PREVENTION *Report*

U.S. Department of Health and Human Services Volume 16: Issue 1 2001 http://odphp.osophs.dhhs.gov/pubs/prevrpt/

FOCUS

Overweight and Obesity: A Major Public Health Issue

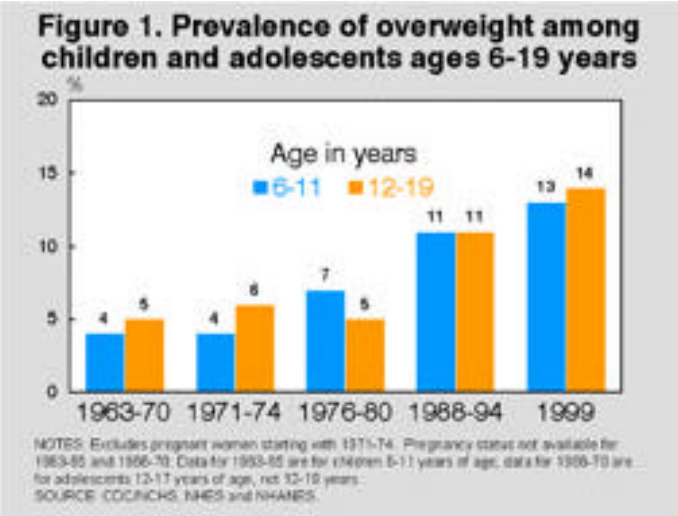
"So many of our health problems can be avoided through diet, exercise and making sure we take care of ourselves. By promoting healthy lifestyles, we can improve the quality of life for all Americans, and reduce health care costs dramatically."

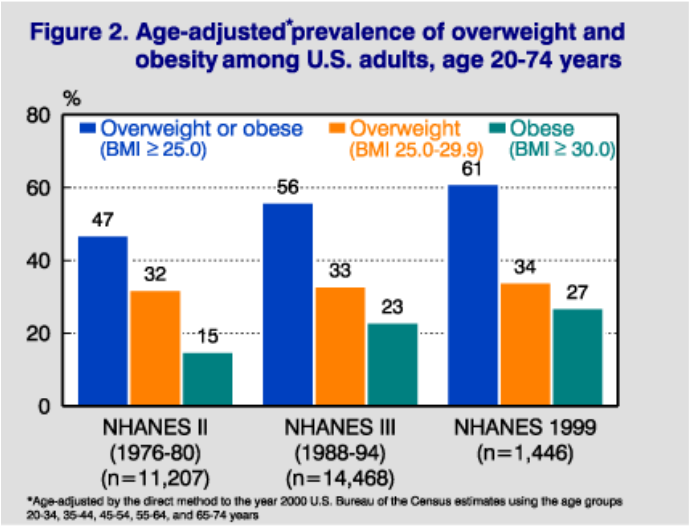
Tommy G. Thompson, Secretary
U.S. Department of Health and Human Services
www.niddk.nih.gov/welcome/releases/8_8_01.htm

As 1 of the 10 Leading Health Indicators, overweight and obesity represent a key measure of the Nation's health and a prime target for health promotion and disease prevention efforts (www.health.gov/healthypeople/LHI). The status of overweight and obesity as a major public health concern will be reinforced later this year when the U.S. Surgeon General issues a "Call To Action." This precedent-setting document on overweight and obesity will reflect the joint efforts of the Office of Disease Prevention and Health Promotion, Centers for Disease Control and Prevention (CDC), National Institutes of Health, and other U.S. Department of Health and Human Services (HHS) agencies. [For more information visit the Surgeon General's Web site at www.surgeongeneral.gov/.]

Magnitude of the Problem

Overweight and obesity have reached epidemic proportions and annually cause hundreds of thousands of deaths in the United States. (see sidebar- *BMI: Do You Know Yours?* for the definitions of overweight and obesity) In 1999, 61 percent of adults were overweight or obese, and 13 percent of children and adolescents were overweight or obese. These proportions are alarming by themselves but even more so when the trends are examined. The numbers are increasing dramatically! In fact, the prevalence of overweight or obese adolescents has nearly tripled in the past two decades.





Contributors to the Problem

Overweight and obesity are caused by many factors. For each individual, body weight is determined by a combination of genetic, metabolic, behavioral, environmental, cultural, and socioeconomic factors. For the majority of individuals, overweight and obesity result from excess calorie consumption and/or inadequate physical activity. Thus, diet and physical activity are essential in prevention and treatment. (See *Spotlight.*)

Consequences of the Problem

Overweight and obesity translate into troubling mortality and morbidity facts:
Mortality. Mortality begins to increase among people with a Body Mass Index (BMI) greater than 25. (See *BMI: Do You Know Yours?*) This increase is modest until a BMI of 30, at which point the increase in mortality is significantly higher. The estimated number of annual deaths attributable to obesity among U.S. adults is between 280,000 and 325,000.

Comorbidities. Many diseases are associated with overweight and obesity. As weight increases, so does the prevalence of health risks.

The prevalence of diabetes begins to increase well below a BMI of 25.

About 60 percent of overweight 5- to 10-year-old children already have one associated biochemical or clinical cardiovascular risk factor, such as hyperlipidemia, elevated blood pressure, or increased insulin levels, and 25 percent have two or more. The risk factors observed in children likely will contribute to chronic diseases in their adult lives.

Almost 80 percent of obese adults have diabetes, high blood cholesterol levels, high blood pressure, or osteoarthritis, and almost 40 percent have two or more of these comorbidities.

The health outcomes related to these diseases, however, often can be improved through weight loss or, at a minimum, no further weight gain.

Overweight and obesity are known risk factors for:	
• diabetes • heart disease • stroke • hypertension • gallbladder disease	• osteoarthritis (degeneration of cartilage and bone of joints) • sleep apnea and other breathing problems • some forms of cancer (uterine, breast, colorectal kidney, and gallbladder).
Obesity is associated with:	
• high blood cholesterol • complications of pregnancy • menstrual irregularities • hirsutism (presence of excess body and facial hair)	• stress incontinence (urine leakage caused by weak pelvic-floor muscles) • psychological disorders such as depression • increased surgical risk.

Economics of the Problem

Total costs (medical costs and lost productivity) attributable to obesity alone amounted to an estimated $99 billion in 1995. Approximately $52 billion of those dollars were direct medical costs (more than 5 percent of U.S. health care dollars).

Compared to other major chronic diseases, the direct economic cost of obesity is approximately the same as that of diabetes, 25 percent greater than that of coronary heart disease, and over 2-1/2 times greater than that of hypertension. The indirect economic impact of obesity is similar to that of smoking.

Cost savings of treating obesity are comparable to those of treating other chronic diseases such as coronary heart disease and diabetes. However, (at least as of 1998) there have been no published reports of the cost effectiveness of different obesity treatments.

Disparities

Healthy People 2010 aims to reduce health disparities, which are substantial in overweight and obesity. Disparities are found in race and ethnicity as well as gender, family income, and other factors. Some highlights, drawn from Healthy People 2010 baselines and other sources, are presented below.

Adults

Race and ethnicity. Overweight and obesity are observed in all population groups, but obesity is particularly common among Hispanic, African American, Native American, and Pacific Islander women. Specifically, 38 percent of black or African American women and 35 percent of Mexican American women, compared to 23 percent of white women, are obese. Stated another way, black or African American women are about 60 percent and Mexican American women are about 46 percent more likely to be obese than white women. [Note: Differences are smaller for men.]

Gender. Women are about one quarter more likely to be obese (25 percent) than men (20 percent). Among black or African Americans, the proportion of women who are obese (38 percent) is 80 percent higher than the proportion of men (21 percent) who are obese.

Age. Among both men and women, obesity prevalence increases with age up to about 60 years when it begins to decline. People aged 50 to 59 years experience close to twice the prevalence of obesity compared to those aged 20 to 29 years.

Family income level. Lower income women are about 50 percent more likely to be obese (35 percent) than those with higher incomes (23 percent). The effects of income are most apparent for white women. [Note: The income criterion is the same as that used for eligibility by the Food Stamp Program.]

Disabilities. Women with disabilities are about 50 percent more likely to be obese (38 percent) than women without disabilities (25 percent).

Arthritis. Adults with arthritis are about 43 percent more likely to be obese (30 percent) than those without the condition (21 percent).

Diabetes. Adults with diabetes are about 86 percent more likely to be obese (41 percent) than those without diabetes (22 percent).

High blood pressure. Adults with high blood pressure are more than twice as likely to be obese (38 percent) as those without high blood pressure (18 percent).

BMI: Do You Know Yours?

Heart disease, stroke, cancer, diabetes, and high blood pressure are linked to being overweight. Many researchers and health professionals use the Body Mass Index (BMI) to assess the health risks of extra pounds. It's simple, correlates to fatness, and applies to both men and women. It's a practical measurement that requires only two things: an accurate measure of an individual's weight and height. (To calculate your BMI, go to www.nhlbisupport.com/bmi/.

An adult with a BMI of less than 18.5 is considered underweight; the healthy weight range is 18.5 up to 25, overweight is 25 up to 30, and obese is 30 or more. In 1999, 61 percent of the adult population were overweight or obese.

In children and adolescents, aged 6 to 19 years, overweight or obese has been defined as a gender- and age-specific BMI at the 95th percentile based on the Centers for Disease Control and Prevention growth charts www.cdc.gov/nccdphp/dnpa/bmi/bmi-for-age.htm. By this definition, 13 percent of children and 14 percent of adolescents were overweight or obese in 1999. A separate definition for obesity or overweight has not been established for children and adolescents based on health outcomes or risk factors.

Children

Race and ethnicity. Among children and adolescents aged 6 to 19 years, overweight or obesity is 36 percent more prevalent in Mexican American youth (15 percent) and 27 percent more prevalent in black or African American youth (14 percent) than in white youth (11 percent).

Gender. No significant differences in the prevalence of overweight or obesity have been noted when comparing male to female children and adolescents.

Family income level. Adolescents aged 12 to 19 years from low-income families are about twice as likely as those from higher income families to be overweight or obese. No significant difference in the prevalence of overweight or obesity has been found in children aged 6 to 11 years in regard to family income.

Science Base Needs Strengthening

Both of the two previous *Prevention Report* issues about Surgeon General's reports on tobacco use and on youth violence described a substantial knowledge base regarding effective prevention and intervention. Indeed, Surgeon General David Satcher said, "...we know more than enough to address the challenges." Such is not the case with overweight and obesity, where recognition of the epidemic is relatively recent and enormous challenges remain ahead.

Some of latest research news is very encouraging. When the results of the Diabetes Prevention Program were released late this summer by the National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK), HHS Secretary Tommy G. Thompson said, "In view of the rapidly rising rates of obesity and diabetes in America, this good news couldn't come at a better time." The study found that lifestyle changes in diet and exercise can effectively delay diabetes in overweight men and women of different ages and races, who already have impaired glucose tolerance—a key step in the development of diabetes. (For details on the study, visit www.niddk.nih.gov/patient/dpp/dpp-q&a.htm.)

CDC is establishing databases compiling information on all school- and community-based research programs addressing obesity and other risk factors and also is working with State and local governments to evaluate existing overweight and obesity prevention programs. The agency has funded 12 State health departments to begin to address overweight and obesity by identifying a target population, designing an intervention specific to that population, and carefully evaluating its impact. The long-term goal is to develop effective State-based programs to prevent obesity. In addition, CDC is preparing chapters for an upcoming publication based on evidence from scientific research that will assist communities in establishing effective strategies to promote physical activity and prevent obesity.

Members of the National Institutes of Health (NIH) National Task Force on Prevention and Treatment of Obesity, composed of leading obesity researchers and clinicians, are charged with publishing evidence-based reviews of overweight and obesity in leading medical journals to provide clinicians with the latest and most accurate information.

Government-funded research is under way at leading universities and medical centers. For example, the University of Pennsylvania Health System, a world leader in obesity research, is launching a child obesity project "Healthy Year—Healthy Life" that aims to develop an intervention strategy.

NIDDK funds two types of university-based core centers whose focus is obesity and nutrition research: eight Clinical Nutrition Research Units (located in CA, CO, MA, NC, NY, TN, and WA), and four Obesity/Nutrition Research Centers (in MA, MN, NY, and PA). One of these core centers represents a collaborative effort among five major Boston institutions: the New England Medical Center, Beth Israel and Deaconess hospitals, University Hospital, and the Harvard School of Public Health (www.niddk.nih.gov/fund/other/centers.htm#Obesity-Nutrition).

As we learn more about the prevention of overweight and obesity we are also gaining additional knowledge on associated health risks. A 10-year Mayo Clinic Study has linked obesity with early heart attack. Children who are obese and remain obese are at significantly higher risk of developing heart disease or stroke throughout their lifetimes.

In addition, we are learning more about the quality of care provided in the presence of the elevated health risks associated with being overweight or obese. NIDDK's New York Obesity/Nutrition Research Center has found that despite obese women being more likely than normal weight women to make general physician visits, they are less likely to receive preventive breast and gynecologic care and Pap smears (www.niddk.nih.gov/health/nutrit/research/newyork.htm).

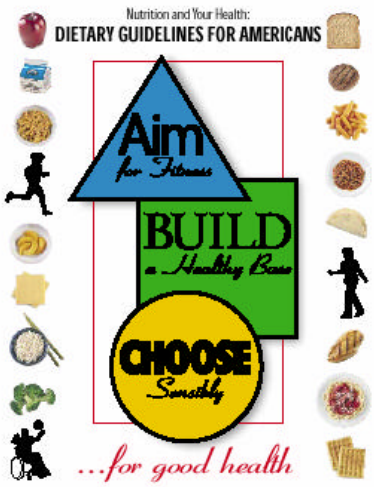
Challenges

From a public health perspective, the burden of suffering and the economic costs are well documented. Also known are the difficulties associated with prevention and treatment. Missing are effective ways to implement the solution: eat better and move more. The pressure is on, however, to apply public health principles so that the overweight and obesity Leading Health Indicator moves in a positive direction during the 21st century.

SPECIAL FEATURE

Dietary Guidelines for Americans: A Dietary Guide That Says It All

The U.S. Department of Agriculture (USDA) has been issuing dietary recommendations for more than a century, before specific vitamins and minerals even were named. In 1980, USDA joined with the U.S. Department of Health and Human Services (HHS) to develop the first version of what has become a very critical Federal nutrition policy document to improve the Nation's health: *Nutrition and Your Health: Dietary Guidelines for Americans* (www.usda.gov/cnpp/DietGd.pdf).



The fifth edition, released in 2000, represents some very important changes, including increased emphasis on:

- Healthy weight: including for the first time, a clear definition of healthy weight, overweight, and obesity using Body Mass Index (BMI) measures.
- The vital importance of physical activity to health.
- Plant foods as an important foundation of a healthy eating pattern, with new and separate guidelines on (a) grain products and (b) fruits and vegetables.

The 2000 edition introduces a new guideline establishing consumer safe food handling as a prerequisite for healthy eating. It also gives broader recognition to the many ways of building healthy dietary patterns and includes more emphasis on food choices to reduce saturated fat.

The cover design really says it all: *aim for fitness, build a healthy base, choose sensibly ... for good health*.

Why is this guide so important?

First of all, it serves as a brief but comprehensive overview of authoritative nutrition advice.

In the days of information overload, it's a single and scientifically based source of diet and health information.

It translates the scientific and medical consensus on what constitutes a healthful diet into plain, easy-to-understand language.

USDA has produced "Using the Dietary Guidelines for Americans," a publication that summarizes the guidelines onto two pages (www.usda.gov/cnpp/Pubs/DG2000/DietGuidBrochure.pdf).
(For background and related information, visit www.nal.usda.gov/fnic/dga/

By following these dietary guidelines, Americans can reduce their risk for four of our country's leading killers—heart disease, some cancers, diabetes, and stroke—that are linked to diet and physical activity patterns.

SPOTLIGHT

Sisters Together: Move More, Eat Better

Sisters Together: Move More, Eat Better is a national media-based program designed to encourage black women aged 18 years and older to maintain a healthy weight by becoming more physically active and eating healthier food.

Sisters Together is a program of the Weight-control Information Network (WIN), a national information service of the National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK) of the National Institutes of Health (NIH). The program targets black women, because studies indicate that nearly 70 percent of them are overweight.

The national media program kickoff will take place October 20, 2001, in Washington, DC. Launch events will include a fitness walk and health information fair.

The campaign features three practical brochures with science-based tips to help women move more, eat better, and ultimately, improve their quality of life:

- Celebrate the Beauty of Youth
- Energize Yourself & Your Family
- Fit and Fabulous as You Mature

Other helpful publications are available at the campaign site (www.niddk.nih.gov/health/nutrit/sisters/sisters.htm) and on the WIN home page (www.niddk.nih.gov/health/nutrit/win.htm).

RESOURCES

Weight Wise on the Web

In 1991, the National Heart, Lung, and Blood Institute (NHLBI) launched the Obesity Education Initiative (http://www.nhlbi.nih.gov/about/oei/index.htm) to help reduce the prevalence of overweight along with the prevalence of physical inactivity in order to reduce the risk of coronary heart disease (CHD) and overall morbidity and mortality from CHD. Seven years later, NHLBI, in cooperation with the National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK), released the first Federal *Clinical Guidelines on the Identification, Evaluation, and Treatment of Overweight and Obesity in Adults*. Today, the Web site (www.nhlbi.nih.gov/guidelines/obesity/ob_home.htm) offers the guidelines and a number of key documents, including "The Practical Guide: Identification, Evaluation, and Treatment of Overweight and Obesity in Adults" and an electronic textbook based on the guidelines, as well as a slide show, Body Mass Index calculator, and an interactive menu planner. Of special interest are the two free interactive programs for use on Palm operating system devices. The "Aim for a Healthy Weight" section contains educational information for the public and for health professionals. NIDDK supports the National Weight-control Information Network (WIN) (www.niddk.nih.gov/health/nutrit/win.htm), which provides booklets and fact sheets, statistics, Weight Loss & Control Organizations Resource List, and bibliographic searches. (See *Spotlight.*)

The Centers for Disease Control and Prevention offers guidelines for schools and community programs promoting healthy eating and physical activity as well as surveillance data on obesity (www.cdc.gov/health/obesity.htm). The HHS Office on Women's Health provides education and outreach for young girls on healthy eating, sports and fitness, and eating disorders (www.4women.gov/owh/girl.htm). The President's Council on Physical Fitness and Sports features "Funfit Kids" with easy exercises and nutrition tips to urge the younger crowd to get up and get out (www.fitness.gov/funfit/funfit.html). The Council site links to dozens of Federal agencies and programs and health fitness organizations.

The Partnership for Healthy Weight Management is a coalition of representatives from science, academia, the health care profession, government, commercial enterprises, and organizations whose mission is to promote sound guidance on strategies for achieving and maintaining a healthy weight (www.consumer.gov/weightloss/). On behalf of the Partnership, the Federal Trade Commission offers the "Water Ballet" public service announcement for TV and radio (www.consumer.gov/weightloss/psa.htm).

A host of specialized and general health professional associations and voluntary organizations offer helpful Web sites, including the North American Association for the Study of Obesity (www.naaso.org/ American Society of Bariatric Physicians (www.asbp.org/obesity.htm), and American Heart Association (www.americanheart.org). The American Obesity Association (AOA) (www.obesity.org/) offers health information and education related to obesity as well as community action and policy statements. AOA has published Objectives for Achieving and Maintaining a Healthy Population (www.obesity.org/HealthyWeight_2010.htm) as a Healthy Weight 2010 supplement to the Federal Healthy People 2010.

Healthy People 2010

One of the 10 Leading Health Indicators of Healthy People 2010 addresses overweight and obesity, categorizing the problem as a major contributor to the preventable causes of death. (www.health.gov/healthypeople/Document/tableofcontents.htm#under). The results of the National Health and Nutrition Examination Survey (NHANESIII) from 1988-94 estimated that **11 percent** of children and adolescents aged 6 to 19 years were overweight or obese and **23 percent** of adults aged 20 and older were obese. These numbers form the baselines by which to measure the progress toward the Healthy People 2010 targets. Data from the 1999 NHANES reveal these numbers have increased to **13 percent** for children and adolescents and **26 percent** for adults. These results show we are heading in the opposite direction of the 2010 targets of **5 percent** overweight or obesity for children and adolescents and **15 percent** obesity for adults.
The first three objectives of the *Nutrition and Overweight* focus area of Healthy People 2010 cover weight status (www.health.gov/healthypeople/Document/HTML/Volume2/19Nutrition.htm):

19-1. Increase the proportion of adults who are at a healthy weight.
19-2. Reduce the proportion of adults who are obese.
19-3. Reduce the proportion of children and adolescents who are overweight or obese.

Of interest from an historical perspective are a number of online documents, including:

- *Health Implications of Obesity*, the National Institutes of Health Consensus Statement released in 1985, which named obesity as a chronic disease for the first time (text.nlm.nih.gov/nih/cdc/www/49txt.html.)
- The 1997 World Health Organization (WHO) Consultation on Obesity that warned about an "escalating epidemic of overweight and obesity" putting millions of people at risk from related diseases and health disorders (www.who.int/archives/inf-pr-1997/en/pr97-46.html).
- Proceedings from the "Childhood Obesity: Causes and Prevention" symposium sponsored by the Center for Nutrition Policy and Education, U.S. Department of Agriculture in 1998 (www.usda.gov/cnpp/Seminars/obesity.PDF).

ACTIVITIES

Family Planning

According to a preliminary annual report from the Centers for Disease Control and Prevention (CDC), the birth rate for U.S. teens declined to a record low in 2000—22 percent lower than the rate in 1991. The greatest declines are seen among teenagers aged 15 to 17, whose rate of births dropped 29 percent, and among black teens, whose rate dropped 31 percent from 1991 to 2000. Other factors that CDC tracks, such as timely prenatal care, had not changed from 1999 to 2000, while the rate of cesarean deliveries rose to 22.9 percent. The report, titled ***Births: Preliminary Data for 2000***, can be viewed or downloaded at www.cdc.gov/nchs/releases/01news/newbirth.htm.

Nutrition and Overweight

The Interactive Healthy Eating Index is an online dietary assessment tool provided by the Center for Nutrition Policy and Promotion. After users provide a day's worth of their personal dietary information, they can receive a "score" on the overall quality of their diet for that day. This score assesses the types and amounts of food eaten and compares them to those recommended by the Food Guide Pyramid. It also tells users how much total fat, saturated fat, cholesterol and sodium in their diet. The Index is available at www.usda.gov/cnpp/.

The **National Organic Program** establishes national standards for the production and handling of organically produced products, including a national list of substances approved for and prohibited from use in organic production and handling. This final rule establishes a national-level accreditation program, which will be administered by Agricultural Management Service of the U.S. Department of Agriculture. Under the program, certifying agents will certify production and handling operations in compliance with the requirements of this regulation and initiate compliance actions to enforce program requirements. The final rule includes requirements for labeling products as organic and containing organic ingredients and provides for importation of organic agricultural products from foreign programs determined to have equivalent organic program requirements. Producers, handlers and processors will begin using the USDA seal, as prescribed by the final rule, on product packaging October 21, 2002. Information on the program is available at www.ams.usda.gov/nop/.

The **Child Nutrition Programs** Web site at www.fns.usda.gov/cnd/ provides information on its programs, which offer healthy, nutritious meals and snacks to the Nation's children. Through the National School Lunch Program and School Breakfast Program, school children have access to healthy meals. Through the Special Milk Program, school children who do not have access to other meal programs can supplement their day with a serving of milk.

Public Health Infrastructure

The CDC recently released an updated version of ***Guidelines for Evaluating Public Health Surveillance Systems***, originally published in 1988. This document provides standards for monitoring the quality of disease and injury tracking systems, which are essential to preventing and curbing outbreaks such as the West Nile virus. The guidelines are online at www.cdc.gov/mmwr/mmwr_rr.html.

CROSSCUTTING

Arthritis, Osteoporosis, and Chronic Back Conditions

A Spanish-language pamphlet titled **¿Tengo Artritis? Do I Have Arthritis?** can be downloaded from the National Institute of Arthritis and Musculoskeletal Skin Diseases (NIAMS) of the National Institutes of Health. at www.niams.nih.gov/hi/topics/athritis/tengo/index.htm. Print copies can also be ordered by calling the NIAMS Information Clearinghouse at (301) 495-4484.

Health Communication

An online **breast cancer education program in American Sign Language** has been created through a partnership among University of California at San Diego (UCSD) Cancer Center, Deaf Community Services of San Diego, Inc., UCSD Department of Communication, and Gallaudet University. The program is called "**Every Woman Counts**" and is available at http://cancer.ucsd.edu/deafinfo. Videotapes of the program also are available at cost from the State of California; contact cancer.ucsd.edu/deafinfo or mailto:mmussuto@dhs.ca.gov.

Heart Disease and Stroke

Men and Heart Disease: An Atlas of Racial and Ethnic Disparities in Mortality and ***Women and Heart Disease: An Atlas of Racial and Ethnic Disparities in Mortality*** were developed by the Office for Social Environment and Health Research at West Virginia University and the Cardiovascular Health Branch at CDC to provide critical data on geographic, racial, and ethnic inequalities in men's and women's heart disease death rates for the five major racial and ethnic groups. The Atlases include more than 200 national and State maps of heart disease mortality. The maps in each Atlas highlight the geographic, racial, and ethnic inequalities in heart disease mortality among men and provide government agencies and their partners at the local, State, and national levels with information to tailor heart-healthy programs and policies to the communities of men with the greatest burden of heart disease. The Atlases are available at www.cdc.gov/nccdphp/cvd/mensatlas/index.htm and www.cdc.gov/nccdphp/cvd/womensatlas/index.htm. Print copies can also be ordered online at these sites.

Public Health Infrastructure

The Agency for Healthcare Research and Quality (AHRQ) recently released a report documenting 11 proven patient safety practices that could favorably affect the Nation's health care system. The report, ***Making Health Care Safer: A Critical Analysis of Patient Safety Practices***, described such proven practices as giving patients antibiotics just before surgery to prevent infections, and using ultrasound to help guide the insertion of central intravenous lines. The full report is available at www.ahrq.gov/clinic/ptsafety/; it also can be ordered by calling (800) 358-9295.

MEETINGS

American Heart Association: Scientific Sessions 2001. Anaheim, CA. (800) 521-6017, or visit www.scientificsessions.org/ **November 11–14, 2001**.

American Speech-Language-Hearing Association. New Orleans, LA. (800) 795-6732, e-mail NSDA@dystonia-foundation.org, or visit www.dysphonia.org. **November 15–18, 2001**.

27th International Stroke Conference. San Antonio, TX. (214) 706.1543, e-mail strokeconference@heart.org, or visit www.strokeconference.org/index.oft **February 7–9, 2002**.

Healthy Kids, Healthy Communities: Integrating Health and Education -- National Leadership Conference. Washington, DC. (703) 476-3403, or visit www.cdc.gov/nccdphp/dash/conference/index.htm. **February 10–13, 2002**.

13th Annual Art and Science of Health Promotion Conference. Lake Tahoe, NV. (248) 682-0707, or visit http://healthpromotionconference.org/. **February 25–March 1, 2002**.

16th National Conference on Chronic Disease Prevention and Control. Atlanta, GA. Visit www.cdc.gov/nccdphp/conference/index.htm. **February 27–March 1, 2002**.

Prevention VII Conference: Obesity. Honolulu, HI, or visit www.americanheart.org/Scientific/confer/index.html. **April 27–28, 2002**.

IN THE LITERATURE

Nutrition and Overweight, Physical Activity and Fitness

Achieving a Healthy Lifestyle Among United States Adults: A Long Way To Go. Ford, E.S., et al. *Ethnicity & Diseases* 11(2001): 224-231.

The U.S. population has been advised to avoid smoking, eat a healthy diet, exercise often, and maintain a healthy weight. This study examined data from the Third National Health and Nutrition Examination Survey (NHANES III) to determine what percentage of Americans actually follow all four of these healthy lifestyle recommendations. NHANES III was conducted between 1988 and 1994 and sampled the U.S. population throughout the country.

Data for more than 16,000 NHANES III participants were examined by sex, race or ethnicity, age, and educational status. Researchers found that only 6.8 percent of the total population engaged in all four healthy lifestyle factors. Older people, whites, and “other” races/ethnicities were more likely than African Americans and Mexican Americans to have a healthy lifestyle. Men were less likely than women to follow all four healthy guidelines. White men and African American women were particularly low in the consumption of fruits and vegetables, and Mexican Americans and African American women were especially low in physical activity and healthy weight.

Although Americans have made some progress in eating more fruits and vegetables and in lower smoking rates for some population groups, the percentage of people who follow all four of the major recommended healthy lifestyle guidelines is very small.

Heart Disease and Stroke, Nutrition and Overweight

Diet and Atherosclerosis. D. Kritchevsky. *Journal of Nutrition, Health & Aging*, 5(2001): 155-159.

There is increasing interest in the effect of overall dietary patterns on the development of coronary heart disease. Diet can affect the levels of cholesterol in the blood and lead to coronary heart disease. This study evaluates the effect of lipids, protein, carbohydrates, and fiber on cholesterol levels on the development of atherosclerosis.

Cholesterol intake does not seem significantly to affect the levels of cholesterol in the blood. The type of fat in the diet—saturated vs. unsaturated—is the most important factor in blood cholesterol level. Saturated fats were much more atherogenic than unsaturated. Trans fats have been shown to raise blood cholesterol levels.

Researchers combined certain amino acids with soy protein and with fish and milk protein and measured the effects on blood cholesterol. Experiments showed that animal protein was more likely to lead to atherosclerosis than vegetable protein.

Fiber added to the diet has been shown to have a beneficial effect in some studies but insoluble fibers such as wheat bran show no effect. Similarly, some carbohydrates are more atherogenic than others.

Much research still needs to be done on the effects of overall diet and the combinations of different elements in the diet, but healthy eating of a variety of foods is the best advice.

Nutrition and Overweight

Losing the Battle of the Bulge: Causes and Consequences of Increasing Obesity. *Medical Journal of Australia* 174(2001):590-592.

Two-thirds of men and over half of women in Australia are overweight or obese. These rates have risen since 1980, when less than half of men and less than one-third of women were in this category. Almost one-quarter of Australian children are overweight or obese.

This article discusses the health and economic consequences of the rising incidence of overweight and obesity, along with possible social causes and prevention strategies.

The problem of overweight and obesity is one that Australia shares with developed and, more recently, developing countries. According to the Worldwatch Institute, for the first time in history the number of overweight people in the world rivaled the number of underweight people.

The health risks are well known and include high blood pressure, heart disease, osteoarthritis, type 2 diabetes, and some cancers. The number of Australians with type 2 diabetes has more than tripled in the past 20 years, from 285,000 to 940,000.

Economic consequences include marketing to encourage the overconsumption of food to promote diet aids and programs, increased health services to deal with illnesses caused by obesity, and upsizing of public seating to accommodate larger bodies. The direct cost of obesity in Australia is estimated to be $464 million from 1989–1990.

Proposed remedies include improving "nutritional literacy," taxing high-fat and sugary foods that are low in nutrients, using warning labels on unhealthy foods, and regulating food advertising. The Worldwatch Institute also recommends redesigning communities to encourage people to make physical exercise a part of daily life. This could be done by expanding public transportation and building more trails for walking, jogging, and cycling. Private car access could be restricted to central business districts and school campuses.

Diabetes

Strategies for Prevention of Type 2 Diabetes. *Experimental and Clinical Endocrinology & Diabetes* 109(2001) Suppl 2: S240-S249.

Type 2 diabetes and its complications together present a major cause of death and morbidity worldwide. It is predicted that by 2025, diabetes will affect 300 million people. Effective prevention programs for type 2 diabetes are needed to reduce the medical and economic burdens it produces.

Prevention can be implemented by either changing lifestyle or relevant environmental factors or focusing prevention programs at specific population groups that are at high risk for developing type 2 diabetes. The latter can include both non-pharmacological and pharmacological means. Investigations are focusing on three of four main classes of drugs currently being considered in the prevention of type 2 diabetes: alpha-glucosidase inhibitors, sulfonylureas, and metformin.

Population strategy includes reduction of excessive calorie intake and an increase in physical activity—in other words, diet plus exercise. Several studies have examined the protective effects of this regimen on people at risk for type 2 diabetes. Some, including the large prospective Da Qing IGT and Diabetes Study, indicate that this type of lifestyle intervention can reduce or delay the onset of the disease, while other studies are inconclusive.

Health Communication

Bringing Health Care Information to the Deaf Community. G.R. Sadler, et al. *Journal of Cancer Education* 16(2001):105-108.

In preparation for the creation of a breast cancer education program for the deaf community, the authors conducted a literature review, key informant interviews, and focus groups. The purpose of their research was to discover the deaf community's perceptions of health promotion information, health care delivery, and the perceived barriers of the deaf community to health care and information.

American Sign Language (ASL) is widely used, especially by older members of the deaf community, who may have the most urgent need for health care and information; however, few health care providers are proficient in its use. Health care providers often do not employ an ASL interpreter to help with appointments because most require a 2-hour minimum fee for their services. Even when a member of the deaf person's family is able to interpret, this solution does not afford the deaf person the privacy and confidentiality that may be needed.

The nature of ASL in itself also is a barrier because the hearer (provider) must rely on the interpreter instead of the speaker for any visual cues. ASL also operates in a spatial context rather than a linear one, as spoken language does. An understanding of ASL delivery would help health care providers communicate more effectively.

Other problems arise when health care providers try to rely on the deaf person's ability to read lips or on written communication. Only about 30 percent of English words can be lipread, so that lipreading is error prone, at best, and lipreading abilities vary greatly among members of the deaf community. Some deaf patients may not read or write well enough to make written communication very effective either. Deaf and hard of hearing people also may have a very limited base of knowledge about health issues and health information, which can present another barrier.

Health care providers must be aware of these characteristics of and barriers to health communication with members of the deaf community and work to overcome them.

Immunization and Infectious Diseases

Prevention of Lyme Disease: A Review of the Evidence. Poland, G.A. *Mayo Clinic Proceedings* 76(2001): 713-724.

Because the rate of Lyme disease infection is steadily rising, Healthy People 2010 has set a goal of reducing its incidence by 44 percent. Public health officials are exploring environmental means, personal precautions, vaccines and other prevention measures to combat the disease. Disease risks and the efficacy of various prevention programs are described in this article.

Treatment of the undergrowth in woods that harbor the Lyme disease organism is not practical because removing vegetation is too labor intensive and chemical usage can be dangerous to other wildlife. Burning the woods infected with disease-bearing deer ticks is effective in the short term, but tends to produce higher deer populations in the following years, leading to rebounding populations of ticks. Passive treatment of deer with acaricide, a pesticide that kills mites and ticks, is considered a fairly effective treatment.

Encouraging the use of personal precautions has not proven successful, mostly because people do not use them. The reasons for this may include the belief that these precautions are not, in themselves, effective. In addition, the ticks are very hard to detect because of their small size.

A vaccine has been developed for persons aged 15 and older that is effective for a year or more with a series of 3 to 5 doses. Because 5- to 9-year-old children and people aged 45 to 55 have a higher risk of contracting the disease a vaccine must be developed that also protects this large segment of the population.

Combinations of these prevention measures may be the best plan for decreasing the incidence of Lyme disease.

Sexually Transmitted Diseases

Psychosocial Factors Associated With Self-Reported Male Condom Use Among Women Attending Public Health Clinics. *Sexually Transmitted Disease* 28(2001):387-393.

A survey of women attending STD clinics in Jefferson and Madison counties of Alabama examined the way

that STD history influenced these women in their attitudes regarding condom use. The results suggest that STD history could be used in targeting public health intervention and prevention efforts to increase condom use.

The women who participated in this study were mostly young and black. They were, on average, 24 years old, had been in a relationship a little over a year, and had a monthly income of $300 to $600. Two-thirds had more than a high school education and almost one-half reported current condom use for birth control.

Increased frequency of condom use among the survey participants was positively associated with higher education and such attitudes as perceived need for condom use, convenience and acceptability of male condom use, and perceived partner risk. Frequency of condom use was negatively associated with age, duration of relationship, higher lifetime drug risk behavior, and higher rate of types of violence.

These results supported other studies in this area, showing that a history of STDs was a significant factor associated with condom use.

ETCETERA

The **Agency for Healthcare Research and Quality** recently announced the availability of the first database of information on hospital inpatient care of children in the United States, called **Kids' Inpatient Database (KID)**. KID includes data on pediatric patients from birth through 18, their principal and secondary diagnoses, tests, surgeries, length of stay, hospital charges, and payment sources. It will enable researchers to analyze hospital care and charges for common and rare conditions in children. For information on the use of KID, call (866)566-4287.

Title VI Program Director Connie Bremner recently received a **Robert Wood Johnson Foundation Community Health Leadership Award** for her innovative efforts in addressing the health needs of the elders and disabled members of the Blackfeet Nation in Montana. Besides managing the Eagle Shield Senior Citizen Center Program, Ms. Bremner is expanding the Tribe's home health program, starting an adult day care program, and launching a respite care program for caregivers of terminally ill Tribal members.

OFFICE OF DISEASE PREVENTION AND HEALTH PROMOTION

The mission of the Office of Disease Prevention and Health Promotion (ODPHP) is to provide leadership for disease prevention and health promotion among Americans by stimulating and coordinating prevention activities. *Prevention Report* is a service of ODPHP.