Dietary
Guidelines
Advisory
Committee

REPORT OF THE DIETARY GUIDELINES ADVISORY COMMITTEE on the DIETARY GUIDELINES FOR AMERICANS

To the Secretary of Agriculture and the
Secretary of Health and Human Services

Published by U.S. Department of Agriculture
Human Nutrition Information Service

April 10, 1985

CONTENTS

	Page
Letter to Secretaries of Agriculture and of Health and Human Services	ii
Preface	iii
Proposed Revision of Guidelines	1
Eat a variety of foods	3
Maintain reasonable weight	5
Avoid too much fat, saturated fat, and cholesterol	8
Eat foods with adequate starch and fiber	9
Avoid too much sugar	10
Avoid too much sodium	11
If you drink alcoholic beverages, do so in moderation--and don't drive	12
References	13

United States
Department of
Agriculture

Human Nutrition
Information
Service

Belcrest Road
Hyattsville, Maryland
20782

April 10, 1985

Honorable Margaret M. Heckler
Secretary of Health and Human Services
Washington, D.C. 20201

Honorable John R. Block
Secretary of Agriculture
Washington, D.C. 20250

Dear Mrs. Heckler and Mr. Block:

The Dietary Guidelines Advisory Committee which was appointed to review the scientific accuracy of the 1980 joint publication of the Department of Agriculture and the Department of Health and Human Services, "Nutrition and Your Health: Dietary Guidelines for Americans," has concluded its task. A copy of the report of this committee, which includes proposed revisions in the 1980 publication and key scientific references on which the revisions are based, is enclosed.

Print copies of the report of the Dietary Guidelines Advisory Committee will be available shortly from the Department of Agriculture's Human Nutrition Information Service, 6505 Belcrest Road, Hyattsville, MD 20782. In addition to the revisions suggested in the Dietary Guidelines publication, the Dietary Guidelines Advisory Committee makes the following recommendations to the Departments:

1. The revised Dietary Guidelines should be used as the basis for policy development related to federal nutrition education and information programs of both Departments.

2. The Departments should publish and plan a broad public distribution of a publication presenting the revised Dietary Guidelines.

3. The Departments should convene an advisory committee of nationally recognized nutrition authorities to review these Dietary Guidelines for scientific accuracy and appropriateness on a 5- to 10-year cycle.

4. The Department of Agriculture should continue work aimed at developing a system of simple food groupings consistent with the currently available food supply that can be used in nutrition education programs related to the Dietary Guidelines concepts.

Respectfully submitted,

Isabel D. Wolf

ISABEL D. WOLF
Administrator, Human Nutrition Information Service
Executive Secretary, Dietary Guidelines Advisory Committee

Enclosure

"Nutrition and Your Health: Dietary Guidelines for Americans" (USDA HG No. 232) was published jointly by the Departments of Agriculture and Health and Human Services in February 1980. The bulletin recognizes that we do not know enough about nutrition to identify an "ideal" diet for each individual and that food alone cannot make you healthy. Its seven guidelines feature variety and moderation in diet:

1. Eat a variety of foods
2. Maintain ideal weight
3. Avoid too much fat, saturated fat, and cholesterol
4. Eat foods with adequate starch and fiber
5. Avoid too much sugar
6. Avoid too much sodium
7. If you drink alcohol, do so in moderation

On February 23, 1983, U.S. Department of Agriculture Secretary John R. Block established a Dietary Guidelines Advisory Committee (47 Fed. Reg. 55, 508 (1982)) in accordance with a stipulation of the Senate Appropriations Committee. The Committee was to be appointed for a two-year period. The purpose of the Committee was to review the scientific literature affecting dietary guidance for the public, to review comments received from the public about the Dietary Guidelines bulletin, and to make any recommendations that the Committee deemed appropriate to the Secretaries of the two Departments. The review was considered to be desirable because of continued intense interest in the information and because the state of knowledge in nutrition and dietary planning continues to advance.

The Committee was composed of nine scientists specializing in the field of human nutrition who were appointed by the Secretary. Three were representatives of the Department of Health and Human Services, three were representatives of the Department of Agriculture, and three were selected from a list of nominees recommended by the National Academy of Sciences. They were:

Dr. Henry Kamin
Professor of Biochemistry
Department of Biochemistry
Duke University
Durham, North Carolina

Dr. David Kritchevsky
Associate Director
Anatomy and Biology
The Wistar Institute
Philadelphia, Pennsylvania

Dr. Robert E. Olson
Professor of Medicine and
Pharmacological Sciences
State University of New York
at Stony Brook
Stony Brook, New York

Dr. Lester Salans
Professor of Medicine
Mt. Sinai Medical School
New York, New York

Dr. Robert Levy
Professor of Medicine
College of Physicians
and Surgeons
Columbia University
New York, New York

Dr. Bernard Schweigert
Chairman, Department of Food
Science and Technology
University of California, Davis
Davis, California

Dr. Sanford A. Miller
Director, Center for Food
Safety & Applied Nutrition
Food & Drug Administration
Washington, DC

Dr. Fredrick Stare
Professor Emeritus
School of Public Health
Harvard University
Boston, Massachusetts

Dr. Judith S. Stern
Professor of Nutrition
Department of Nutrition
University of California, Davis
Davis, California

Dr. Bernard Schweigert was appointed Committee Chairman and the Administrator of USDA's Human Nutrition Information Service, Ms. Isabel D. Wolf, served as Executive Secretary.

The Chairman defined the charge of the Committee as threefold:

1. To review the latest scientific information to ascertain what, if any, additions or modifications were appropriate for the Dietary Guidelines as published in 1980;

2. To review comments submitted by the public since the Dietary Guidelines were published to ascertain what, if any, modifications were appropriate based on these comments; and

3. To recommend to the Secretaries of Agriculture and Health and Human Services any revisions to the Dietary Guidelines as published in 1980 and to provide references to the scientific literature that help to substantiate such revisions.

Written comments about the guidelines from the public were invited. Hundreds of comments were received and all were reviewed and considered by the Committee.

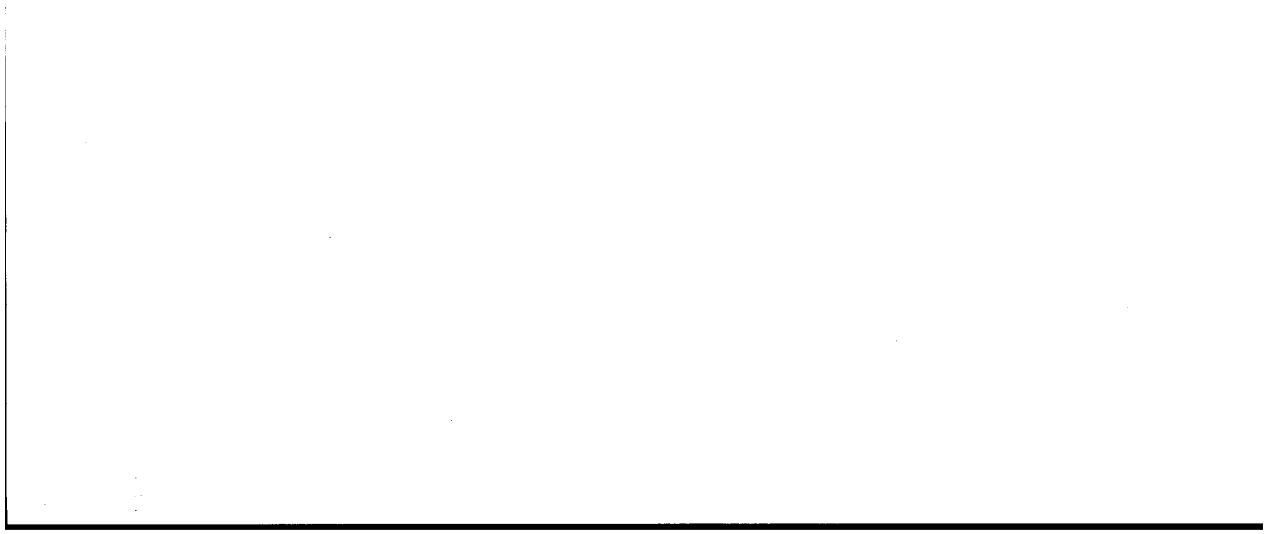
The Committee held four meetings, all of which were announced in the Federal Register and were open to the public: July 20-21, 1983; December 13-14, 1983; May 22, 1984; and December 19, 1984.

Seven subcommittees were formed, each to be responsible for the review of scientific literature and comments and the presentation of draft text for a single guideline. The subcommittees for the seven guidelines were as follows:

1. Olson, Kamin, Stare
2. Stern, Stare, Salans
3. Kritchevsky, Levy, Olson
4. Kritchevsky, Salans, Kamin
5. Salans, Miller, Kritchevsky
6. Miller, Stern, Levy
7. Stare, Olson, Stern

Each of the nine Committee members reviewed and commented on draft text of all seven guidelines. The recommended revision of the Dietary Guidelines presented in this report, therefore, takes into account the views of all members of the Committee.

The revision of "Nutrition and Your Health: Dietary Guidelines for Americans" proposed in this report reflects the most recent nutrition research. It is expected that the revised guidelines, like the 1980 edition of the guidelines, will be used widely as the basis for dietary guidance for the general public. In the interest of consistency, the general format of the seven guidelines and the extent to which nutritional issues were covered in the 1980 edition were retained in the revision. However, modifications that combine certain closely related guidelines and that extend the information presented could have been justified.



Nutrition and Your Health
Dietary Guidelines for Americans

What should you eat to stay healthy?

The life expectancies, body sizes, and good health of Americans seem to indicate that most diets are adequate. Foods we have to choose from are varied, plentiful, and wholesome.

Even so, hardly a day goes by without someone trying to tell us what we should and should not eat. Newspapers, magazines, books, radio, and television give us lots of advice. Unfortunately, much of it is confusing.

Some of this confusion exists because we don't know enough about nutrition to identify an "ideal diet" for each individual. People differ--and their food needs differ depending on age, sex, body size, physical activity, and other conditions such as pregnancy and illness. In those chronic conditions where diet may be important--heart attacks, high blood pressure, strokes, dental caries, diabetes, osteoporosis, and some forms of cancer--the roles of specific dietary substances have not been fully defined.

Research seeks more information about the amounts of essential nutrients people need. Also important is research to show better the diet's role in certain chronic diseases. Extensive attention has been devoted recently, for example, to the possible effects of certain dietary substances on osteoporosis, cancer, and heart disease.

But what about advice for today? The guidelines below tell how to choose and prepare foods for you and your family. This advice is the best we can give based on the nutrition information we have now.

The first two guidelines form the framework for a good diet: "Eat a variety of foods" that provide enough of essential nutrients and amounts of energy (calories) to "maintain reasonable weight." The next five guidelines recognize special characteristics of good diets. They suggest that you get adequate starch and fiber and avoid too much fat, sugar, sodium, and alcohol.

The Recommended Dietary Allowances (RDA) are quantity goals for energy, protein, and some minerals and vitamins. Specific quantity goals for other dietary substances, such as fats and dietary fiber, must await further research. However, for the U.S. population as a whole, increases in our current intakes of starch and fiber and reduction of total calories primarily from dietary fats, sugars, and alcohol is sensible. These suggestions are especially appropriate for people who have other risk factors for chronic diseases, such as family history of obesity, premature heart disease, diabetes, high blood pressure, high blood cholesterol levels, or for those who smoke.

The guidelines are suggested for most Americans--those who are already healthy. They do not apply to people who need special diets because of diseases or conditions that interfere with normal nutrition. These people may require special instruction from trained dietitians, in consultation with their own physicians.

No guidelines can guarantee health and well-being. Health depends on many things, including heredity, lifestyle, personality traits, mental health and attitudes, and environment, in addition to diet.

Food alone cannot make you healthy. But good eating habits based on moderation and variety can help keep you healthy and even improve your health.

Dietary Guidelines for Americans

- Eat a variety of foods
- Maintain reasonable weight
- Avoid too much fat, saturated fat, and cholesterol
- Eat foods with adequate starch and fiber
- Avoid too much sugar
- Avoid too much sodium
- If you drink alcoholic beverages, do so in moderation--and don't drive

You need over 40 different nutrients to be and stay healthy. These include vitamins and minerals, amino acids (from proteins), essential fatty acids (from certain vegetable oils), and sources of energy (calories from carbohydrates, fats, and proteins). These nutrients are present in adequate quantities in the foods contained in a well-balanced diet.

Most foods contain more than one nutrient. For example, milk provides proteins, fats, sugar, riboflavin and other B vitamins, vitamin A, calcium, phosphorus, and other nutrients; meat provides protein, B-complex vitamins--particularly B_6 and B_{12}--and iron and zinc in important amounts.

No single food supplies all of the essential nutrients in the amounts that you need. Milk for instance, contains very little iron and meat provides little calcium. You should, therefore, eat a variety of foods to secure an adequate diet. With a variety of foods, you are more likely to get all the nutrients you need.

One way to assure variety, and with it a well-balanced diet, is to select foods each day from each of the major food groups. These groups include: fruits and vegetables; cereals and other foods made from grains, such as breads; meats, fish, poultry, eggs, peas, and beans; and milk and dairy products such as cheese and yogurt. It is important not only to select foods from each of the major food groups but also to select a variety of foods daily from each of these food groups.

Fruits and vegetables are good sources of vitamin A, vitamin C, and folic acid, of fiber, and of many minerals. Whole-grain and enriched breads, cereals and other grain products provide B vitamins, iron, protein, and energy. Meats, poultry, fish, and eggs supply protein, fat, iron, and other minerals as well as several vitamins, including thiamin and vitamin B_{12}. Dairy products are major sources of calcium and many other nutrients. Recent research has given emphasis to the importance of calcium in preventing osteoporosis.

TO ASSURE YOURSELF AN ADEQUATE DIET

Eat a variety of foods daily in adequate amounts including selections of:

- Fruits
- Vegetables
- Whole-grain and enriched breads, cereals, and other products made from grains
- Milk, cheese, yogurt, and other products made from milk
- Meats, poultry, fish, eggs
- Legumes (dry peas and beans)

The number and size of portions should be adjusted to reach and maintain a reasonable body weight.

There are no known advantages to consuming excessive amounts of any nutrient. You will rarely need to take vitamin or mineral supplements if you eat a variety of foods. There are a few important exceptions to this general statement:

- Women in their childbearing years may need to take iron supplements to replace the iron they lose with menstrual bleeding. Women who are no longer menstruating should not take iron supplements routinely.

- Women who are pregnant or who are breast-feeding need more of many nutrients, especially iron, folic acid, vitamin A, calcium, and sources of energy. Detailed advice should come from their physicians and dietitians.

- Infants also have special nutritional needs. Infants should be breast-fed unless there are special problems. The nutrients in human breast milk tend to be more available than those in cow's milk. In addition, breast milk serves to transfer immunity to some diseases from the mother to the infant.

  Normally, most babies are not given solid foods until they are 3 to 6 months old. At that time, other foods can be introduced gradually. Prolonged breast- or bottle-feeding--without solid foods or supplemental iron--can result in iron deficiency.

  You should not add salt or sugar to the baby's foods. Infants do not need these inducements if they are really hungry. The foods are nourishing and extra flavoring with salt and sugar is not necessary.

TO ASSURE YOUR BABY AN ADEQUATE DIET

- Breast-feed unless there are special problems
- Delay other foods until baby is 3 to 6 months old
- Do not add salt or sugar to baby's food

- Elderly people may eat relatively little food. Thus, they should pay special attention to minimizing foods high in calories and low in essential nutrients--for example, fats, oils, sugars, and alcohol. The latter is not usually regarded as a food, but is high in calories. Although elderly people do not generally need vitamin supplements, occasionally their dependence on drugs for the treatment of various diseases may require a physician's guidance on vitamin supplementation because of drug-nutrient interactions.

Megadoses of any nutrient should be avoided.

If you are too fat, your chances of developing some chronic disorders are increased. Obesity is associated with high blood pressure, increased levels of blood fats (triglycerides) and cholesterol, heart attacks, and strokes, the most common type of diabetes, and many other types of ill health. Thus, you should try to maintain a "reasonable" weight.

But how do you determine what a reasonable weight is for you?

There is no absolute answer. The following table shows reasonable ranges for most adults. If you have been obese since childhood or adolescence, you may find it difficult to reach or maintain your weight within a reasonable range. For most people, their weight should not be more than it was when they were young adults (approximately 25 years old).

It is not well understood why some people can eat much more than others and still maintain normal weight. However, one thing is definite: to lose weight, you must take in fewer calories than you burn. This means that you must either select foods containing fewer calories or you must increase your activity, or both.

Reasonable Body Weight Ranges

Height without shoes	Weight without clothes	
	Men (pounds)	Women (pounds)
4'10"		92-121
4'11"		95-124
5'0"		98-127
5'1"	105-134	101-130
5'2"	108-137	104-134
5'3"	111-141	107-138
5'4"	114-145	110-142
5'5"	117-149	114-146
5'6"	121-154	118-150
5'7"	125-159	122-154
5'8"	129-163	126-159
5'9"	133-167	130-164
5'10"	137-172	134-169
5'11"	141-177	
6'0"	145-182	
6'1"	149-187	
6'2"	153-192	
6'3"	157-197	

Note: For women 18-25 years, subtract one pound for each year under 25.

SOURCE: Adapted from the 1959 Metropolitan Desirable Weight Table.

TO IMPROVE EATING HABITS

- Eat slowly
- Take smaller portions
- Avoid "seconds"

For the majority of people who decide to lose weight, a steady loss of 1 to 2 pounds a week--until you reach your goal--is safe. Success depends on acquiring new and better habits of eating and exercise. That is why so-called "crash" and "fad" diets usually fail in the long run.

Do not try to lose weight too rapidly. Avoid crash diets that are severely restricted in the variety of foods they allow. Diets containing fewer than 800 calories may be hazardous and should be followed only under appropriate medical supervision. Some people have developed kidney stones, disturbing psychological changes, and other complications while following such diets. A few people have died suddenly and without warning. Also do not attempt to lose weight by vomiting or by using laxatives. Frequent vomiting and purging can cause chemical imbalance which can lead to irregular heart beats and even death. Frequent vomiting can also erode tooth enamel. Avoid other extreme means of losing weight.

TO LOSE WEIGHT

- Eat a variety of foods that are low in calories and high in nutrients

  -eat less fat and fatty foods
  -eat less sugar and sweets
  -drink less alcohol
  -eat more fruits, vegetables, and whole grains

- Increase physical activity

A gradual increase of everyday physical activity like brisk walking can also be very helpful in maintenance of weight loss. The chart below gives the approximate calories used per hour in different activities.

Approximate Energy Expenditure by a Healthy Adult Weighing About 150 Pounds

Activity	Calories per hour
Lying quietly	80-100
Sitting quietly	85-105
Standing quietly	100-120
Walking slowly, 2½ mph	210-230
Walking quickly, 4 mph	315-345
Light work, such as ballroom dancing; cleaning house; office work; shopping	125-310
Moderate work, such as cycling 9 mph; jogging, 6 mph; tennis; scrubbing floors; weeding garden	315-480
Hard work, such as aerobic dancing; basketball; chopping wood; cross-country skiing; running, 7 mph; shoveling snow; spading garden; swimming, "crawl"	480-625

Source: Based on material compiled by Robert E. Johnson, M.D., Ph.D., Professor Emeritus, University of Illinois.

A pound of body fat contains approximately 3500 calories. To lose 1 pound of fat, you must burn 3500 calories more than you consume. If you burn 500 calories more a day than you consume, you will lose 1 pound of fat a week. Thus, if you normally burn 1700 calories a day, you can theoretically expect to lose a pound of fat each week if you adhere to a 1200 calorie-per-day diet. When you begin a weight reduction diet, you may at first experience somewhat faster weight loss due to loss of water and protein.

Do not attempt to reduce your weight below the reasonable range. Severe weight loss may be associated with nutrient deficiencies, menstrual irregularities, infertility, hair loss, skin changes, cold intolerance, severe constipation, psychiatric disturbances, and other complications.

If you lose weight suddenly or for unknown reasons, see a physician. Unexplained weight loss may be an early clue to an unsuspected underlying disorder.

AVOID TOO MUCH FAT, SATURATED FAT, AND CHOLESTEROL

If you have a high blood cholesterol level, you have a greater chance of having a heart attack. Other factors can also increase your risk of heart attack--high blood pressure and cigarette smoking, for example--but high blood cholesterol is clearly a major risk factor.

Populations like ours with diets relatively high in total calories, saturated fats, and cholesterol tend to have high blood cholesterol levels. Individuals within these populations have a greater risk of having heart attacks than individuals within populations eating diets that contain less fat.

Eating extra saturated fat, excess calories, and high levels of cholesterol will increase blood cholesterol in many people. Of these, saturated fat has the greatest influence. There are, however, wide variations among individuals--related to heredity and to the way each person's body uses cholesterol.

Some people can consume diets high in saturated fats and cholesterol and still maintain desirable blood cholesterol levels. Other people, unfortunately, have high blood cholesterol levels even if they eat low-fat, low-cholesterol diets.

There is controversy about what recommendations are appropriate for healthy Americans. But for the U.S. population as a whole, it is sensible to reduce daily consumption of fat. This suggestion is especially appropriate for individuals who have other cardiovascular risk factors, such as family history of premature heart disease, high blood pressure, and diabetes, or who smoke.

The recommendations are not meant to prohibit you from using any specific food item or to prevent you from eating a variety of foods. Many foods which contain fat and cholesterol also provide high quality protein and many essential vitamins and minerals. These foods can be eaten in moderation so long as the overall fat and cholesterol intake is not excessive.

TO AVOID TOO MUCH FAT, SATURATED FAT, AND CHOLESTEROL

- Choose lean meat, fish, poultry, dry beans and peas as protein sources
- Use low-fat milk and milk products as calcium sources
- Moderate the use of egg yolks and organ meats
- Limit intake of butter, cream, heavily hydrogenated fats, shortenings, and foods containing palm and coconut oils
- Trim excess fat off meats
- Broil, bake, or boil rather than fry
- Read labels carefully to determine both amount and type of fat present in foods

EAT FOODS WITH ADEQUATE STARCH AND FIBER

The major sources of energy (calories) in the American diet are carbohydrates and fats. Protein is also a source of energy, but supplies fewer calories than either carbohydrate or fat, alcoholic beverages are another source of calories. If fat intake is limited, then any caloric deficit can be made up by carbohydrates. Carbohydrates contain less than half the number of calories per ounce than fats do.

Simple carbohydrates, such as sugars, provide calories but few other nutrients. Complex carbohydrates such as starch are found in foods like breads and cereal products, beans, peas, nuts, seeds, fruits, and vegetables. In addition to carbohydrates, these foods contain many other essential nutrients. The caloric content of simple and complex carbohydrates is the same.

Increasing your consumption of foods containing complex carbohydrates can also help to increase your level of dietary fiber. The American diet is relatively low in fiber.

Fiber is a generic term used to describe parts of plant foods which are generally indigestible by humans. There are several major classes of fiber, each of which has a unique chemical structure and different biological effects. For example, wheat bran (which contains several types of fiber) has laxative properties but no influence on blood cholesterol levels. Whether dietary fiber, once extracted from a food stuff, functions as it does in the intact food is a subject of current research. Excessive intake of fiber may lead to trace mineral deficiency.

Eating foods high in fiber has been found to reduce symptoms of chronic constipation, diverticular disease, and some types of "irritable bowel." It has been suggested that habitual intake of diets low in fiber may increase the risk of developing colon cancer, but there are no firm data on this point.

A diet containing whole-grain breads and cereals, fruits, and vegetables should provide an adequate intake of dietary fiber. There is no reason to add fiber to foods that do not already contain it.

TO EAT MORE COMPLEX CARBOHYDRATES DAILY

- Substitute starches for fats and sugars
- Select foods which are good sources of fiber and starch, such as whole-grain breads and cereals, fruits and vegetables, beans, peas, and nuts.

A major health hazard from eating too much sugar is tooth decay (dental caries). The risk of caries is not simply a matter of how much sugar and sugar-containing foods you eat but how often you eat them. The more frequently you eat sugar and sugar containing foods the greater the risk for tooth decay, especially if they are eaten between meals, and if they adhere to your teeth.

Americans consume sugar in various forms in their diets. Common table sugar (sucrose) is only one form of sugar. Other sugars--such as glucose, dextrose, fructose, maltose, and lactose--occur naturally in foods and are added as ingredients in foods, e.g. corn sweeteners. Both starches and sugars appear to increase the risk of dental caries when consumed between meals, but simple sugars appear to offer a higher risk. Thus, frequent in-between meal snacks of foods such as cakes and pastries, candy, dried fruits, and soft drinks may be more harmful to teeth than the sugars eaten in regular meals.

It is obviously impossible and imprudent to avoid all sugar because most of the foods we eat contain some sugar in one form or another. It is important to minimize the consumption of excess sugars and sweet foods between meals. And if you do eat them, brush your teeth, if possible.

Clearly, there is more to maintaining healthy teeth than avoiding sugars. Careful dental hygiene and exposure to adequate amounts of fluoride through fluoridated water are especially important. Fluoridated toothpastes or mouth rinses are also helpful.

Contrary to widespread belief, too much sugar in your diet does not cause diabetes. The most common type of diabetes occurs in obese adults, and avoiding sugar without correcting the overweight problem--which requires reduction in total caloric intake (carbohydrate, alcohol, fat, and protein)--will not solve the problem. However, refined sugars provide calories but few other nutrients, and, thus, diets containing excessive amounts of sugars should be avoided by those on weight-reducing diets and by the elderly.

TO AVOID EXCESS SUGARS

- Use less of all sugars and foods containing large amounts of sugars, including white sugar, brown sugar, raw sugar, honey, and syrups
- Remember, how often you eat sugar and sugar-containing food is as important to the health of your teeth as how much sugar you eat. Therefore, restrict consumption of sweets and starches to mealtime and avoid in-between meal snacks of foods containing sugars and starches
- Read food labels for clues on sugar content. If the names sucrose, glucose, maltose, dextrose, lactose, fructose, or syrups appear first, then there is a large amount of sugar. Select foods canned without syrup, or with light, rather than heavy syrup
- If your infant sleeps with a bottle, be sure it contains only drinking water

AVOID TOO MUCH SODIUM

Table salt contains sodium and chloride--both are essential in the diet. In addition, salt is often required for the preservation of certain foods.

Sodium is present in many beverages and foods that we eat, especially in certain processed foods, condiments, sauces, pickled foods, salty snacks, and sandwich meats. Baking soda, baking powder, monosodium glutamate (MSG), and even many medications (many antacids, for instance) contain sodium.

The major hazard of excess sodium is for persons who have high blood pressure. Not everyone is equally susceptible. In the United States, approximately one in four adults has mild to severe high blood pressure. Sodium intake is but one of the factors known to affect high blood pressure. Several other nutrients may also be involved. Obesity, in particular, seems to play a major role.

In populations with low sodium intakes, high blood pressure is rare. In constrast, in populations with high sodium intakes, high blood pressure is common. If people with high blood pressure severely restrict their sodium intakes, their blood pressure will usually fall, although not always to normal levels.

At present, there is no good way to predict who will develop high blood pressure, although certain groups such as blacks have a higher incidence. Low sodium diets might help some of these people avoid high blood pressure if they could be identified before they develop the condition.

Since most Americans eat more sodium than is needed, consider reducing your sodium intake. Use less table salt, read labels carefully, and eat sparingly those foods to which large amounts of sodium have been added. Remember that up to half of sodium intake may be "hidden" either as part of naturally occurring foods or as part of a preservative or flavoring agent that has been added.

TO AVOID TOO MUCH SODIUM

- Learn to enjoy the unsalted flavors of foods
- Cook with only small amounts of added salt
- Add little or no salt to food at the table
- Limit your intake of salty foods such as potato chips, pretzels, salted nuts and popcorn, condiments (soy sauce, steak sauce, garlic salt), cheese, pickled foods, and cured meats
- Read food labels carefully to determine the amounts of sodium in processed foods and snack items
- Look for new, lower sodium products in the markets to replace those of higher sodium content

IF YOU DRINK ALCOHOLIC BEVERAGES, DO SO IN MODERATION--AND DON'T DRIVE

Alcoholic beverages are high in calories and low in nutrients. Thus, even moderate drinkers will need to drink less if they are overweight and wish to reduce.

Heavy drinkers frequently develop a variety of nutritional deficiencies as well as more serious diseases, such as cirrhosis of the liver and certain types of cancer, particularly if they also smoke cigarettes. This is in part because of loss of appetite, poor food intake, and impaired absorption.

Excessive consumption of alcoholic beverages by pregnant women may cause birth defects or other problems during pregnancy. It has not been established whether there are risks to the fetus from minimum consumption of alcohol. Until this is known, pregnant women should abstain or limit alcohol intake to an occasional standard-size drink of beer, wine or liquor (not more than one drink per day).

One or two standard-size drinks daily appear to cause no harm in normal healthy adults. If you drink, be moderate in your intake and DO NOT DRIVE!

REFERENCES

Introduction

National Academy of Sciences, National Research Council, Food and Nutrition Board, Committee on Dietary Allowances. 1980. Recommended Dietary Allowances, 9th ed. Washington, DC: National Academy Press.

National Academy of Sciences, National Research Council, Food and Nutrition Board. 1980. Toward Healthful Diets. Washington, DC: National Academy Press.

National Academy of Sciences, National Research Council, Committee on Diet, Nutrition and Cancer. 1982. Diet, Nutrition and Cancer. Washington, DC: National Academy Press.

Wolf, I. D., and B. B. Peterkin. 1984. Dietary Guidelines: The USDA Perspective. Food Technol. 38(7):80.

Guideline 1

American National Red Cross and U.S. Department of Agriculture. 1984. Better Eating for Better Health. Washington, DC: Amer. Natl. Red Cross.

Davis, C. A., L. H. Fulton, L. Light, D. D. Odland, L. Page, N. R. Raper, and R. S. Vettel. 1979. Food. Washington, DC: U.S. Dept. of Agriculture Home and Garden Bull. No. 228.

King, J. C., S. H. Cohenour, C. G. Corrcuccini, and P. Schneeman. 1978. Evaluation and Modification of the Basic Four Food Guide. J. Nutr. Educ. 10:27.

Light, L., and F. J. Cronin. 1981. Food Guidance Revisited. J. Nutr. Educ. 13:57.

National Institutes of Health. 1984. Osteoporosis--Consensus Conference. J. Amer. Med. Assoc. 252:799.

U.S. Department of Agriculture, Human Nutrition Information Service. 1981. Ideas for Better Eating: Menus and Recipes to Make Use of the Dietary Guidelines. Washington, DC: U.S. Dept. of Agriculture.

Guideline 2

Bray, G. A. 1984. An Evaluation of Treatments for Obesity. In Obesity: Pathogenesis and Treatment, G. Enzi, G. Crepaldi, G. Pozza, and A. E. Renold, eds., pp. 237-253. New York: Academic Press.

Rhoads, G. G., and A. Kagan. 1983. The Relation of Coronary Disease, Stroke, and Mortality to Weight in Youth and in Middle Age. Lancet i:492.

Royal College of Physicians. 1983. The Health Consequences of Overweight and Obesity. J. Royal Coll. Physicians of London 17:4.

Seltzer, F. 1984. Personal Communication on Fogarty Height/Weight Table.

Simopoulos, A. P. 1985. Dietary Control of Hypertension and Obesity and Body Weight Standards. J. Amer. Dietet. Assoc. 85:419.

Stern, J. S. 1984. Is Obesity a Disease of Inactivity? In Eating and Its Disorders, A. J. Stunkard and E. Stellar, eds., pp. 131-139. New York: Raven Press.

Stunkard, A. J. 1984. The Current Status of Treatment for Obesity in Adults. In Eating and Its Disorders, A. J. Stunkard and E. Stellar, eds., pp. 157-173. New York: Raven Press.

Weighley, E. S. 1984. Average? Ideal? Desirable? A Brief Overview of Height-Weight Tables in the United States. J. Amer. Dietet. Assoc. 84:417.

Guideline 3

Ahrens, E. H. 1957. Nutritional Factors and Serum Lipid Levels. Amer. J. Med. 23:928.

Ahrens, E. H. 1979. Introduction. Amer. J. Clin. Nutr. 32(Suppl.):2627.

American Heart Association. 1984. Recommendations for Treatment of Hyperlipidemia in Adults. AHA Special Report. Circulation 69:1065A.

Gertler, M. M., S. M. Garn, and P. D. White. 1950. Diet, Serum Cholesterol and Coronary Artery Disease. Circulation 2:696.

Glueck, C. J. 1979. Appraisal of Dietary Fat as a Causative Factor in Atherogenesis. Amer. J. Clin. Nutr. 32(Suppl.):2637.

Glueck, C. J. 1979. Dietary Fat and Atherosclerosis. Amer. J. Clin. Nutr. 32(Suppl.):2703.

Gordon, D. J., K. M. Salz, K. J. Roggenkamp, and F. A. Franklin. 1982. Dietary Determinants of Plasma Cholesterol Changes in the Recruitment Phase of the Lipid Research Clinics Coronary Primary Prevention Trial. Arteriosclerosis 2:537.

Gordon, T., A. Kagan, M. Garcia-Palmieri, W. B. Kannel, W. J. Eukel, J. Tillotson, P. Sorlie, and M. Hjortland. 1981. Diet and Its Relation to Coronary Heart Disease and Death in Three Populations. Circulation 63:500.

Gordon, T., M. Fisher, N. Ernst, and B. M. Rifkind. 1982. Relation of Diet to LDL Cholesterol, VLDL Cholesterol, and Plasma Total Cholesterol and Triglycerides in White Adults. Arteriosclerosis 2:502.

Grande, F., J. T. Anderson, C. Chlouverakes, M. Proja, and A. Keys. 1965. The Effect of Dietary Cholesterol on Man's Serum Lipids. Amer. J. Clin. Nutr. 17:281.

Hegsted, D. M., R. B. McGandy, M. L. Myers, and F. J. Stare. 1965. Quantitative Effects of Dietary Fat on Serum Cholesterol in Man. Amer. J. Clin. Nutr. 17:281.

Hjermann, I., I. Holme, K. Velve Byre, and P. Leren. 1981. Effect of Diet and Smoking Intervention on the Incidence of Coronary Heart Disease. Lancet ii:1303.

Hopkins, P. N., and R. R. Williams. 1981. A Survey of 246 Suggested Coronary Risk Factors. Atherosclerosis 40:1.

Kagan, A., W. B. Kannel, T. R. Dawber, and N. Revotskie. 1962. The Coronary Profile. Ann. N. Y. Acad. Sci. 97:883.

Kannel, W. B., J. T. Doyle, A. M. Ostfeld, D. Jenkins, L. Kuller, R. N. Podell, and J. Stamler. 1984. Optimal Resources for Primary Prevention of Atherosclerotic Disease. AHA Special Report. Circulation 70(Suppl.):157.

Keys, A., J. T. Anderson, and F. Grande. 1965. Serum Cholesterol Response to Changes in the Diet. Metabolism 14:747, 759, 776.

Kritchevsky, D. 1978. Dietary Interactions. In Nutrition, Lipids, and Coronary Heart Disease, R. I. Levy, B. M. Rifkind, B. H. Dennis, and N. D. Ernst, eds., pp. 229-246. New York: Raven Press.

Levy, R. I., et al. 1984. The Influence of Changes in Lipid Values Induced by Cholestyramine and Diet on Progression of Coronary Artery Disease: Results of the NHLBI Type II Coronary Intervention Study. Circulation 69:325.

Lipid Research Clinics Program. 1984. The Lipid Research Clinics Coronary Primary Prevention Trial Results. I. Reduction in Incidence of Coronary Heart Disease. J. Amer. Med. Assoc. 251:351.

Lipid Research Clinics Program. 1984. The Lipid Research Clinics Coronary Primary Prevention Trial Results. II. The Relationship of Reduction in Incidence of Coronary Heart Disease to Cholesterol Lowering. J. Amer. Med. Assoc. 251:365.

Mahley, R. W., T. L. Innerarity, T. P. Bersot, A. Lipson, and S. Margolis. 1978. Alterations in Human High-Density Lipoproteins, with or without Increased Plasma-Cholesterol, Induced by Diets High in Cholesterol. Lancet ii:807.

McGill, H. C. 1979. Appraisal of Cholesterol as a Causative Factor in Atherogenesis. Amer. J. Clin. Nutr. 32(Suppl.):2632.

McGill, H. C. 1979. The Relationship of Dietary Cholesterol to Serum Cholesterol Concentration and to Atherosclerosis in Man. Amer. J. Clin. Nutr. 32(Suppl.):2664.

National Advisory Committee on Nutrition Education. 1983. Proposals for Nutritional Guidelines for Health Education in Britain. Lancet ii:719, 782, 835, 902.

National Institutes of Health. 1984. Consensus Development Conference Statement on Lowering Blood Cholesterol to Prevent Heart Disease. Sponsored by the National Heart, Lung and Blood Institute and National Institutes of Health Office of Medical Applications of Research, Bethesda, MD.

Schonfeld, G., W. Patsch, L. L. Rudel, C. Nelson, M. Epstein, and R. E. Olson. 1982. Effects of Dietary Cholesterol and Fatty Acids on Plasma Lipoproteins. J. Clin. Invest. 69:1072.

Shekelle, R. B., A. M. Shryock, O. Paul, M. Lepper, J. Stamler, S. Liu, and W. J. Raynor. 1981. Diet, Serum Cholesterol, and Death from Coronary Heart Disease. New Eng. J. Med. 304:65.

Walker, W. J., E. Y. Lawry, D. E. Love, G. V. Mann, S. A. Levine, and F. J. Stare. 1953. Effect of Weight Reduction and Caloric Balance on Serum Lipoprotein and Cholesterol Levels. Amer. J. Clin. Nutr. 5:654.

Guideline 4

Anderson, J. W. 1982. Diabetes. New York: Arco Publishing, Inc., p. 157.

Bingham, S., D. R. R. Williams, T. J. Cole, and W. P. T. James. 1979. Dietary Fiber and Regional Large-Bowel Cancer Mortality in Britain. Brit. J. Cancer 40:456.

Eastwood, M. A., A. N. Smith, W. G. Brydon, and J. Pritchard. 1978. Comparison of Bran, Ispaghula, and Lactulose on Colon Function in Diverticular Disease. Gut 19:1144.

Kritchevsky, D. 1983. Fiber, Steroids and Cancer. Cancer Res. 43:2491S.

Smith, R. G., M. J. Rowe, A. N. Smith, M. A. Eastwood, E. Drummond, and W. G. Brydon. 1980. A Study of Bulking Agents in Elderly Patients. Age and Aging 9:267.

Vahouny, G. V., and D. Kritchevsky, eds. 1982. Dietary Fiber in Health and Disease. New York: Plenum Press, p. 330.

Guideline 5

American Dental Association. 1983. Statement on Diet and Dental Caries. J. Amer. Dent. Assoc. 107:78.

Anderson, R. J., et al. 1982. The Reduction of Dental Caries Prevalence in English Schoolchildren. J. Dent. Res. 61:1311.

Burt, B. A., and S. A. Ekland. 1980. Sugar Consumption and Dental Caries: Some Epidemiological Patterns in the U.S. Fourth Annual Conference on Foods, Nutrition, and Dental Health, American Dental Association.

Department of Health and Social Security. 1978. Prevention and Health--Eating for Health. London: HMSO.

Gustafsson, B. E., et al. 1954. The Viperholm Dental Caries Study: The Effect of Different Levels of Carbohydrate Intake on Caries Activity in 436 Individuals Observed for Five Years. ACTA Odont. Scand. 11:232.

Landis, J. R., F. A. Larkin, K. E. Guire, and F. E. Thompson. 1980. A Study of Dietary Intake, Food Patterns, and Dental Health: Analysis of Data from the HANES I Survey. Univ. of Mich., School of Public Health.

National Advisory Committee on Nutrition Education. 1983. Proposals for Nutritional Guidelines for Health Education in Britain. Lancet ii:782.

National Institute of Dental Research. 1983. National Caries Program Annual Report, Fiscal Year 1983. Report of the Associate Director.

Newbrun, E. 1982. Sugar and Dental Caries: A Review of Human Studies. Science 217:418.

Sheiham, A. 1983. Sugars and Dental Decay. Lancet i:282.

Guideline 6

Ackley, S., E. Barrett-Connor, and L. Suarez. 1983. Dairy Products, Calcium, and Blood Pressure. Amer. J. Clin. Nutr. 38:457.

Desrosier, N. W. 1963. The Technology of Food Preservation, 3rd edition. Westport, CT: Avi Publishing Co., Inc., p. 258.

Fed. Reg. 49:5510, 1984. Final Rule. Food Labeling: Declaration of Sodium Content of Foods and Label Claims for Foods on the Basis of Sodium Content.

Kaplan, N. M. 1983. Hypertension: Prevalence, Risks and Effect of Therapy. Ann. Intern. Med. 98:705.

Luh, B. S., and J. G. Woodruff. 1975. Commercial Vegetable Processing. Westport, CT: Avi Publishing Co., Inc., p. 457.

McCarron, D. A., J. Stanton, H. Henry, and C. Morris. 1983. Assessment of Nutritional Correlates of Blood Pressure. Ann. Intern. Med. 98:715.

National Institutes of Health, National Heart, Lung and Blood Institute. 1978. New Hypertension Prevalence Data and Recommended Public Statements. Bethesda, MD: Natl. Inst. Health, Natl. Heart, Lung and Blood Inst., Natl. High Blood Pressure Educ. Prog.

Schucker, R. D. 1984. Personal communication on new product introductions.

Tannen, R. L. 1983. Effects of Potassium on Blood Pressure Control. Ann. Intern. Med. 98:773.

U.S. Department of Agriculture, Human Nutrition Information Service. 1980. The Sodium Content of Your Food. U.S. Dept. of Agriculture, Home and Garden Bull. No. 233.

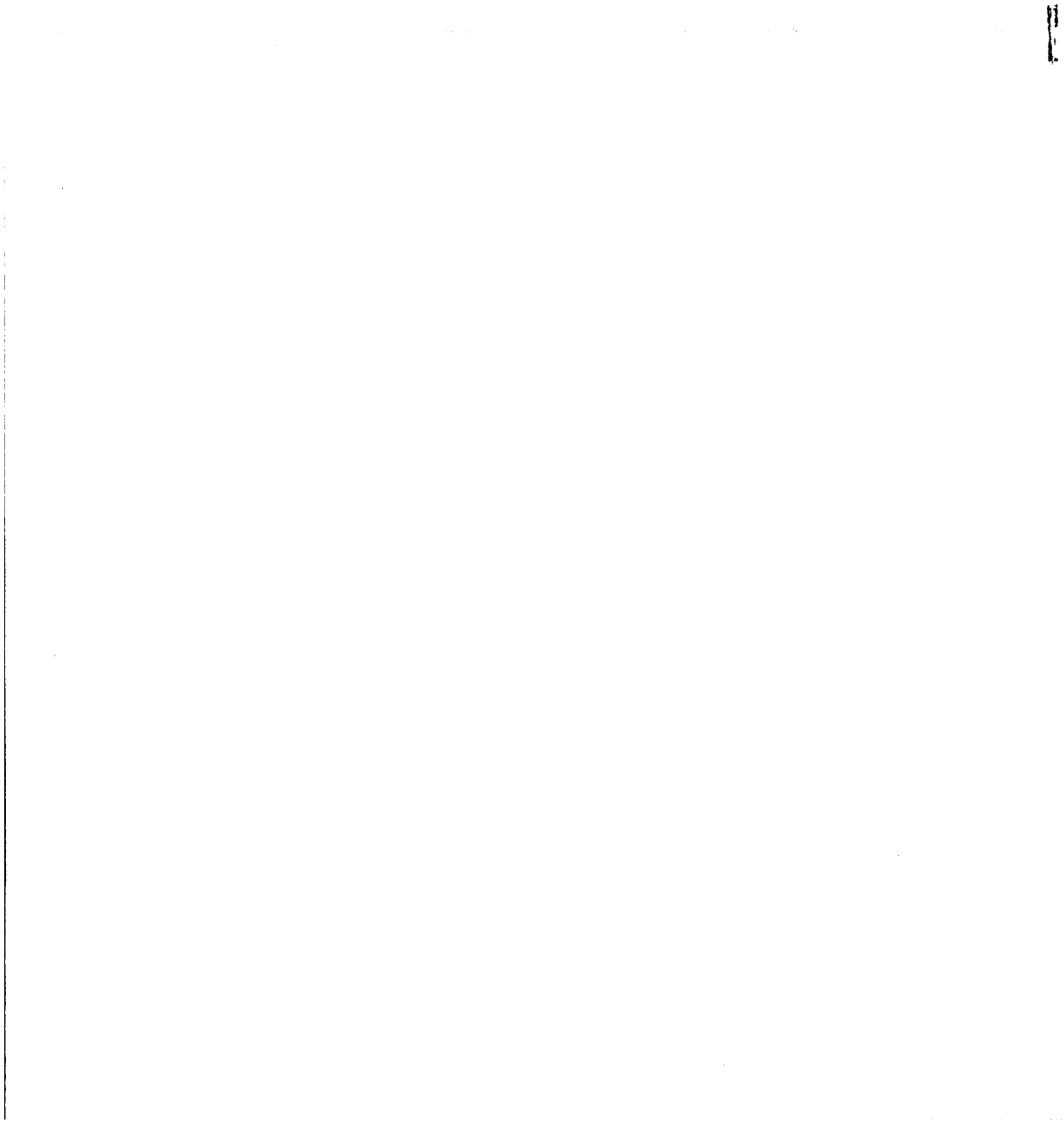
Guideline 7

American Medical Association. 1983. Fetal Effects of Maternal Alcohol Use. J. Amer. Med. Assoc. 249:2517.

Harlap, S., and P. H. Shiono. 1980. Alcohol, Smoking, and Incidence of Spontaneous Abortions in the First and Second Trimester. Lancet, ii:173.

Landesman-Dwyer, S., A. S. Ragozin, and R. E. Little. 1981. Behavioral Correlates of Prenatal Alcohol Exposure: A Four-Year Follow-Up Study. Neurobehavioral Toxicology and Teratology 3:187.

Mills, J. L., B. I. Graubard, E. E. Harley, G. G. Rhoads, and H. W. Berendes. 1984. Maternal Alcohol Consumption and Birth Weight. J. Amer. Med. Assoc. 252:1875.

Rosett, H. L. 1983. Patterns of Alcohol Consumption and Fetal Development. Obstetrics and Gynecology 61:539.

☆ U.S. Government Printing Office : 1985 - 460-937/20132