 Although limited, evidence
15 suggests that alcohol consumption during
16 lactation was associated with altered post-
17 natal growth, sleep patterns, and/or
18 psychomotor patterns of the offspring. Again,
19 that is when alcohol is consumed while the
20 mother is -- right before the mother is breast
21 feeding.

22 So, the implications for this, and

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1 I think this is where the meat of it is, and
2 this is why we actually wanted to bring this
3 question forward, was that:

4 The benefits of breast feeding to
5 the infant are well-established.

6 A woman who chooses to breast feed
7 need not completely abstain from alcohol.

8 And because the level of alcohol
9 in breast milk mirrors the mother's blood
10 alcohol content, after latch-on has been
11 perfected and a pattern of consistent breast
12 feeding has been established, at around the
13 age 2 to 3 months, a mother could wait three
14 to four hours after a single drink -- and in
15 parentheses I put "the time it would take to
16 metabolize ethanol" -- before breast feeding,
17 and the infant exposure to alcohol would
18 likely be negligible.

19 It is not sufficient for a woman
20 to express breast milk after alcohol
21 consumption to prevent exposure to the infant
22 because the concentration of alcohol in breast

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1 milk will remain at levels in the blood until
2 all of the alcohol is metabolized.

3 Contrary to medical and cultural
4 folklore, alcohol consumption does not enhance
5 lactational performance; rather, it reduces
6 milk production and decreases infant milk
7 consumption in the three to four hours after
8 alcohol is consumed.

9 There is still insufficient
10 evidence to conclude definitively that alcohol
11 exposure to an infant during lactation affects
12 the post-natal growth of the child.
13 Nonetheless, alcohol exposure to the breast-
14 feeding infant by breast feeding too soon
15 after consuming a single drink should be
16 avoided.

17 So then, we also -- I guess maybe
18 this is somewhat unique. There were some
19 implications and relevant contextual issues
20 that we felt are related to the entire
21 chapter, not to any one specific question.

22 And one was to sort of remind

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1 people that abstention is an important option
2 and to sort of give some context to that:
3 that approximately one in three American
4 adults does not drink alcohol.

5 And adverse effects for
6 unintentional injury or for certain people and
7 situations can occur at even moderate alcohol
8 consumption levels. Just to remind people,
9 again, that is operating vehicles, pregnant
10 women, people swimming and doing other
11 activities that require coordination. And
12 that is in the text.

13 If implications - oh sorry - and
14 if truly evidence-based, then for individuals
15 who choose to drink, recommendations should be
16 interpreted as average over the course of the
17 week and not necessarily every day, or
18 conversely, all concentrated on a few days.

19 There we have it. If anybody
20 still has the energy, I am open for
21 discussion.

22 CHAIR VAN HORN: Eric, I think you

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1 did a great job of pulling it together from
2 the last time we discussed it, and it reads
3 very, very well.

4 Tom, did you have something?

5 MEMBER PEARSON: Just another
6 comment. We discussed this, but under the
7 total chapter, "Abstention is an important
8 option. Approximately one in three American
9 adults does not drink alcohol."

10 But there are some adults that
11 shouldn't drink alcohol. It might be worth
12 putting that in.

13 MEMBER RIMM: Yes. Well, it is
14 actually in the text.

15 MEMBER PEARSON: It is in the
16 text?

17 MEMBER RIMM: Yes. I mean
18 pregnant women, women who can't control their
19 consumption, driving, things like that.

20 MEMBER PEARSON: Right.

21 MEMBER RIMM: Yes. Yes, you're
22 right, I apologize to my Subcommittee members

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1 because I did tweak the slides a little bit
2 without showing it to them. But, yes, it's
3 there.

4 MEMBER PEARSON: Because for some
5 people, it is not a choice; it shouldn't be a
6 choice. It should be a prohibition.

7 MEMBER RIMM: Right. It was
8 mostly to give people, to remind people that
9 there's not the pressure of drinking. One in
10 three Americans don't drink.

11 MEMBER PEARSON: Right.

12 CHAIR VAN HORN: Any other
13 comments for Eric?

14 MEMBER RIMM: I will say that the
15 two Committee members who read our chapter,
16 Rafael and Shelly, really I think helped a
17 lot. Because, as you say, you can read
18 through this a thousand times, but to get
19 someone else's perspective was very helpful in
20 shaping it and rewording some of the
21 conclusions.

22 CHAIR VAN HORN: That is very

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1 important.

2 Okay. Well, we are going to also
3 open the floor for Roger and his group to talk
4 about food safety and technology. They have
5 offered to short-sheet this one, but we are
6 going to let you decide what it is important.

7 MEMBER CLEMENS: We will do that
8 now. There is now an abyss. We have opened
9 the floor.

10 First of all, thank you so much.
11 I am Rog Clemens with my colleagues Rafael and
12 Naomi. Thank you so much for being part of
13 this great group of Food Safety and
14 Technology.

15 In particular, thank you very
16 much, Kellie, Donna, Holly, and Shirley for
17 contributing so much to the research and the
18 contribution to the writing material of this
19 important chapter.

20 Everybody wants to consume food,
21 and everybody wants to be sure that food is,
22 in fact, safe. That is exactly where we are.

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1 We broke up the various sections
2 within Food Safety. And I turn to my
3 colleague and friend, Rafael, to address food
4 safety in the home.

5 Rafael?

6 MEMBER PEREZ-ESCAMILLA: Yes. I
7 was thinking, because we have done this
8 presentation maybe two or three times before,
9 that I can be very brief in summarizing where
10 I think the evidence stands.

11 The U.S. population overall is not
12 following food safety recommendations when
13 they prepare food in their homes and, also,
14 sometimes in the decisions that they make when
15 they consume foods outside their homes. And
16 this is true across the life cycle and across
17 the socioeconomic status group.

18 We have a situation here where we
19 don't have that very evident socioeconomic
20 differential for different behaviors. The
21 evidence comes out in different ways
22 sometimes. Low-income groups practice better

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1 food safety behaviors or report that they
2 practice better food safety behaviors. In
3 other times, the converse is true for higher
4 socioeconomic groups, and so on.

5 Consistent with the report from
6 2005 and the work by Lydia Medeiros and
7 colleagues, we did reach the conclusion that
8 perhaps the three areas that we would get the
9 biggest bang for the buck would be hand
10 washing and kitchen sanitation issues,
11 prevention of cross-contamination, and cooking
12 and storing prepared foods at the right
13 temperatures.

14 The Committee also reviewed the
15 issue related to the consumption of
16 undercooked or raw animal source food
17 products. We have concluded that, even though
18 that incidents of food-borne illness outbreaks
19 or food-borne intoxicants related to these
20 behaviors may not be that great, whenever it
21 happens, it can be extremely serious.
22 Whenever it happens, oftentimes, it ends with

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1 death or very, very serious harm to the
2 individuals.

3 So, for that reason, we do feel
4 very strongly that the project related to
5 listeria and vibrio related to the consumption
6 of raw oysters in the U.S. are very well-
7 justified by the U.S. Government that has
8 those programs in place.

9 And secondly, the Committee
10 reviewed extensively the benefit/risk studies
11 related to seafood consumption, and very
12 consistently the studies come across with very
13 favorable benefit/risk ratios, including for
14 vulnerable subgroups, that is, pregnant women,
15 lactating women, women of reproductive age, or
16 young children.

17 The qualification here is that it
18 is extremely important for the American public
19 at large to have access, to make wise
20 selections, and know which types of seafoods
21 should be avoided or limited with regard to
22 their consumption.

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1 We believe that, given the very
2 low levels of consumption of seafood in the
3 country, that the U.S. population could really
4 benefit in terms of cardiovascular health, in
5 terms of the neural development of their
6 infants, without having a major impact on risk
7 issues. And that includes to some extent the
8 evidence reviewed on cancer.

9 And last, but not least, I want to
10 fully echo and endorse Tom's comment about the
11 need for more support to deliver food safety
12 education to the very diverse communities that
13 form our country, and the Cooperative
14 Extensive system has historically played a
15 very important role and, hopefully, can
16 continue to play a very central role in the
17 delivery of this education.

18 MEMBER CLEMENS: Thank you,
19 Rafael, for that wonderful summary.

20 I want to summarize, also. We
21 look at the technology in the home. It is
22 really interesting that, in fact, a lot of the

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1 technology that is now used in the food
2 industry to improve food safety is not
3 available in the home. We also see that what
4 is available in the home is not being used
5 properly.

6 Very few studies for this agree,
7 whether it is a thermometer or a cutting board
8 or even a refrigerator.

9 So, again, to Rafael's point, and
10 also addressed by Tom, we clearly need greater
11 education on food safety in the home.

12 Larry?

13 MEMBER APPEL: Yes. This is Larry
14 Appel.

15 I guess it is in the
16 integration/translation chapter we make a
17 comment about developing a strategic plan. To
18 me, this is one area where this is a crying
19 need, you know, because I just don't, for the
20 life of me, understand how you take the
21 population and you educate them or get them to
22 do the right thing.

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1 So, I am wondering if you might
2 want to specifically state something like this
3 because I am sort of skeptical that just a
4 little bit of education here -- I think it is
5 much more, there has to be a systems approach
6 to this.

7 MEMBER CLEMENS: Thank you for
8 that great comment. We actually have that in
9 our chapter. Maybe some of that should go
10 into the integration chapter as well.

11 MEMBER NELSON: I think we are
12 planning to add that bullet, so to speak. We
13 don't have much more than that because it
14 really should go to the individual chapters.

15 But since I'm talking, can I ask a
16 question or comment? And this is probably too
17 much to bite off, but I am thinking that --
18 first, is a question.

19 Given we are reading a lot about
20 these E. coli outbreaks and other issues, is
21 there any sense of what proportion of food-
22 borne illnesses are a result of a person not

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1 doing the right thing versus the food supply?

2 Because I do think, you know, one
3 of the things that -- we are talking to your
4 point a little bit, Larry -- but the whole
5 report there are certain things individuals
6 can do, and we need to do them better, but,
7 then, there are other issues that are sort of
8 converging that are making our food supply
9 more challenging in many ways.

10 So, the first question is: is
11 there any sense of what the proportion is at
12 all? Or is it just so understudied that we
13 don't know?

14 MEMBER PEREZ-ESCAMILLA: We tried.
15 We tried very hard, and the answer is it is
16 not known.

17 MEMBER NELSON: We don't know?

18 MEMBER PEREZ-ESCAMILLA: The very
19 big problem, the very big challenge here is
20 the degree of underreporting for small, home-
21 based outbreaks that don't affect a lot of
22 people. It is so, so huge that I think it is

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1 a very important question, and we tried to get
2 an answer.

3 And there is some data -- and Rob
4 brought this to our attention -- that comes
5 from the states in terms of individuals that
6 get diagnosed with food-borne illness, and
7 then that gets reported back to a database,
8 and they try to get at the issue of whether
9 this happened at home or during a picnic or --

10 MEMBER NELSON: Right. Because
11 that is how they determine these outbreaks, is
12 by CDC tracking.

13 MEMBER PEREZ-ESCAMILLA: Right.

14 MEMBER NELSON: But, sorry. Then,
15 so we may not know what the percentage is, but
16 in your chapter do you at least have -- and I
17 know; I was a peer reviewer of it, and I had
18 asked if this could be added in, thinking
19 about the other sort of ways that we are
20 thinking about the other issues in the report,
21 about that we do need to be careful about some
22 of the way our food supply is managed and

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1 produced and distributed right now because it
2 is a real problem.

3 I think that is where the sort of
4 systems-based -- and we are not the FDA here,
5 but I think that we really need to be careful
6 because these are these widespread things
7 where I don't know if it is true that a
8 typical burger has a thousand different cows
9 in it, you know, beef in it, which makes it
10 scary, you know, because then you can't track
11 stuff.

12 But I am just concerned that we
13 need to have at least a couple of sentences
14 that it is not just washing your hands and
15 refrigerating food.

16 MEMBER CLEMENS: I appreciate your
17 comments there, Mim. I, too, share your
18 concern. We share your concern.

19 As the locavore movement is
20 picking up, we think there is a significant
21 opportunity to improve safety issues to make a
22 huge impact on the American public. Right

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1 now, there aren't any safety nets for the
2 locavores. That is a serious omission.

3 MEMBER NELSON: Yes, but I am
4 still more worried about the national
5 homogenization than the locavores.

6 MEMBER CLEMENS: Well, even at the
7 local level, at the national level, there are
8 several bills in the governments, both working
9 with Canada and the United States. They are
10 working together to look at traceability.
11 There was a brand-new report on traceability
12 that was issued just two months ago. So, in
13 fact, we will see from farm to fork every
14 ingredient, whether it is produced in the
15 United States or offshore, will be traceable.

16 So, the government, working with industry, is
17 actually having a lot of steps in place to
18 reduce the risk of those types of food-borne
19 outbreaks.

20 MEMBER PEREZ-ESCAMILLA: I think
21 the very important message to consumers is
22 that, I think what is very important is to

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1 inform consumers in a very objective manner as
2 to what it is that the government is doing,
3 what it is that the industry is doing, and
4 what it is that they can do to minimize the
5 chance that something can happen, given that
6 they are the last line of defense.

7 VICE CHAIR FUKAGAWA: This is
8 Naomi.

9 I do think we also have to
10 remember that a lot of our
11 translation/integration chapter is suggesting
12 or encouraging more locally-produced foods and
13 products. And this will have to be melded in
14 in some way in terms of what national food
15 safety programs might be because we may "do
16 in" the smaller farmer, the regional
17 cheesemaker, or, you know, regional producers
18 of foods. I think that is an important thing
19 because we could be giving mixed messages in
20 terms of who is responsible for the safety at
21 the end point.

22 MEMBER PEARSON: I suspect that

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1 this is like crime or homicide. You know, you
2 hear about the large outbreaks of this or
3 that, and they get all the press. Then, there
4 is this underpinning of a huge burden of
5 individual problems out there.

6 I just wonder, with the health
7 reform legislation, there is talk of everyone
8 having a personalized prevention program.
9 Well, why shouldn't that have some suggestion
10 that you could actually cook supper and not
11 die from it?

12 (Laughter.)

13 So, I think there's some
14 opportunities as we come up with at least
15 talking about the individualization of one's
16 personal health and the things to do that with
17 current legislation, that you could do with
18 intersectorial activities, HHS, across to some
19 other things. So, I think there are some
20 opportunities with this, but I suspect that
21 this is -- you know, we only hear about the
22 tip of the iceberg, the arbiter that is not

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1 doing a good job.

2 MEMBER SLAVIN: I have just a
3 concern about this chapter interrelating with
4 some of the other chapters. It has to do with
5 minimally-processed and fresh fruits and
6 vegetables because I think people never
7 realize how many outbreaks are linked to that.

8 And also, I think the sodium issue, that
9 sodium does have a role in food preservation.

10 So, kind of balancing all these goals and
11 objectives and not having unintended
12 consequences really.

13 MEMBER CLEMENS: Indeed, sodium is
14 more than flavor. We want to address that. I
15 think we started to do that.

16 We have had good conversations
17 with Larry for that various point. We
18 discussed that the last time of go-round. So,
19 we don't want to avoid those unintended
20 consequences.

21 On minimally-processed, we haven't
22 come to a definition. I spoke to Rob about

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1 that, and we want to be sure we get a
2 definition included here. The USDA has a
3 small definition, if I recall correctly, Rob,
4 but that deals within the kitchen, if I recall
5 correctly. So, we should incorporate that
6 into -- and we have that here in the chapter.

7 It is in the glossary.

8 So, maybe instead of putting it
9 out in the glossary, we can actually put it in
10 the chapter itself, so they can see it
11 upfront.

12 MEMBER ACHTERBERG: But, Roger,
13 shouldn't we, if we are mentioning minimally-
14 processed at home, concomitant with that is
15 shorter shelf life?

16 MEMBER CLEMENS: Many of the
17 topics -- I appreciate that, Cheryl -- many of
18 the topics that we discussed today will
19 actually impact shelf life, virtually
20 everything. If you reduce the saturated fat,
21 it will impact shelf life. If you reduce the
22 sodium, you are reducing shelf life.

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1 Virtually everything we discussed today will
2 impact shelf life in the home or in the
3 industry.

4 CHAIR VAN HORN: And therein lies
5 what a lot of people say is the difference
6 between Europe and the United States, the size
7 of our refrigerators.

8 (Laughter.)

9 The fact is that we store and hold
10 things for so much longer than others do.

11 Oh, Kathryn, sorry.

12 MS. McMURRY: I just have a
13 question for clarification. The Fatty Acids
14 Subcommittee discussed an amount of 8 ounces
15 of fish -- sorry -- of seafood per week, and
16 the Food Safety Subcommittee is discussing up
17 to 12 ounces of seafood per week. I am
18 wondering if we could get a little clarity
19 about what the Committee as a whole wants to
20 recommend.

21 MEMBER PEARSON: We have had
22 discussion. I don't think this is your

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1 recommendation. This is how much you can eat
2 up to where you are sure it is safe, which
3 includes the 8 ounces. It gets a little bit
4 more interesting when you get up to 16 ounces
5 or something like that.

6 But if you are, in fact, eating
7 the ones with the high mercury, you don't need
8 to eat that much to get to 250 milligrams of
9 DHA/EPA. The high-mercury fish, you don't
10 need to eat that much of in order to get an
11 amount of DHA/EPA.

12 So, everything is perfectly
13 consistent.

14 CHAIR VAN HORN: Yes, I think the
15 point is the recommendation is 8 ounces, but
16 even if you go beyond that, I think is the
17 point, that 12 ounces is safe, can be safe.
18 Correct?

19 MEMBER PEARSON: Yes.

20 CHAIR VAN HORN: Okay. Larry, one
21 more thing?

22 MEMBER APPEL: It is a separate --

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1 CHAIR VAN HORN: A separate topic?

2 MEMBER APPEL: It is a safety
3 versus health and nutrition issue.

4 CHAIR VAN HORN: All right. Well,
5 I think, ladies and gentlemen, we have come to
6 an amazing point in the fact that we have
7 delivered the topics, despite a two-hour delay
8 this morning. I really, really appreciate all
9 of the Committee's help in trying to be
10 succinct and efficient in terms of the
11 presentations.

12 It is important for those still
13 listening to us to realize that we have come
14 to a consensus on many, many things, but we
15 also have some additional issues to resolve.
16 So, I think, once again, as I said earlier, we
17 cannot at this point say that this report is
18 completely finished, but we are really close.

19 And the next step is for us to
20 fine-tune and finalize these conclusion
21 statements, which will happen over the next
22 couple of weeks, I guess I could say.

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1 Carole, do you want to add to
2 that?

3 MS. DAVIS: Well, what we have
4 here is the direction we need to go in. So,
5 we are okay to do tweaking from this direction
6 that you all have given us. So, we really
7 have completed the report, and we will go
8 ahead to work to get these edits that people
9 have given us today.

10 CHAIR VAN HORN: Yes. I think the
11 point that the Committee wants to make, and I
12 have heard this from everyone, is that no one
13 today feels comfortable yet saying, yes, I
14 read the whole thing now that all these
15 changes have been made. So, I think that the
16 goal would be to have some additional
17 opportunity to review what things have been
18 resolved.

19 But I also think there have been
20 specific recommendations about sharing and
21 partnering on some of these topics, so that
22 there is consistency, crosstalk, wording that

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1 is similar in each of these chapters, so that
2 we use the word "moderate" in the same way
3 across all the different studies. Where I
4 think earlier we didn't have the ability to do
5 that, now I think we have all been through a
6 mindset that would probably put us on an equal
7 playing field. So, hopefully, we can go
8 forward with that.

9 Once again, I can't express enough
10 our thanks to the group as a whole, to the
11 support staff for all the incredible work and
12 support that has been provided throughout this
13 process.

14 Unless I hear from anyone else of
15 any other topics, I think we can adjourn for
16 today.

17 Rob? Sorry. Okay, Rob?

18 Thank you.

19 DR. POST: Well, I do have some
20 comments.

21 Larry, did you have a comment?

22 MEMBER APPEL: No. I know it just

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1 didn't come up, but the sources of energy
2 expressed as calories, you know, really we
3 need to have that paper that evidently is in
4 press because right now we are not presenting
5 them optimally anyplace in the report. I
6 guess there was some paper --

7 CHAIR VAN HORN: Yes, there is a
8 paper. It is in press now.

9 MEMBER APPEL: It is in press.
10 So, can it be inserted in the report? Because
11 right now we express grams of sugar-sweetened
12 beverages, percent calories just among
13 beverages. It is really not presented in an
14 optimal way. If the messages is calories,
15 calories, calories, we need to present data
16 about where the calories are coming from in
17 the categories we have often used in other
18 sections of the report.

19 So, we need to get that. Wherever
20 that paper is, we need to get approval and
21 somehow weave it in in the right way.

22 MEMBER NELSON: I am sorry, Linda.

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1 This is Mim. I have another question.

2 Are you going to communicate with
3 us with what the process is? Because there
4 are some outstanding issues. Are we going to
5 have a way to figure out how we resolve those
6 outstanding issues and refine some of the
7 wording? So, we will just wait? We will stay
8 tuned to hear from you and others? Okay.

9 CHAIR VAN HORN: Yes. I mean I,
10 personally, would like to make sure that all
11 of us, after all this work, are happy with the
12 final report. So, I will personally be back
13 in touch with you via email in some fashion,
14 but I have yet to find out how that is going
15 to work exactly.

16 So, I think, in the meantime, the
17 main goal is don't hesitate at this point,
18 strike while the iron is hot, still fresh in
19 your mind, on the wording changes, on the,
20 again, consolidation, reconciliation of
21 different references, et cetera. That is
22 really important.

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1 So, you know who you are. I don't
2 need to go around and do that again.

3 All of those should go directly to
4 who? To Carole. Okay. Very good.

5 MEMBER APPEL: This is Larry
6 again.

7 Though I think we really do need
8 clarity on this process, so that we can -- I
9 mean, is it possible to say within a week we
10 get a collated document with the conclusions?

11 Everybody has an idea of the contentious ones
12 where we need to -- and then, there are other
13 ones where we said just add this, but it is
14 not really that big a deal. Can we get a
15 document within one week that is collated?
16 Because we have had a lot of email traffic
17 that has been very difficult to manage.

18 CHAIR VAN HORN: Okay. Joanne
19 Spahn says yes. And we do what Joanne Spahn
20 says.

21 (Laughter.)

22 MEMBER APPEL: Okay.

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1 CHAIR VAN HORN: So, I think that
2 will help us because, once we have that, and
3 we are all looking at the same thing, that
4 will help.

5 DR. POST: And I would add the
6 comments that you are providing, whether it is
7 on a chart or in a chapter, definitely that is
8 part of the process and getting those to the
9 staff. That is important, your subtopic
10 areas.

11 And we need that, well, we need
12 that today. So, that would help.

13 MS. DAVIS: The book or the
14 folders?

15 MEMBER RIMM: This is Eric Rimm.
16 But there's going to be more
17 tweaking we do besides just what we give you
18 today.

19 CHAIR VAN HORN: Yes.

20 MEMBER RIMM: So, there's going to
21 have to be some four- or five-day deadline
22 before everything gets sent in, and then

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1 Joanne makes a copy from now. But, still, I
2 think as much as all of us would like to read
3 the entire document over from front to back
4 again, which, of course, we don't -- is there
5 any way we can figure out to track changes
6 within the printed document, so we actually
7 can see what was changed? Because all of us
8 are going to contribute small pieces, but it
9 would be nice to know what, you know, Larry
10 did with his.

11 CHAIR VAN HORN: You mean for the
12 conclusion statements, is what you are saying?

13 MEMBER RIMM: Yes.

14 MEMBER NELSON: Yes, although, I
15 mean, I know with the integration chapter,
16 there is more than just the conclusion. Like
17 the total diet and the integration chapter are
18 two chapters I think we may all want to read
19 those. They aren't very long. Then, the
20 others might just be the conclusion and
21 implication for the others. That is what I
22 might suggest because it might help.

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1 CHAIR VAN HORN: That is a good
2 point. Carole just pointed out that each
3 group should be working with your leads, your
4 DGMT leads, and putting the responsibility
5 kind of on them to communicate back, so that
6 we can, then, be more standardized in the
7 approach that we are taking.

8 And what I am envisioning is, then
9 -- Joanne, correct me if I'm wrong -- that the
10 conclusion statements will be yet again
11 modified from the version we got just recently
12 from you, and then we have that final set to
13 look at. Is that correct?

14 MS. SPAHN: What I hear is, I'm
15 going to finalize -- we will start with a
16 clean conclusion statement from this morning.

17 Then, we will track changes for any changes
18 that were recommended today. So, that when
19 you look through it, you can see very clearly
20 what changed as a result of this meeting or
21 subsequent meetings within your Subcommittee.

22 CHAIR VAN HORN: Yes, so that

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1 answers your issue, Eric. We will all look at
2 the same thing, and it will reflect what was
3 done today. But anything new and different
4 needs to be done within a week.

5 MS. DAVIS: So, I think within
6 each of the chapters we are going to need to
7 be sure that we have gotten all the things
8 that have been brought up. That is how you
9 can work with the DGMT leads and NEL people.
10 So, we will have to schedule some meetings.

11 DR. POST: Okay. I would like to
12 add a comment. Then, I think it is important
13 that the public, the folks that are on the
14 phone and that have hung out with us all day,
15 has the idea that, in fact, essentially, the
16 tweaking and modifying in terms of context or
17 text, that we have gotten a clear direction on
18 the content of the conclusions. And that was
19 important for today's outcome. So, there
20 really are no unended issues, but there are
21 ways to help make the conclusion statements
22 better and certainly with better text. That

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1 will be the effort here and the work over the
2 next week, as we have heard.

3 And with that, I would like to say
4 thank you to Linda, and thank you to the whole
5 2010 Dietary Guidelines Advisory Committee for
6 taking this arduous volunteer effort on. We
7 look forward to receiving the Committee's
8 final recommendations and the advisory report.

9 I would like to say thanks to the
10 USDA and HHS staff that supported the work of
11 the Advisory Committee members.

12 (Applause.)

13 Throughout this process, they have
14 become your friends and certainly phone pals
15 and in-person pals over the last almost a
16 couple of years.

17 (Laughter.)

18 And I would like to say first to
19 Carole Davis, the Designated Federal Officer
20 and Co-Executive Secretary for the DGAC from
21 USDA, who I introduced this morning, I would
22 like to say thank you. She provided primary

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1 administrative leadership for all the
2 operations, and those were done fantastically.

3 (Applause.)

4 And I will point out, too, I would
5 like to say thanks to Kathryn McMurry. She is
6 the second Co-Executive Secretary from HHS,
7 who provided much valuable guidance as well.

8 (Applause.)

9 Then, I want to thank and
10 recognize Shanthy Bowman from the Agricultural
11 Research Service of USDA, and Holly McPeak
12 from the Office of Disease Prevention and
13 Health Promotion, who also served as Co-
14 Executive Secretaries to the Committee.

15 (Applause.)

16 Many thanks go to the Dietary
17 Guidelines management team, Kellie O'Connell
18 and Colette Rihane definitely, for getting
19 these kinds of meetings organized.

20 (Applause.)

21 And in addition to the four
22 Executive Secretaries, they definitely provide

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1 the primary support.

2 And also, I would like to
3 recognize, from USDA, Jan Adams.

4 And you have seen these names on
5 various slides. They are our crackerjack team
6 here to get the support the Committee needs.

7 Jan Adams, Trish Britten, Eve
8 Essery, Patricia Guenther, Kellie O'Connell
9 again, and Colette Rihane.

10 And from HHS, Shirley Blakely and
11 Rachel Hayes.

12 And now I would like to recognize,
13 as has been done today, our science writer and
14 editor, Anne Brown Rogers, who pulled today's
15 draft report together. We couldn't have done
16 it without her.

17 (Applause.)

18 And much thanks and appreciation
19 goes to the staff of the Evidence Analysis
20 Library Division at CNPP, who have operated
21 the Nutrition Evidence Library under the
22 direction of Joanne Spahn.

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1 And I would like to also recognize
2 Jean Altman and Donna Blum-Kemelor; Eve
3 Essery, who was mentioned earlier; Thomas
4 Fungwe; Joan Lyon; Patricia MacNeil; Molly
5 McGrane; Julie Obbagy; and Yat Ping Wong, who
6 is our research librarian from the National
7 Agricultural Library.

8 And additionally, not listed on
9 theses slides are the countless other USDA and
10 HHS employees who provided behind-the-scenes
11 assistance and support along the way. Their
12 efforts and experience do not go unnoticed.

13 We would also like to recognize
14 our 81 National Service Volunteer Evidence
15 Abstractors, who are depicted here on this
16 slide. And I think there is another slide as
17 well, and perhaps even a third slide.

18 These volunteers reviewed over a
19 thousand articles that went into this effort.

20 That's quite a lot.

21 And last, but not least, I would
22 like to thank our contract support staff and

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1 consultants for their outstanding efforts and
2 contributions.

3 And thanks very much to all the
4 assistance of the Graduate School, who has
5 provided us especially this help, especially
6 for their gracious allowance of using their
7 facilities for this last meeting.

8 Again, I want to thank or express
9 our appreciation for the service this Advisory
10 Committee has provided to the federal
11 government and the cooperative work of all the
12 subcommittees and the staff.

13 And on the last comment, or the
14 previous one, I would definitely like to thank
15 the Graduate School again because the rest of
16 this day worked out quite nicely, having
17 started off having a very rocky start, and
18 having found out along the day that, actually,
19 the electricity has been out in the rest of
20 this building, except for essentially our
21 area. And we have managed to keep the air
22 conditioning as well.

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1 So, we definitely lucked out.
2 Fate was with us. That's a good sign.

3 So, we look forward to completing
4 this very shortly.

5 With that, I will ask Linda for
6 any closing remarks before closing the
7 meeting.

8 CHAIR VAN HORN: Just thank you
9 again. Safe travels to everyone.

10 And for all those who listened in,
11 we hope you enjoyed and appreciated the effort
12 that has gone into providing these guidelines,
13 and we look forward to their implementation.

14 Thank you.

15 MEMBER CLEMENS: This is Rog.

16 The implementation, Carole, when
17 we get these back to you, what's the plan and
18 timing to get these to the Secretaries and,
19 ultimately, to the public?

20 DR. POST: We have said that the
21 report would go by June; it would go to both
22 Secretaries.

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1 There is a process for public
2 comment. I wanted to mention that. And then
3 the report will be available for public
4 comment, the advisory report.

5 After that, of course, it is the
6 basis for establishing the Dietary Guidelines
7 for Americans 2010 policy. That will be the
8 busy work of all the staff and perhaps some
9 help with some advice and counsel along the
10 way from Committee members, but it will be the
11 work of the federal agencies to get this work
12 done by the end of the year.

13 And 2011 is sort of the preview
14 here, 2011 being the robust consumer-oriented
15 communications efforts, public and private
16 partnerships, to magnify the messaging that we
17 will be researching this year, so that we are
18 all ready and speaking with one nutrition
19 voice, many voices, but one nutrition voice
20 when it comes to 2011.

21 MEMBER PEARSON: This is Tom.

22 Just out of interest, since we

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1 have been working on this, those public
2 comments, are those usually shared with the
3 Committee?

4 DR. POST: Yes, they will be up
5 there. In fact, just as the comments we
6 received for this Committee's work, they will
7 be part of the public availability. They will
8 be available at our dietaryguidelines.gov
9 website.

10 MEMBER PEARSON: And they could be
11 chopped up by working group, et cetera?

12 DR. POST: Screened and sorted,
13 screened in terms of topic area, and made
14 available in a very helpful way.

15 MS. McMURRY: Just to be clear,
16 though, your report will not change.

17 MEMBER PEARSON: Well, I
18 understand, but I think it is interesting, you
19 know, we are just interested in seeing what
20 people think of it.

21 DR. POST: The comments in this
22 case, though, will be handled as a comment to

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1 a Federal Register from the Department, but
2 making it available and segmenting them by
3 topic area is something that can be done.

4 MEMBER APPEL: This is Larry.

5 I am just wondering, many of us
6 have had, I think, conversations about how to
7 improve the process, especially leading up to
8 it. I am just wondering if there is going to
9 be a systematic attempt to just gather a few
10 ideas from us. Because we used the two hours
11 downstairs and said, well, how would you do it
12 better? I thought we came up in our own
13 circle with a lot of good ideas.

14 MEMBER NELSON: Well, this is Mim.

15 I would hope that, as a Committee,
16 similar to the 2005, that we might consider
17 writing a letter to the nutrition community
18 around what our challenges were and some
19 advice we might give to both USDA, HHS, and
20 the next Committee. And we should publish
21 that because I think we certainly have some
22 real solid ideas on how it could be, the next

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1 Committee -- we have learned a lot.

2 DR. POST: And we would welcome
3 all these ideas as we move forward and look
4 forward to 2015.

5 And I am, of course, putting my
6 HHS folks on the spot.

7 (Laughter.)

8 And I should say, too, that Wendy
9 Braund may have some comments in terms of
10 concluding comments.

11 DEPUTY DIRECTOR BRAUND: I will
12 make it quick. Don't worry.

13 I commend your efforts. On behalf
14 of the Department, we all thank you.

15 As a physician and a public health
16 practitioner, I especially appreciate your
17 fidelity to the science, but, also, your
18 efforts to bring implications to your
19 recommendations, because I think those are
20 really going to be critical in helping us to
21 translate those recommendations into action
22 steps that we can take as Departments and that

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1 individuals can take to better their own
2 health.

3 So, thank you so much.

4 DR. POST: Thank you.

5 (Applause.)

6 (Whereupon, at 5:34 p.m., the
7 proceedings in the above-entitled matter were
8 adjourned.)

9

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