

Reducing Sodium in the Food Supply

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and

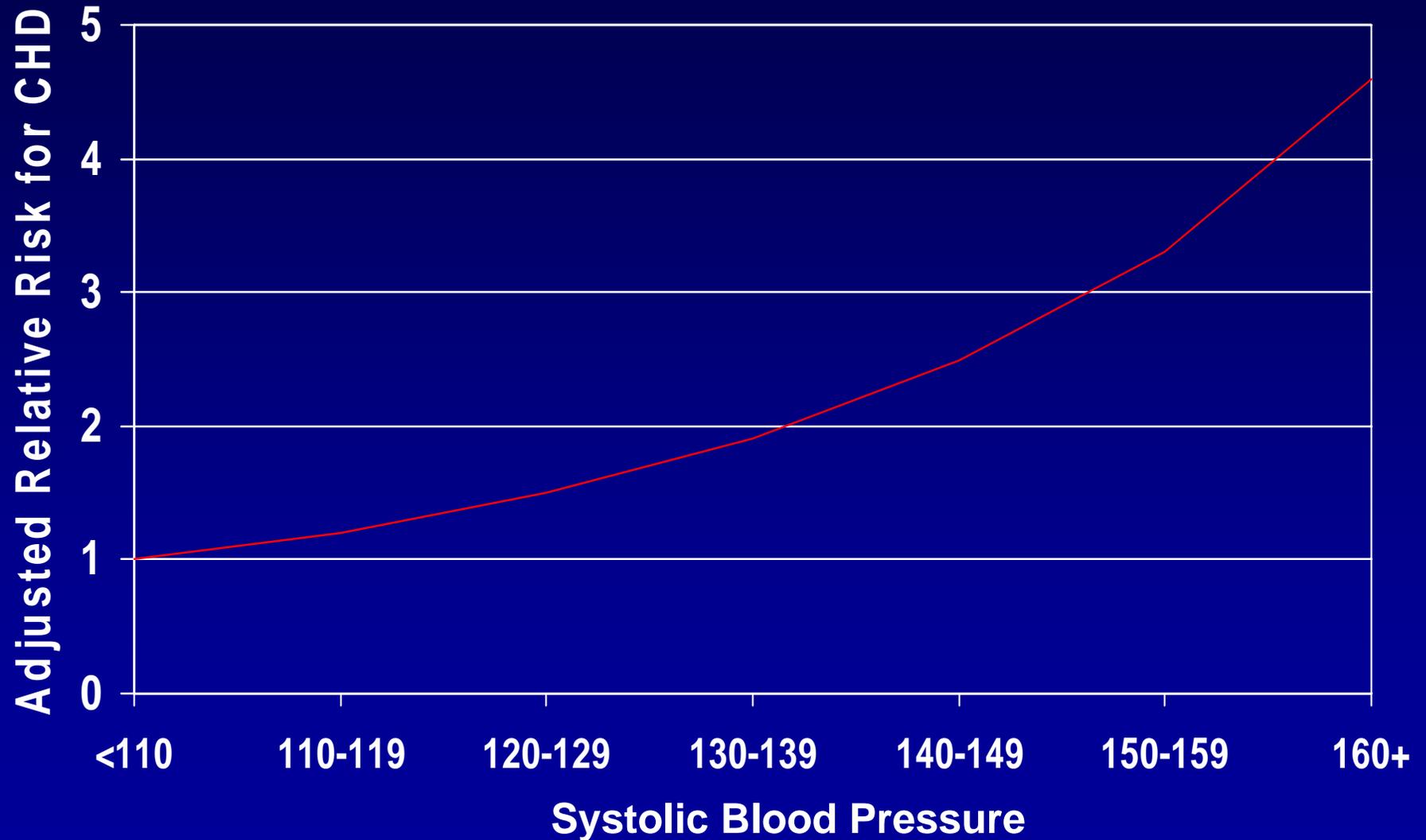
American Public Health Association representative

National High Blood Pressure Education Program Coordinating Committee

Outline

1. Evidence linking blood pressure levels to risk of CVD
2. The rise in prevalence of high blood pressure with age
3. Prevention of high blood pressure
4. The need for action on sodium
 - early federal recommendations on sodium
 - current consumption levels in the U.S. and sources
 - sodium levels in supermarket and restaurant foods
5. The APHA policy resolution on sodium
6. Subsequent developments
7. The U.K. and Finland

Relative Risk of Developing CHD vs. Systolic Blood Pressure



Neaton JD. *Arch Int Med* 1992; 152:56-64.

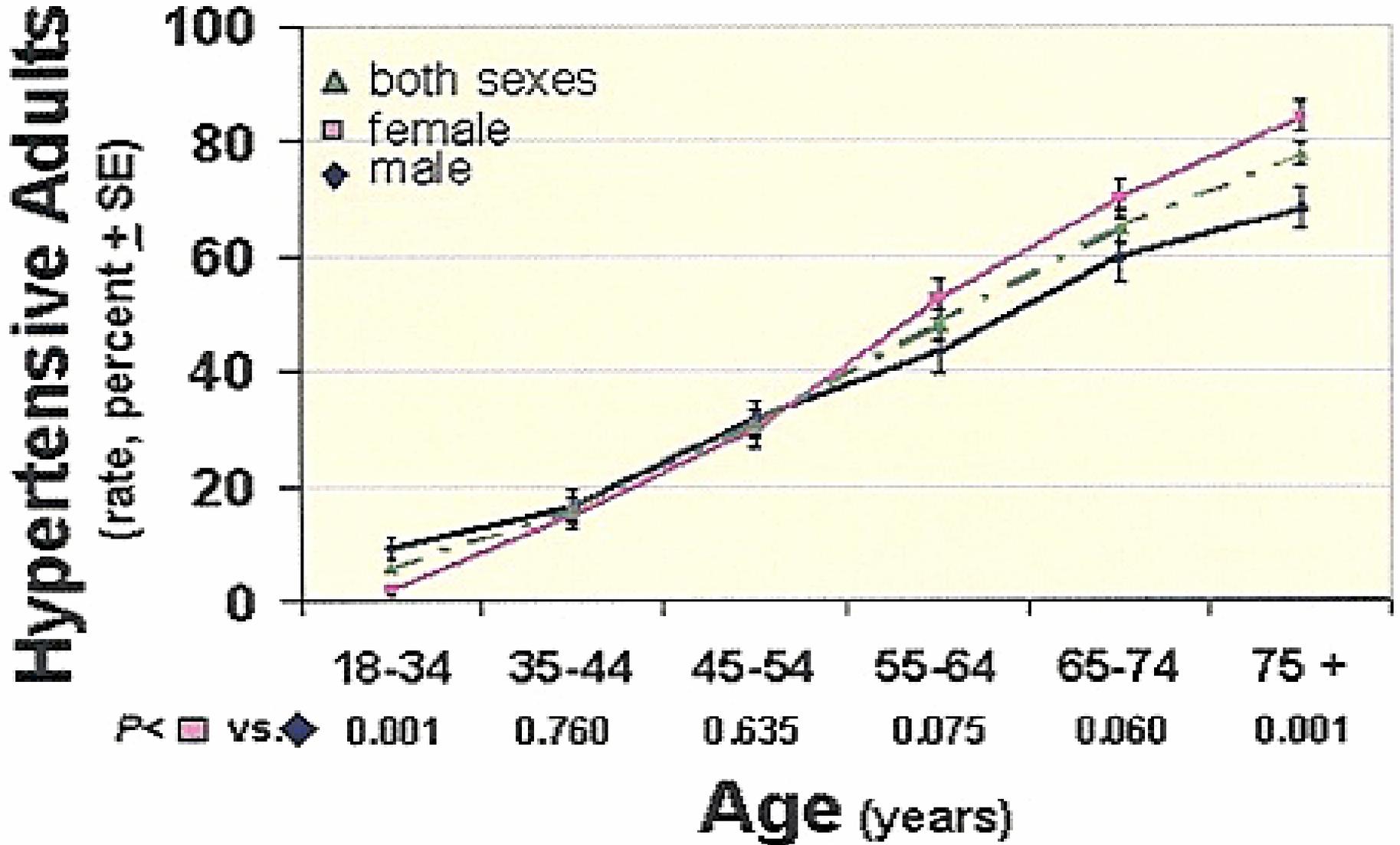


Figure 2. Estimated prevalence of hypertension among US adults by age and sex for 1999 to 2000.

REDUCED ALCOHOL CONSUMPTION

WEIGHT CONTROL

National High Blood Pressure
Education Program

Working Group Report on Primary Prevention of Hypertension

PHYSICAL ACTIVITY

REDUCED SALT INTAKE

NATIONAL INSTITUTES OF HEALTH

National Heart, Lung, and Blood Institute

Primary Prevention of Hypertension

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The National High Blood Pressure Education Program Coordinating Committee published its first statement on the primary prevention of hypertension in 1993. This article updates the 1993 report, using new and further evidence from the scientific literature. Current recommendations for primary prevention of hypertension involve a population-based approach and an intensive targeted strategy focused on individuals at high risk for hypertension. These 2 strategies are complementary and emphasize 6 approaches with proven efficacy for prevention of hypertension: engage in moderate physical activity; maintain normal body weight; limit alcohol consumption; reduce sodium intake; maintain adequate intake of potassium; and consume a diet rich in fruits, vegetables, and low-fat dairy products and reduced in saturated and total fat. Applying these approaches to the general population as a component of public health and clinical practice can help prevent blood pressure from increasing and can help decrease elevated blood pressure levels for those with high normal blood pressure or hypertension.

JAMA. 2002;288:1882-1888

www.jama.com

A DIRECT POSITIVE RELATIONSHIP between blood pressure and cardiovascular risk has long been recognized. This relationship is strong, continuous, graded, consistent, independent, predictive, and etiologically significant for those with and without coronary heart disease^{1,2}; it has been identified in both men and women, younger and older adults, different racial and ethnic groups, different countries; and applies to those with high-normal blood pressure as well as those with hypertension.^{1,3}

Despite progress in prevention, detection, treatment, and control of high blood pressure, hypertension remains an important public health problem. Based on the Third National Health and Nutrition Examination

Survey (NHANES III), approximately 43 million noninstitutionalized US adults, 18 years of age or older, met the criteria for diagnosis of hypertension (systolic blood pressure ≥ 140 mm Hg or diastolic blood pressure ≥ 90 mm Hg, or taking antihypertensive medication) recommended in The

Sixth Report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure (JNC VI).⁴⁻⁶ Almost 13 million additional persons had been diagnosed as having hypertension by a health care professional but did not meet the previously mentioned JNC

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Statement on Sodium from the Initial Primary Prevention Report

“Given the ubiquitous nature of sodium in processed foods, the potential for a reduction in sodium intake far exceeds that which has been shown in intervention studies and is easily achievable in contemporary society. Thus, changes in food manufacture, as well as public education initiatives, provide a basis for much more substantial reductions in sodium consumption. Given such changes, a societal goal of sodium chloride intake for the general population of no more than 6 grams per day is reasonable and achievable.”

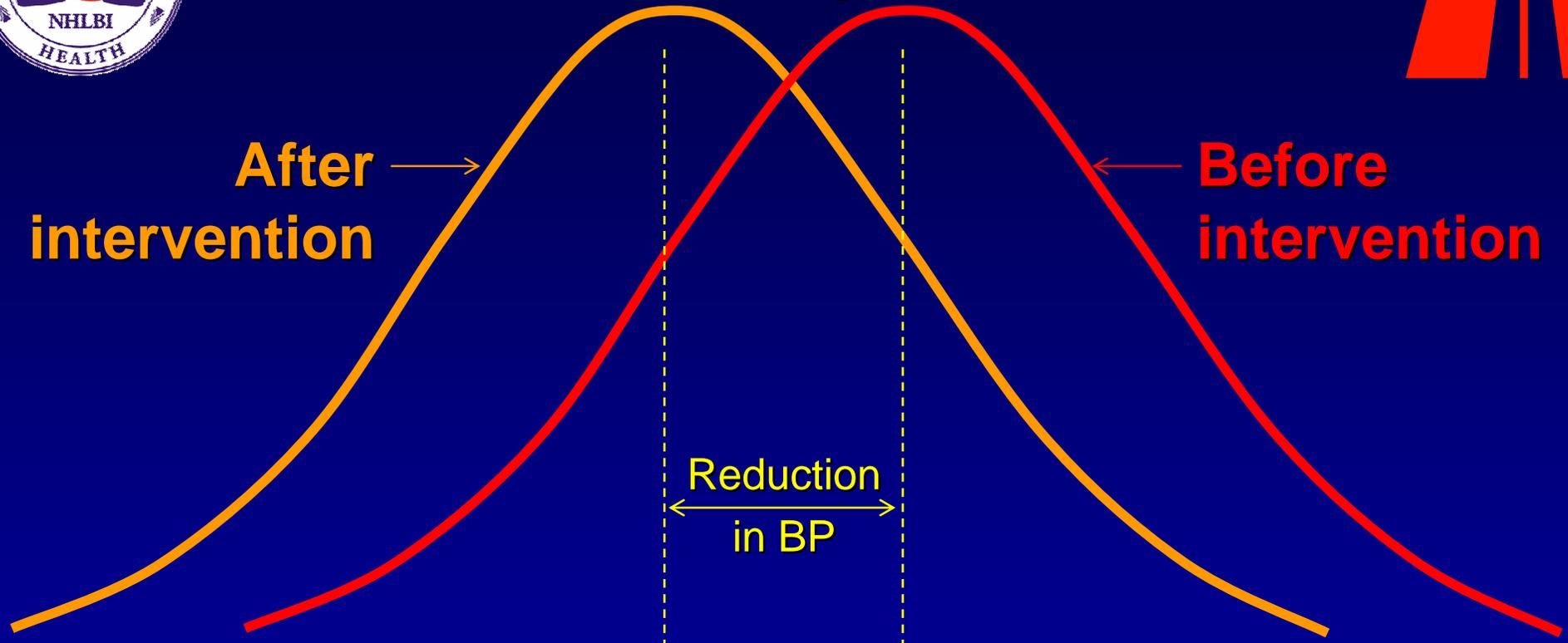
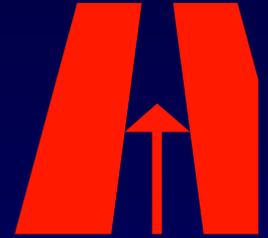
Effect of a Population-Wide Strategy

A population-wide strategy to reduce overall blood pressure by only a few mm Hg could affect overall cardiovascular morbidity and mortality **by as much or more than** treatment alone.



Population-based Strategy

Effects of Lowering SBP Distributions



Reduction in BP mm Hg	% Reduction in Mortality		
	Stroke	CHD	Total
2	-6	-4	-3
3	-8	-5	-4
5	-14	-9	-7

Stamler J. *Hypertension*
1991;17:1-16-1-20.

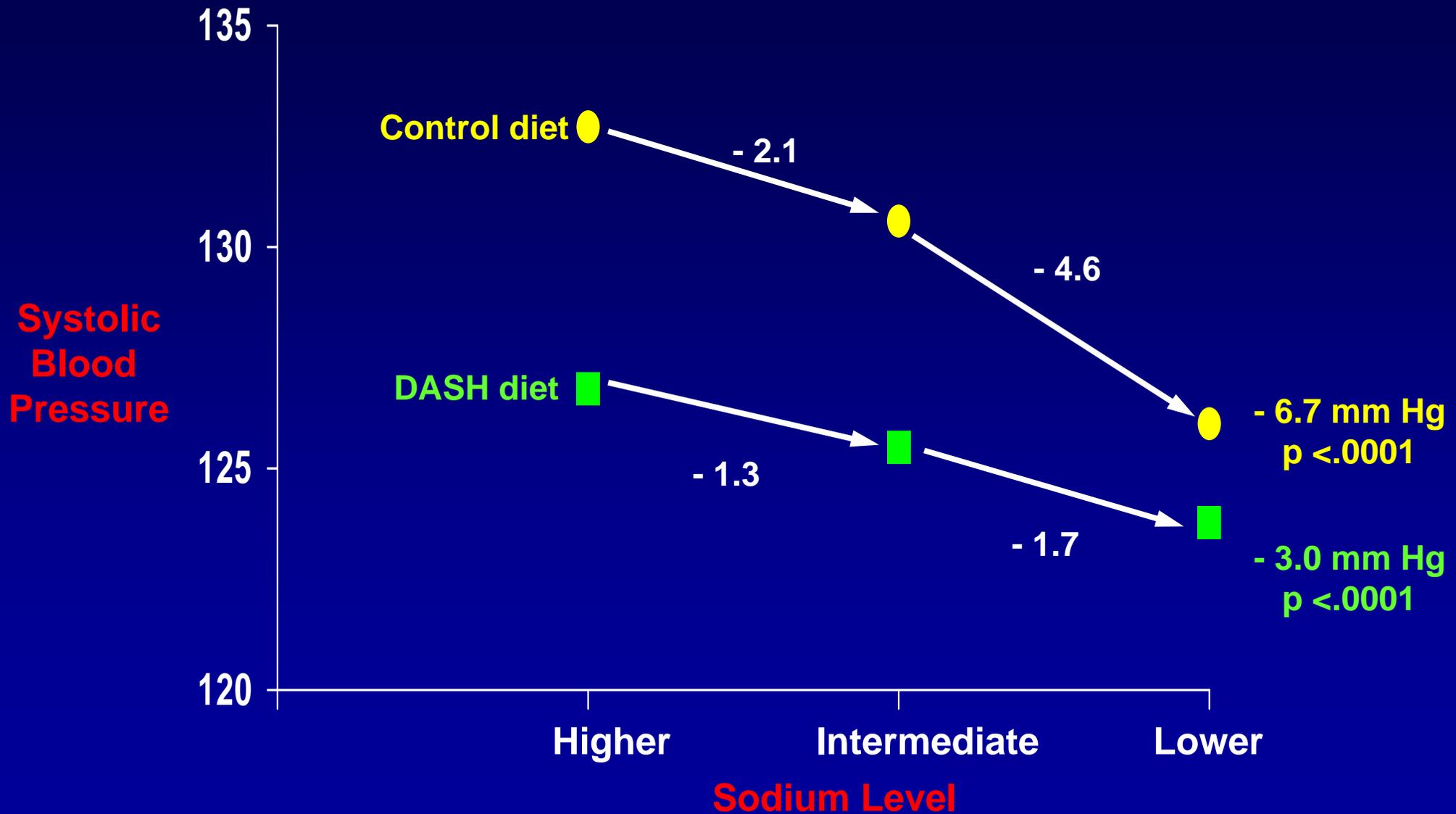
A Visit and a Request from Drs. Roccella and Cutler, 8/01

- The request: could I get APHA to sponsor a resolution on sodium?

Sodium Intake in the United States

- Sodium reduction in the food supply is the hypertension prevention strategy most amenable to a public health solution.
- Randomized clinical trials show that Na⁺ reduction results in ↓ BP in both hypertensives *and* non-hypertensives.
- Current consumption levels of sodium greatly exceed physiologic need.
 - Mean intake is 4000 mg daily.
 - 75% of this intake is derived from processed foods.
- Only 20% of the population consumes ≤ 2400 mg Na⁺ per day.
- The 2010 Objective for the Nation is for 65 percent of persons aged 2 and above to consume ≤ 2400 mg.
- This objective *cannot* be achieved unless food processing and restaurant preparation practices in the United States are changed.

Effect of Sodium Level on Systolic Blood Pressure



Processed foods sold in supermarkets generally have high levels of sodium.



Campbell's Select Chicken Noodle (1 cup)
990 mg sodium



Stouffer's Vegetable & Chicken Pasta Bake (12 oz.)

1,190 mg Sodium

Sodium reduction in supermarket foods is feasible.

Products labeled “healthy” have less sodium.



Campbell's Healthy Request Chicken Noodle (1 cup)
360 mg sodium



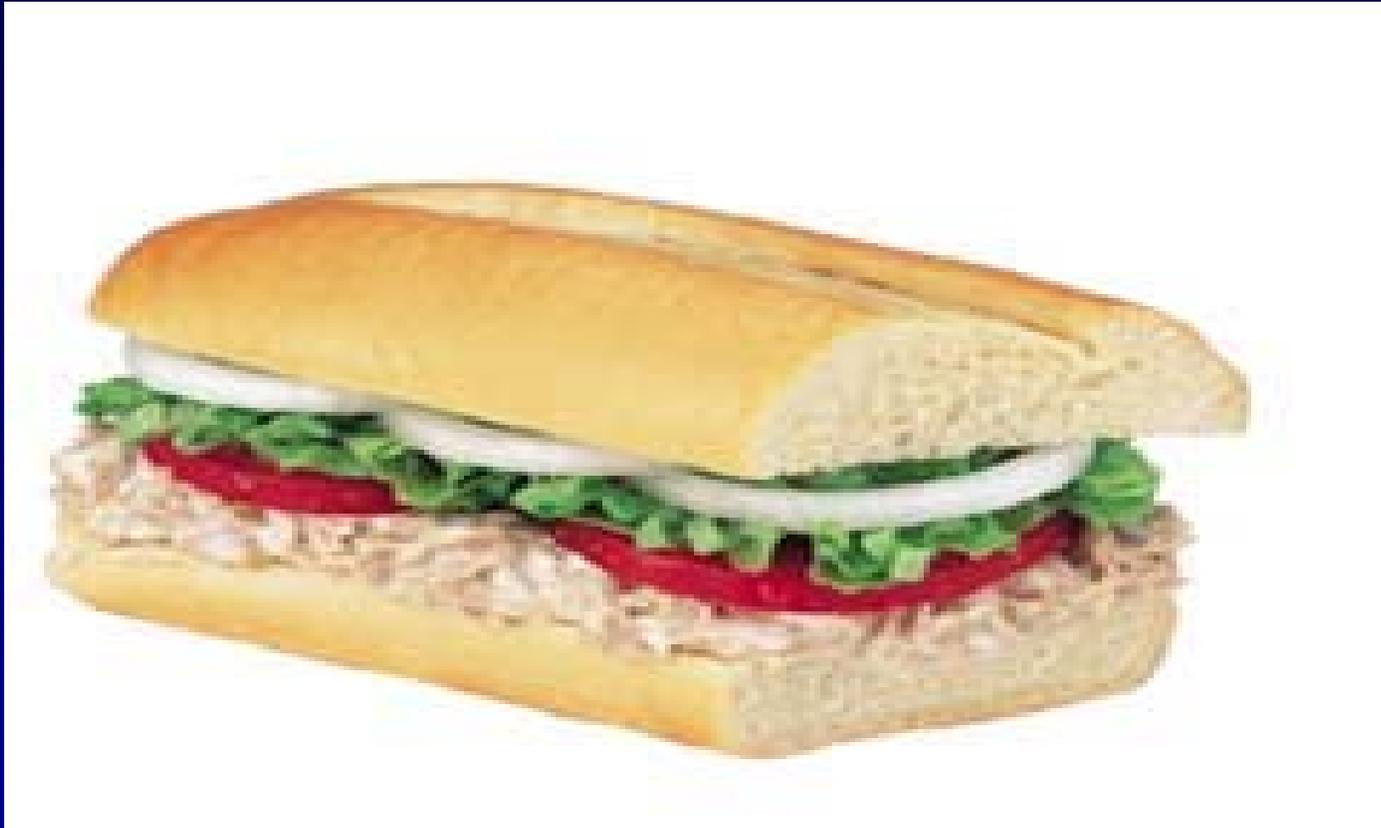
Healthy Choice Chicken Broccoli Alfredo Dinner (11.5 oz.)
530 mg sodium

Restaurant foods typically have $\geq 1,000$ mg of sodium per serving.



Sbarro's Supreme Pizza 1 Slice (10 oz.)

1,580 mg sodium



Tuna sandwich
1,360 mg sodium

Chinese Restaurant Foods



Chicken Chow Mein
2,450 mg sodium

Mexican Restaurant Foods



Chicken fajitas with tortillas, beans, rice, and guacamole
3,660 mg sodium

Italian Restaurant Foods



Lasagna
2,060 mg sodium

Even “healthier” restaurant foods are often high in sodium.

7 SUBWAY subs with **6** grams of fat or less

Turkey Breast on Wheat

Fresh Value Meal
Add

Subway® is a proud sponsor of the American Heart Walk

Subway 6" Turkey Sub
1,010 mg sodium



Burger King Chicken Whopper
1,420 mg sodium

Cutting sodium in restaurant foods is feasible.

Burger King
King Size Fries
1,070 mg sodium



McDonald's
Super Size Fries
390 mg sodium



Steps in the APHA Policy Resolution Process

- Meeting with the APHA Executive Director, November 2001
- Meeting with the APHA Executive Committee, January 2002
- Evidence-based resolution submitted in February 2002
- Consideration of proposed resolutions by APHA section(s)
- Feedback and critique by APHA Policy Committee
- Revisions to the policy
- Vote by the Policy Committee
- Publication in *The Nation's Health* and on-line
- Public hearing at the APHA annual meeting
- Vote by the Governing Council

2002-4 Reducing Sodium Content in the American Diet

Cardiovascular diseases are responsible for 40 percent of all deaths in the United States. Each year, more than 725,000 Americans die of heart disease and more than 160,000 die of stroke.¹

Elevated blood pressure levels are a major cause of these diseases. The relationship between blood pressure levels and risk of developing cardiovascular diseases is strong, continuous, graded, consistent, independent, and etiologically significant.^{2,3}

More than 50% of adults in the U.S. have blood pressure levels which are higher than optimal (defined as < 120 mm Hg systolic and < 80 mm Hg diastolic), thereby putting them at significantly increased risk of developing these diseases.^{4,5} For example, the estimated 23 million persons with high normal blood pressure (130-139 mm Hg systolic and/or 85-89 mm Hg diastolic) have a 1.5 to 2.5 times greater risk of having a heart attack, a stroke, or heart failure in 10 years than those with optimal blood pressure levels.⁶

Hypertension, defined as a systolic blood pressure \geq 140 mm Hg, a diastolic blood pressure \geq 90 mm Hg, affects about 43 million U.S. adults and presents the highest risk.⁴ The prevalence of hypertension rises dramatically with increasing age; by age 80, more than 70 percent of the population is hypertensive.⁴ Blacks suffer from even higher rates of hypertension and its deleterious effects than whites.⁴ The majority of hypertension is uncontrolled.⁷ The *Healthy People 2000* objective of 50 percent of hypertensives having their blood pressures controlled to a level less than 140/90 mm Hg was not met⁸; instead, only about 25 percent of adults with hypertension had their blood controlled to this extent.⁷

Hypertension is a largely preventable risk factor.⁹ The National High Blood Pressure Education Program guidelines recommend five nutritional/lifestyle approaches to prevent hypertension: (1) reduction of sodium intake, (2) weight reduction in the overweight, (3) regular physical activity, (4) moderation of alcohol intake, and (5) an eating plan that is rich in fruits, vegetables, and low-fat dairy products and reduced in saturated fat, total fat and cholesterol.^{9,10} These same nutritional ap-

proaches are also highly effective in treating hypertension and can significantly reduce the need for medications.⁶

Because of the high prevalence of elevated blood pressure levels and their sequelae in the United States, effective public health interventions which will lead to population-wide reductions in blood pressure are needed. Reduction in sodium intake represents an important public health opportunity and challenge in this regard.

There is a clear relationship between habitual sodium intake and blood pressure levels.¹¹ The evidence is sufficiently strong to warrant recommendations for the public to reduce dietary sodium intake. A meta-analysis of 32 randomized clinical trials concluded that if a population decreases its sodium intake by 2,300 mg, this would lower blood pressure by 5.8 mm Hg systolic/2.5 mm Hg diastolic in hypertensives, and by 2.3 mm Hg systolic/1.4 mm Hg diastolic in nonhypertensives.¹² A 3 mm Hg reduction in systolic blood pressure for the general U.S. population would result in 11 percent fewer strokes, 7 percent fewer coronary events, and 5 percent fewer deaths.¹³

A small number of researchers have disputed the link between sodium intake and blood pressure.¹⁴ However, randomized clinical trials have now definitively demonstrated that reducing sodium intake decreases blood pressure in people with and without high blood pressure. The recent Dietary Approaches to Stop Hypertension (DASH)-Sodium study showed that a salt-reduced diet alone lowered blood pressure by 8.3/4.4 mm Hg in hypertensives and by 5.6/2.8 mm Hg in normotensives compared to the usual high-sodium American diet.¹⁵ The lower the sodium intake in the diet, the greater was the fall in blood pressure. These findings reaffirm the benefit of continuing to recommend that sodium be limited to no more than 2400 mg per day and suggest that limiting sodium intake further to 1500 mg per day is feasible and provides additional blood pressure lowering without adverse effects.

Higher sodium intake has adverse effects beyond those of increasing blood pressure. An intake of sodium higher by 2300 mg per day is associated with an increase in risk of coronary heart disease mortality of 61 per-

cent, stroke mortality of 89 percent, and all-cause mortality of 39 percent over a 19-year period among adults who are overweight after adjusting for blood pressure, age, BMI, and other important variables.¹⁶ Higher sodium consumption is also associated with an increased risk of developing urinary stones and osteoporosis.¹⁷⁻¹⁸

The average American adult ingests nearly 4,000 mg of sodium daily, far exceeding the current recommendation to consume no more than 2400 mg per day (approximately 6 grams of sodium chloride)¹⁹ Between 2/3 and 3/4 of the daily sodium intake of the U.S. population comes from salt in processed foods, the remainder coming from salt added while cooking or at the table.^{20,21} Thus, in the U.S. and other western societies, a high dietary salt intake is due to a large portion of daily calories consisting of processed foods.

The National High Blood Pressure Education Program Coordinating Committee, the National Academy of Sciences, and the American Heart Association officially support the public health strategy of reducing Americans' daily dietary sodium intake to no more than 2,400 mg and indicate that this would reduce the mean blood pressure of the U.S. population.²²⁻²⁴ Healthy adults living in a temperate climate can maintain a normal sodium balance with as little as 115 mg of dietary sodium per day.²⁵ Given the wide variation in Americans' physical activity and climatic exposure, a level of 500 mg of sodium intake per day has been recommended as safe.²⁶ Animal experiments, epidemiologic studies, and randomized clinical trials have found no long-term adverse effects associated with habitual sodium intake \leq 2,400 mg per day.^{9,10}

Healthy People 2010 has established an objective to increase the proportion of the population who meet this standard (\leq 2400 mg per day) from 21 percent to 65 percent by the year 2010.²⁹ Gradually reducing the amount of sodium added in the manufacturing and commercial preparation of food is a prudent and safe public health intervention, and the single most effective means of attaining this goal. Such a reduction will also make a substantial contribution to meeting the *Healthy People 2010* objective of 50 percent of hypertensives having their blood pressure under control and the *Healthy People* objec-

APHA Press Conference: Effects of Reducing Sodium by 50% in Processed and Restaurant Foods

- A decline of at least 5 mm Hg in mean systolic blood pressure
- A decline of up to 20% in the prevalence of hypertension
- A decline of at least 9% in deaths from coronary heart disease
- A decline of at least 14% decline in deaths from stroke
- A decline of at least 7% in mortality from all causes
 - resulting in at least 150,000 lives saved annually

Sea change urged for food industry: Less salt

By Marian Uhlman
Inquirer Staff Writer

Seeking to lower America's blood pressure, the nation's largest public-health group yesterday called for a 50 percent reduction in salt in processed and restaurant food over the next decade.

The reduction could save about 150,000 lives annually from illnesses linked to high blood pressure, such as strokes and heart attacks, said Dr. Stephen Havas, the lead author of the new American Public Health Association policy.

"Americans are consuming an ever-increasing amount of processed foods high in sodium at home, at work, at school and in restaurants," said Havas, a member of the coordinating committee of the National High Blood Pressure Education Program. "The excess sodium in these foods is unnecessary and leads to a large, preventable toll of hypertension, premature death and disability."

About 50 million American adults have high blood pressure. And 710,000 Americans die annually from heart disease and more than 166,000 die of stroke, according to government data.

The sodium in salt elevates blood pressure by increasing fluid retention in the body, which puts added pressure on vessel walls, Havas said.

"We have strong scientific evidence that indicates reducing sodium intake can have a substantial effect on lowering blood pressure - in both people with hypertension and those without it," said Dr. Claude Lenfant, director of the National Heart, Lung and Blood Institute. "Appealing to individuals as well as to industry to take simple but effective steps to limit sodium in our diets will yield measurable

How salt shakes out in American diets

Sodium is public enemy still, but now it's put in before food is served.

By MARIKO THOMPSON
NEW YORK TIMES NEWS SERVICE

Long before the carbs vs. protein wars, before good fats squared off against bad fats, salt reigned as public health enemy No. 1.

We were warned to set down the salt shaker, to substitute spices in our home cooking and to go easy on the potato chips. Twenty years later, the public health campaign against sodium is still being waged. But the target has shifted from the obvious sources to the hidden ones.

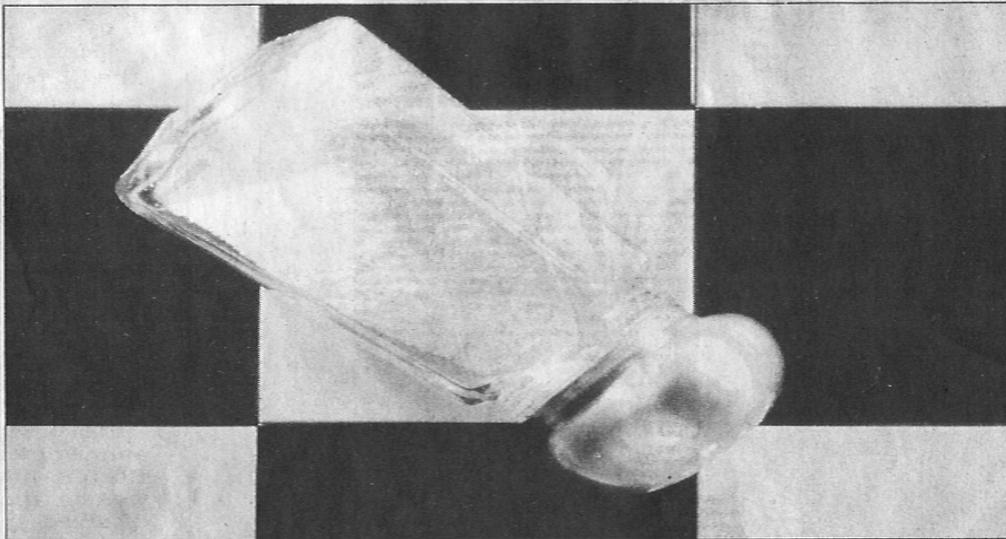
The average American consumes 4,000 milligrams of sodium per day, far exceeding the maximum of 2,400 milligrams recommended by USDA dietary guidelines and major health organizations such as the American Heart Association. These days, only an estimated 25 percent of daily sodium intake is added at the table. The remainder is unseen, consumed in restaurant and processed foods.

"People juggling career and family will go for the convenience foods," said Bettye Nowlin, a spokeswoman for the American Dietetic Association. "But they need to be aware that sodium is everywhere."

Take a look at the food labels on common grocery items. For example, a half cup of Ragu's Old World Style spaghetti sauce contains 780 milligrams of sodium.

What about restaurants? According to the Center for Science in the Public Interest, a Burger King Broiler Chicken Sandwich has 1,110 milligrams of sodium and the garden vegetable soup at Au Bon Pain has 1,240.

The levels recently led the American Public Health Association to call on those industries to cut sodium levels in half over the next decade. People who consume high levels of sodium are more likely to develop hypertension.



high blood pressure have an increased risk for heart disease and stroke. High sodium levels also raise the risk of osteoporosis and kidney problems.

While salt plays a role in health conditions, the underlying causes and solutions are multi-faceted, said Sanford Miller, a senior fellow at Virginia Tech's Center for Food and Nutrition Policy. With hypertension, factors such as genetics and regular

Gradual sodium reduction across the board would save 150,000 lives a year.

Dr. Stephen Havas

exercise affect who will develop the disease. People with a family history of hypertension and African-Americans, who as a group are more likely to develop the disease, should be careful about their sodium intake.

In the case of osteoporosis, potassium appears to offset calcium losses

food labels allow consumers to gauge their daily sodium content.

Restaurant roulette

But with no labels to peruse, eating at restaurants can pose greater challenges. There's no way to know whether the garden vegetable soup contains more sodium than the beef barley soup. The best thing a consumer can do is ask, said John Dunlap, president of the California Restaurant Association.

"Most restaurants will alter food preparation methods when requested," he said. "Salt is in many respects a core seasoning. There are a lot of terrific flavors that emerge with little or no salt. I think consumers need to be educated and shouldn't be afraid to ask questions."

At a minimum, the human body requires only 500 milligrams of sodium, about a quarter teaspoon of salt. Healthy people excrete extra sodium. But outside of the groups that are considered at risk, most people won't know if their bodies are sodium sensitive until it's too late, Miller said.

When ordering from a menu, descriptions provide clues. Pickled and

Ways to reduce sodium

- Choose fresh, frozen or canned food without added salts.
- Select unsalted nuts or seeds, dried beans, peas and lentils.
- Limit salty snacks like chips and pretzels.
- Avoid adding salt to home-made dishes.
- Select unsalted, fat-free broths, bouillons or soups.
- Select fat-free or low-fat milk, low-sodium and low-fat cheeses, and low-fat yogurt.
- When dining out, ask for your dish to be prepared with little or no salt.
- Use spices and herbs to enhance food.

Source: American Heart Association

Looking for sodium on labels

To keep your diet within the recommended maximum of 2,400 milligrams of sodium per day (a little more than 1 teaspoon), the American Dietetic Association suggests reading labels.

Processed foods may be labeled in different ways under guidelines set by the Food and Drug Administration. Here's what those labels mean:

Sodium-free: less than 5 milligrams per serving

Very low sodium: 35 milligrams or less per serving

Low sodium: 140 milligrams or less per serving

Reduced sodium: usual sodium level is reduced by 25 percent

Unsalted, no salt added or without added salt: made without added salt but still containing the sodium that occurs naturally in the food

Sodium samples

Here's a sampling of sodium levels in foods:

Subsequent Developments

- Unanimous endorsement by the NHBPEP CC, December 2002
- Unanimous agreement to include an endorsement of the resolution in JNC 7, April 2003
- National Academy of Sciences recommendation in 2004
- New U.S. Dietary Guidelines recommendation in 2004

Salt and Health

**Scientific Advisory
Committee on Nutrition**

2003

The Stationery Office

FSA wants action on salt content

The Food Standards Agency (FSA) wants manufacturers to be more proactive in their attempts to reduce salt content in food.

FSA chairman Sir John Krebs told the Westminster Diet and Health Forum in early April that UK consumers were eating 50% more salt than they should.

The government agency wants to see the contents of processed foods adjusted by the industry in a way that does not compromise safety and acceptability.

Its own research found that one ready meal contained 5.8g of salt (6g is the recommended daily allowance), yet the manufacturer had a

healthy eating message on the packaging that warned women not to eat more than 5g a day.

“How can the food manufacturer simultaneously sell people a meal and give advice that they shouldn’t eat it? So there is an issue here,” he told government officials and food industry representatives.

The Scientific Advisory Committee on Nutrition is due to set lower target levels for children and adults on salt this month.

Sir John was also critical of organisations such as the British Retail Consortium and the British Frozen Food Federation for failing to cooperate with the FSA’s plans for improving the nation’s diet.

He said that the FSA would also check whether or not the industry was following guidelines on potentially misleading labelling claims and foods targeted at children.



Public sector caterers asked to cut salt levels in food

Thursday, 29 May 2003

Public sector caterers, and their suppliers, are being asked to reduce the amount of salt used in their food production and supplies of processed foods.

Food Standards Agency Chair Sir John Krebs and Minister for Public Health Hazel Blears have written to public sector bodies including social services, local education authorities, the NHS and HM Prison Services.

Those with a particular responsibility for feeding children and older people are being asked to take into account the advice on salt intake levels issued by the Agency on 15 May 2003, including new maximum salt levels for children.

The Agency is also holding a consultation meeting with health and consumer organisations today to discuss the best way forward for reducing salt intake across the population.

Sir John Krebs said: 'Killer diseases such as heart disease and stroke could be reduced if people eat less salt. But 75% of the salt we eat comes from processed food, so many people cannot easily reduce the amount they consume.

'We're urging industry to reduce the amount of salt in their products. Those who cater for people in schools, hospitals, prisons, and other public sector bodies could also significantly help by asking suppliers to reduce the amount of salt they use.'

High salt intake is linked to high blood pressure, which increases the risk of heart disease. People with high blood pressure are three times more likely to develop heart disease and stroke, and twice as likely to die from these diseases than are those with normal levels.

High blood pressure contributes to more than 170,000 deaths per year in England alone. Of these, stroke causes about 50,000 deaths as well as substantial illness and disability every year.

Currently, adults are having about 9 grams of salt a day. Reducing consumption by one-third, to 6 grams a day, would improve public health significantly by reducing average population blood pressure levels.

Average consumption of salt by children aged 4 to 14 is more than 5 grams a day. The Scientific Advisory Committee on Nutrition, which advises the Food Standards Agency and UK health departments, has published new targets for reducing children's salt consumption in its recent report (see link below).

The views expressed at the consumer consultation meeting being held today will be included in a paper to be put to the FSA Board at their meeting on 12 June in Derry City, Northern

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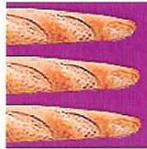
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Big drop in salt levels in bread

Thursday, 29 November 2001

Are you concerned about the amount of salt in your diet? If you are, you'll be pleased to know that, on average, you're now getting about 13½ level

teaspoons of salt per year less, when you eat your daily bread. This is thanks to big reductions in the use of salt by UK bakers.

These are the findings of an FSA study published today, which analysed the five most popular kinds of bread in the UK. An Agency investigation three years ago highlighted the high levels of salt in an average loaf, prompting industry to tackle the problem.

Levels of sodium in bread have now been reduced by up to 21% - and 95% of the sodium found in bread comes from salt.

Combating coronary heart disease

Reducing the amount of salt we eat is a vital step towards combating coronary heart disease. Eating a lot of salt has been linked to high blood pressure, which in turn can lead to an increased risk of strokes, heart disease and kidney disease.

Previous studies have shown that nearly a quarter of the salt we eat comes from bread, with the average person eating three slices of bread a day.

The study revealed fresh white crusty bread still contained, on average, the highest levels of salt at 545 mg of sodium per 100 g of bread.

Other foods now to be targeted

Now that the UK bread industry has set the example, the FSA is urging manufacturers of other food containing hidden salt, such as ready-made meals, to reduce the amount they use. The Agency has identified key sources of salt in our food and is discussing ways of reducing

bread is still as popular as ever, proving that changes with important health benefits can be made without sacrificing taste.

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Answer...

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We're eating twice as much salt as we should

By **SALLY JANES**

MOST of us don't realise there is a hidden killer in our daily diet – salt.

Eating too much of it is linked to high blood pressure — the main cause of strokes. It is also a major factor in heart disease.



Sun salt survey ... time to cut it out?

Using too much salt further increases the risk of stomach cancer and the brittle bone disease osteoporosis.

According to the latest advice from the Food Standards Agency, adults should not consume more than 6g of salt a day.

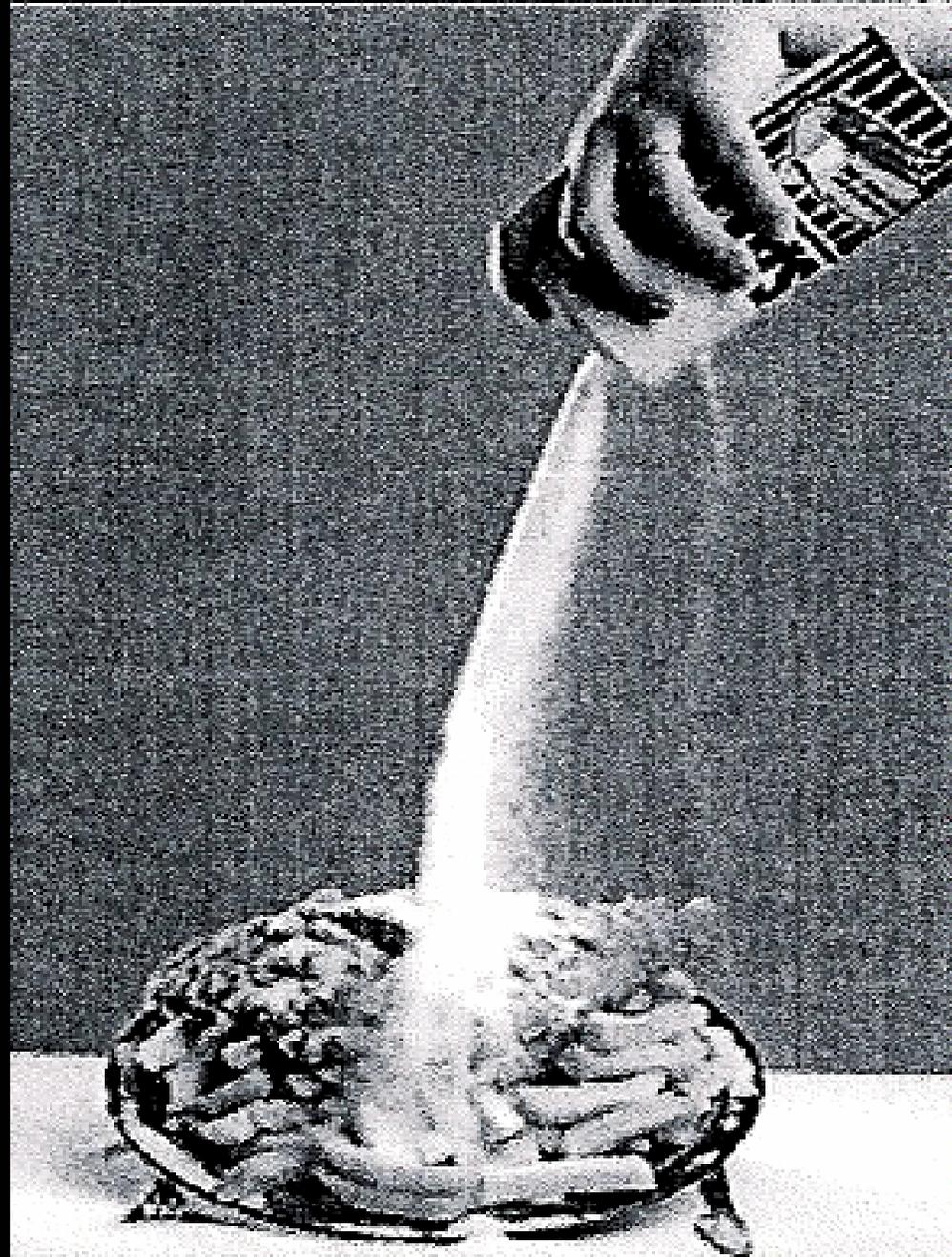
But most of us take in nearly **DOUBLE** that amount without even realising.

The reason is everyday products in our shopping trolleys — from bangers to cornflakes — are laden with salt.

Imagine a breakfast of cereal and two slices of toast, followed by tinned soup and a couple of slices of bread for lunch, then sausages, chips and beans for dinner. You might think you had eaten reasonably healthily but you would have consumed 13g of salt — more than twice the recommended daily amount.

Working out the levels of hidden salt is not easy. Where salt is listed on packaging, it is marked as sodium — just one element of salt. The other element chloride, which forms 60 per cent of salt, is not listed.

So 1g of sodium actually means 2.5g of salt — 1g sodium and 1.5g



Salty ... death in your dinner

Parents warned to cut down salt in children's food

By Valerie Elliott
Consumer Editor

A PUBLIC health warning urging parents to cut down salt in their children's diet to reduce the risk of heart disease, stroke and high blood pressure is to be issued today.

From the age of 4 to 14 children regularly eat too much salt and should reduce their intake by nearly 2g a day, the equivalent of about four bags of crisps.

Parents of four to six-year-olds are advised to be particularly vigilant because these children should not eat more than 3g of salt a day. A meal of hamburger and chips contains about 2.5g.

Another target category is boys aged 7 to 14 who must cut out at least 1g of salt a day or two packets of crisps. The recommended intake for 7 to 10-year-olds is 5g a day and for 11 to 14-year-olds 6g a day. Some of their favourite food contains high levels of salt. For

example, six chicken nuggets contain 1.3g, a tin of spaghetti hoops 2g and a can of baked beans in tomato sauce just under 3g.

Babies up to six months old should eat less than 1g a day, and all the sodium necessary for an infant can be provided in breast milk. Children from 7 to 12 months should be strictly limited to 1g a day, so parents should be aware that one breadstick contains 1.07g. One to three-year-old toddlers should eat a maximum of 2g a day, though health experts believe that most would eat less, and the average for that age group now is 1.4g a day.

This is the first time that official salt limits have been issued and they update provisional limits suggested by health experts last year. The main difference today is that experts decided that four to six-year-olds should have a much lower threshold than seven-year-olds.

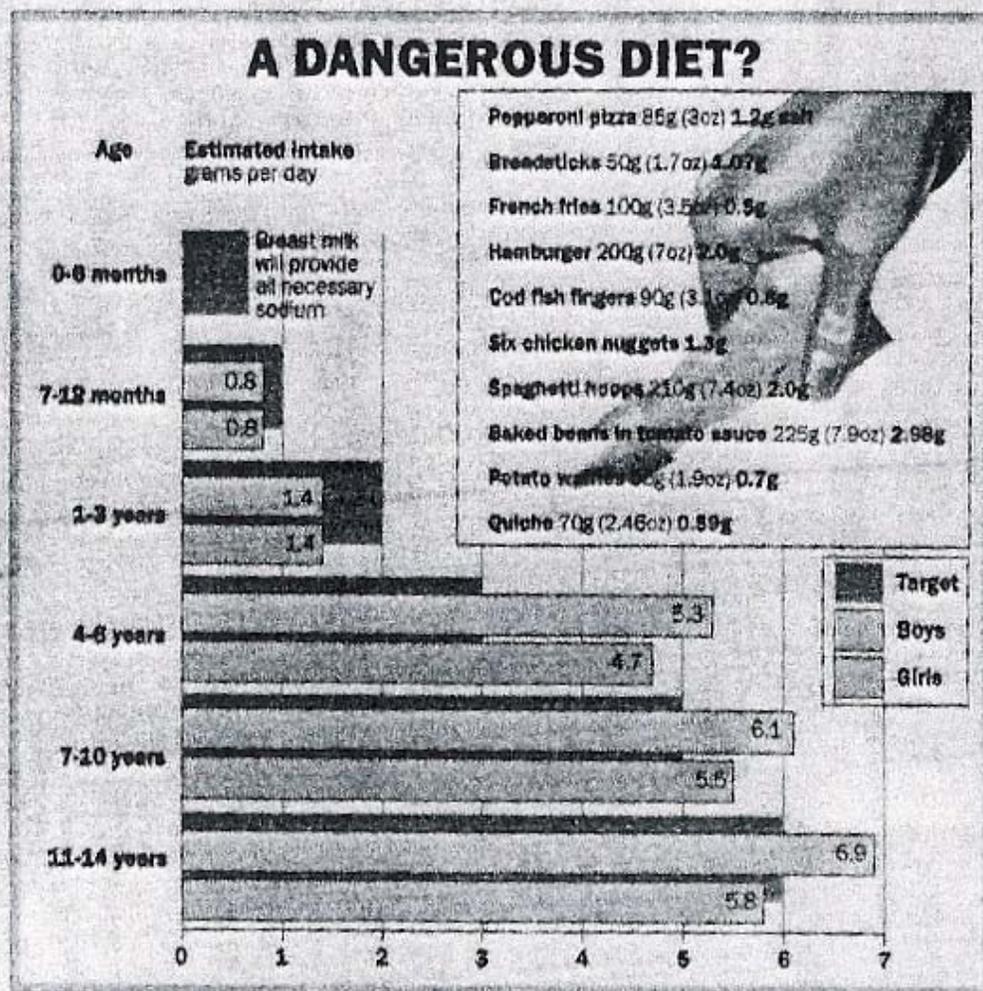
Sir John Krebs, chairman of

the Food Standards Agency, and Sir Liam Donaldson, the chief medical officer, are also asking parents to use less salt in cooking and to avoid adding salt during meals. However, they say that the main problem is from processed food and that 75 per cent of salt consumption is hidden in this food.

Parents are urged to check labels on all food served to their children and to check how much salt or sodium is listed on packaging. A gram of sodium is equal to 2.55g of salt. There is particular concern because children's salt intake is relatively higher than adults because they weigh less.

The Food Standards Agency has already persuaded the Food and Drink Federation, which represents the main food manufacturers, to reduce salt in a range of breakfast cereals, soups and sauces. Amounts in bread have been reduced 13 per cent since 1989.

Most companies use salt to improve the taste of products



but it is also used as a preservative or for texture.

Adults are also being told to cut their daily intake to 6g, from about 9g to 12g, by the Scientific Advisory Committee on Nutrition. Typical quantities, for example, are about 1g

in an adult-sized bowl of cornflakes and 4g in a large slice of pizza. Limits for babies were decided on the basis of sodium intakes from breastfeeding.

Consensus Action on Salt and Health, which has campaigned for ten years to lower

salt consumption, said that a 3g reduction in salt intake in the next five years could prevent 35,000 deaths and 70,000 strokes and heart attacks.

Cost of obesity, page 17
Health, T2, pages 10, 11

CASH

CONSENSUS ACTION ON SALT AND HEALTH

www.actiononsalt.org.uk

PRESS RELEASE

Embargoed to: Friday 7th November 2003

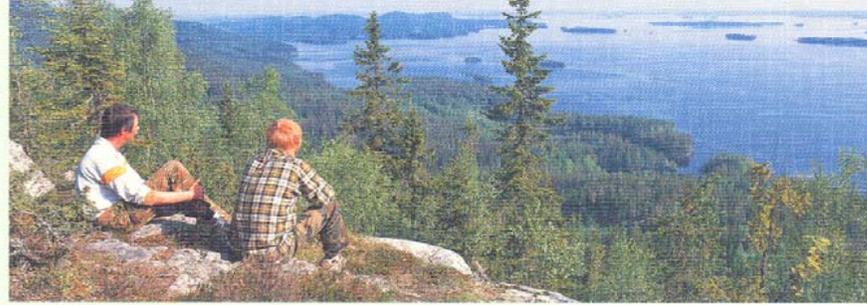
100 people will die today because guidelines on salt have yet to be implemented

How long are we going to have to wait?

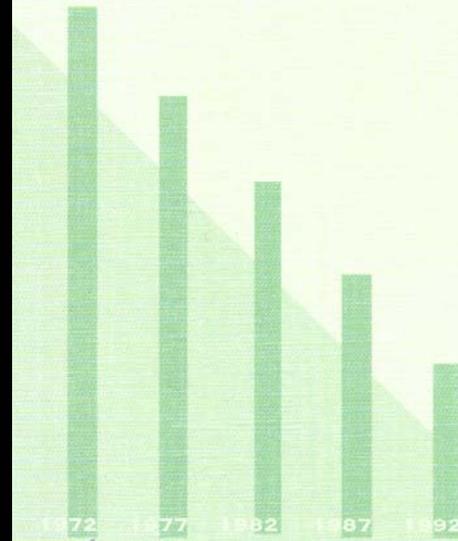
As the Department of Health and the Food Standards Agency prepare to host the first joint Stakeholder meeting on salt in the UK diet on Monday 10th November, Professor Graham MacGregor, of the Blood Pressure Unit at St George's Hospital and Chairman of CASH, is calling on the food industry to reduce the salt it adds to our food immediately, by 10-20%, across the board.

“Research now shows that at least 35,000 deaths from strokes and heart attacks in the UK could be prevented each year if we reduced our salt intake from the current average of 10-12g per day to the recommended 6g per day,” says Professor MacGregor. “Even an immediate cut of 10% by the food industry would reduce salt intake in the whole UK population on average by 1g per day per person and save 5,800 lives over the next year – 16 people every day of the year. Are these lives not worth saving? Furthermore, there would be an approximately equal reduction in the number of individuals having a heart attack or stroke and surviving. Stroke is the leading cause of disability in the UK.”

“The food manufacturers and retailers say that they cannot cut salt levels immediately because customers will not like the taste, yet numerous studies have shown that a 10-20% reduction is not detectable. ASDA, two years ago, managed an average salt reduction of 12% in all its own-label



THE NORTH KARELIA PROJECT



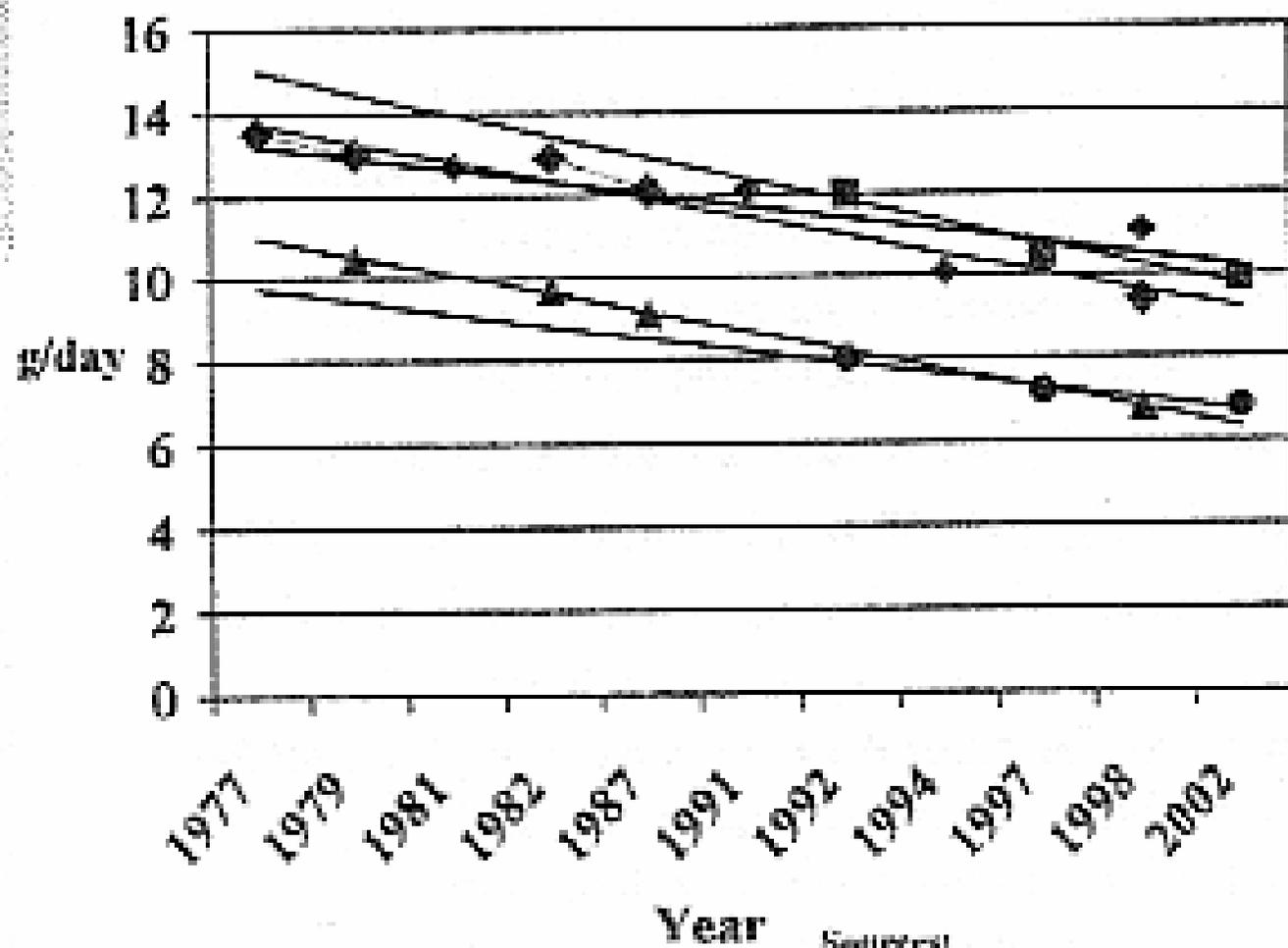
20 Year
Results
and
Experiences

Pekka Puska
Jaakko Tuomilehto
Aulikki Nissinen
Erkki Vartiainen





Salt intake in Finland 1977-2002



- ◆ Per capita statistics
- Dietary surveys, men
- Dietary surveys, women
- ◆ Sodium excretion, men
- ▲ Sodium excretion, women

Source:
 Karvonen ym. 1977, Nissinen ym. 1982, Pietinen ym. 1981, Pietinen ym. 1990, Vuola 1992, KTL/Nutrition Report 1995, KTL/FINDIET 1997 and FINDIET 2002 Studies, KTL/unpublished information.

Summary and Conclusions

1. Supra-optimal BP levels are very common in the U.S. and increase risk of developing CVD and other adverse outcomes.
2. Most hypertension is preventable.
3. Excess sodium consumption is a major cause of hypertension and of the rise in prevalence of hypertension with age.
4. Early efforts to reduce sodium intake and sodium in the food supply had relatively little effect on either the public or the food industry.
5. The APHA resolution may have a galvanizing effect on this issue, but continued focus on this issue will be needed to succeed.
6. Other countries provide evidence of additional ways to change policy.
7. All countries should try to reduce their sodium consumption.