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AWARENESS, SUPPORT AND IMPLEMENTATION OF DIETARY STANDARDS BY DIETITIANS IN OHIO

The Ohio State University PH.D. 1982

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AWARENESS, SUPPORT AND IMPLEMENTATION OF DIETARY STANDARDS BY DIETITIANS IN OHIO

DISSERTATION

Presented in Partial Fulfillment of the Requirements for the Degree Doctor of Philosophy in the Graduate School of The Ohio State University

By

Susan Jane Rudge, B.S., M.S.

* * * * *

The Ohio State University

1982

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CHAPTER 1

INTRODUCTION

In recent years there has been increased concern about the relationship of diet to different chronic diseases. The role of diet and nutrition in the development of chronic diseases is controversial. Many professionals think there is sufficient evidence linking diet to the development of chronic disorders to suggest dietary modifications to the American people. Other professionals strongly oppose making recommendations to the American people at this time and suggest dietary modifications for special high risk groups within the American population. The general public is perplexed and confused by the flood of conflicting statements and advice coming from the professional community.

Three agencies have made specific dietary recommendations to the American people. The first dietary standards established for the American people were made by the Senate Select Committee on Nutrition and Human Needs (1,2). In August, 1979 the Surgeon General in a report entitled "Healthy People" recommended another set of dietary standards (3). The United States Department of Agriculture (USDA) and the United States Department of Health and Human Services (DHHS), in February, 1980 published dietary guidelines for the

American people (4). Dietitians are being challenged to take a more assertive and active role in implementing these dietary standards.

These dietary standards represent an important step in nutrition education for the public because it is so difficult to develop food patterns that would be perfect for everyone. Goodhart (5) stated that diet patterns and food habits vary from nation to nation and individual to individual. There is no single pattern of diet which must be followed to ensure good nutrition nor any single food which can be designated essential for life and health. Because of differences in nutritional needs of individuals throughout the life cycle and variations in nutritive values of food it is impossible to devise a general food that would be just right for everyone. These various conditions influence dietary recommendations developed by different United States agencies.

With the tremendous concern over nutritional status and health of people in the United States the demand has escalated for dietary advice. Since its inception in 1941 the Food and Nutrition Board of the National Research Council of the National Academy of Sciences has "striven to encourage sound nutritional practices by the U.S. population" (6). The Food and Nutrition Board (FNB) established the Recommended Dietary Allowances (RDA) to assure adequate nutrition in U.S. population groups. These RDA were calculated to exceed average nutritional requirements by a "safe margin", taking into account individual differences. The RDA are the levels

of intake of essential nutrients considered, in judgment of the FNB on the basis of available scientific knowledge, "to be adequate to meet known nutritional needs of practically all healthy people" (7). The RDA have been revised at regular intervals with the most recent edition published in 1980. The RDA have been accepted by governmental and non-governmental agencies as a basis for planning and procuring food supplies, interpreting food consumption records, establishing standards for food assistance programs, developing nutrition education programs, developing new products and establishing guidelines for nutrition labeling.

The Basic Four Food Groups developed by USDA have been used in nutrition education to assist people in planning diets that will meet the RDA set by the FNB (7). The RDA are met by selecting servings in given food groups. In the 1979 edition of the food group guide there are five main groups based on similar nutrient composition (8,9). The five groups are 1) milk and dairy products, 2) meat, fish, poultry and dried beans and legumes, 3) fruits and vegetables, 4) breads and cereals, 5) fat, oils, sugar and alcohol, to be used in moderation.

Until recently the RDA and Basic Food Groups were the only widely accepted and publicized dietary standards. During the 1970's there was increasing interest in developing a National Nutrition Policy. Research data have accumulated during the past decade which have focused attention on the interrelationship of environment and health. Public attention

had been on the fact that six of the ten leading causes of death in the U.S. have been statistically associated with diet (1,2). They include heart disease, cancer, cerebrovascular disease, diabetes, arteriosclerosis and cirrhosis of the liver. Since diet is a factor in our health which can be modified the Senate Select Committee on Nutrition and Human Needs issued a report in 1977 with "practical" guides to the individual consumer and set dietary goals for the U.S. population as a whole (1,2). These dietary goals and recommended changes in food selection and preparation were designed to serve as a core of a National Nutrition Policy.

The purpose of this report was to point out that "Eating Patterns of this century represent as critical a public health concern as any now before us" (1). The report stated that the composition of the average American diet had changed this century. The authors reported that complex carbohydrate had decreased while the consumption of fat, cholesterol, sugar, salt and alcohol had been related to six of the ten leading causes of death in the U.S. The dietary goals represented the first comprehensive statement by any branch of the federal government on risk factors in the American diet.

The publication of the dietary goals led to considerable discussion and heated debate within the scientific community. Many organizations and individuals have suggested dietary standards for the American people that differ from the dietary goals. Since 1977, the American Medical

Association, the National Nutrition Consortium and the National Research Council have all proposed dietary standards for the American people. In addition individuals within the scientific community have proposed dietary standards.

In August, 1979 the Surgeon General released a report entitled "Healthy People" (3). The report was a comprehensive review of the health status of the American people. The Surgeon General stated in the introduction that health professionals have an opportunity to facilitate a "health revolution" against chronic diseases afflicting Americans. In addition to general recommendations to improve health of Americans there was a list of specific dietary recommendations.

Against this background of controversy and varying standards for the American people a DHHS-USDA Task Force was organized (10). This Task Force was established to write dietary guidelines on the basis of existing evidence. The Task Force used the comprehensive review of the evidence linking diet and chronic disorders published by the American Society for Clinical Nutrition (11). The result was the publication early in 1980 of the pamphlet entitled "Nutrition and Your Health: Dietary Guidelines for Americans" (4). This pamphlet included seven dietary guidelines.

Of the many dietary standards published in the last four years three have contained specific dietary recommendations for the American people as a whole. The three reports are the Dietary Goals, the Dietary Guidelines and the Surgeon General's report (2,3,4). Dietitians are

professionals responsible for the nutritional care of individuals and groups. They are being challenged to take a more active role in the implementation of these dietary standards. As professionals they must accept the responsibility for the continuing development of their own competence. Since dietary standards have been published recently and since dietitians are responsible for nutritional care it is appropriate to determine whether dietitians are aware of these dietary standards and if they support the dietary standards and if they are implementing these dietary standards in their personal dietary habits and professional work.

Problem Statement

The purpose in this study was to survey dietitians in Ohio to determine their awareness, support and implementation of different dietary standards. The following objectives were established for this study:

1. To determine whether dietitians in Ohio are aware of and/or have read the different dietary standards published since 1977.
2. To determine whether dietitians in Ohio support the dietary standards published in the Revised Dietary Goals, the Dietary Guidelines, and the Surgeon General's Report.
3. To determine if dietitians in Ohio have implemented these specific dietary recommendations in their personal dietary habits and/or professional work.

4. To determine which sources of nutrition information the dietitians in Ohio have access to and read.

Specific Objectives

1. To determine level of awareness as unaware, aware or read carefully for 10 selected dietary standards.
2. To determine if dietitians have a copy of each of the 10 selected dietary standards.
3. To determine the realtionship of level of awareness with level of education and title of dietitians.
4. To determine level of support as agree, disagree or no opinion for specific recommendations in Dietary Guidelines, Surgeon General's Report and Dietary Goals, revised.
5. To determine the relationship of level of support with level of education, title and age of dietitians.
6. To determine level of implementation for the specific recommendations in the Dietary Guidelines, Surgeon General's Report and Dietary Goals, revised in personal dietary habits and professional practices.
7. To determine the utilization of sources of nutrition information as no access, access, read occasionally, read regularly.
8. To determine relationship of title of dietitian to utilization of sources of nutrition information.

Limitations of Study

Since many of the dietary standards were excerpted in many professional publications the dietitians may have read an excerpt

rather than the original publication or may have based their judgment on statements in the questionnaire.

The dietitians made their own evaluation in this questionnaire of what constituted aware, read carefully, implemented, access to, read occasionally or read regularly.

No attempt was made to sample non-respondents to determine if they were different from respondents.

Definition of Terms

For the purpose of this study the following terms are defined:

Dietary Standards - goals, guides or tools for professional people to use in practical situations to achieve and promote better health through better nutrition (13).

Dietary Goals - specific reference to the dietary standards published by the Senate Select Committee on Nutrition and Human Needs (1,2).

Dietary Guidelines - specific reference to the dietary standards published by DHHS-USDA in "Nutrition and Your Health: Dietary Guidelines for Americans" (4).

Food Groups - specific reference to the dietary standards developed by USDA (8,9).

Recommended Dietary Allowances - specific reference to dietary standards published by the Committee on Dietary Allowances of FNB, NRC (7).

Dietary Recommendations - specific guidelines included in each dietary standard.

CHAPTER II

REVIEW OF LITERATURE

Dietitians, health professionals, educators and government leaders are concerned about the role of nutrition in physical and emotional development and overall good health. The public is asking more searching questions about the relationship of diet to health, the quality of the food supply and national policies regarding the use of food and energy resources. At a time when the importance of nutrition is recognized, nutrition misinformation is also on the increase. A demand is growing to close the gap between available nutrition knowledge and its application to the quality of life. Various current dietary standards and events in nutrition and health that lead to the publication of the dietary goals and guidelines are reviewed. Particular attention is placed on the critique of the dietary goals.

Goodhart (5) described some of the concerns in establishing guidelines for an adequate diet. He stated that diet patterns and food habits vary from nation to nation and from individual to individual. There is no single pattern of diet which must be followed to ensure good nutrition nor any single food which can be designated essential for life or health. The human body requires energy, certain fatty acids, amino acids, vitamins and minerals in sufficient

amounts and proper combinations to ensure optimum growth and maintenance of tissue under the environmental conditions to which an individual is exposed. These essential nutrients are widely dispersed in nature and can be obtained from many combinations of foods. Genetic factors and environmental factors as well as diet patterns, age, growth rate, etc. affect requirements for specific nutrients. Because of differences in nutritional needs of individuals and variations in nutritive value of foods, it is impossible to devise a general food plan that would be right for everyone. These various considerations may influence dietary recommendations suggested by various standards of different U.S. agencies.

Recommended Dietary Allowances and Food Guides

The Recommended Dietary Allowances (RDA) have served as the primary nutrient standards in the U.S. and similar standards have been developed by other countries. The RDA are developed and published by the Food and Nutrition Board (FNB) of the National Research Council of the National Academy of Sciences (7). The FNB was established in 1940 to assess the national situation in regard to the extent of malnutrition and make recommendations to improve nutritional status of Americans. The role of the FNB was to "provide good scientific information and evaluation that can serve as a basis for developing policy in areas of food science and nutrition" (14). The FNB should bring to the attention of the federal government and the public those issues that

should be addressed to ensure availability of kinds of food necessary to maintain health and productivity in the U.S.

An allowance is established to represent that level of intake of essential nutrients "considered in the judgment of the FNB on the basis of available scientific knowledge, to be adequate to meet known nutritional needs of practically all healthy persons" (7). The RDA are re-evaluated at regular intervals and incorporate new scientific information. The most recent edition was published in 1980 (7).

The RDA are calculated to exceed average nutrient requirements by a "safe margin" taking into account the difference in requirements among individuals in a basically healthy population. The RDA are established for healthy population and intended to be met by a diet of a wide variety of foods. The RDA have been accepted by both government and non-governmental agencies as basis for planning and procuring food supplies for population groups, interpreting food consumption records, establishing standards for food assistance programs, developing nutrition education programs and establishing guidelines for nutrition labeling of foods.

The United States Department of Agriculture (USDA) developed food guides to be used in nutrition education to assist people in planning adequate diets that would meet the RDA set by the FNB (6). By selecting servings of food in given food groups the RDA are met. In 1943 the "Basic 7

Food Groups" was published and followed in the 1950's by the "Basic 4 Food Groups" (13,15). "Food for Fitness: A Daily Food Guide" was published in 1956 and received wide distribution and use as a nutrition education tool. This food guide remained unchanged until 1980. In 1980 the USDA published "A Hassle Free Guide to a Better Diet" (16). This food guide contains five food groups 1) milk and dairy products, 2) meat, fish, poultry, dry beans and other high protein foods, 3) fruits and vegetables, 4) breads and cereals, and 5) fats, oils, sugar, salt, and alcoholic beverages. The FNB thinks this food guide is a sound guide for the American people (6).

Over the years researchers have expressed concern over appropriate use of the RDA and the limitations of food guides. Hegsted (17) stated that many people assume the RDA and similar standards are requirements. He stated that most dietary recommendations are estimates of "minimal no risk level of intake". Hegsted cited several problems in using the RDA. He concluded that the RDA: 1) are not useful in instructing the homemaker or whoever feeds the family; 2) are amounts of nutrients to be consumed and do not allow for losses between purchase and consumption; 3) are difficult to relate to varying energy needs; 4) are difficult to deal with nutrient-nutrient interrelationships and drug-nutrient interactions. Since RDA are allowances for a healthy population it is difficult to use them to evaluate dietary data.

Early Demands for National Nutrition Policy Including Dietary Standards

While the RDA and food groups have provided dietary standards for use by health professionals, there has been increasing demand for a National Nutrition Policy (NNP) containing guidelines which address the relationship of diet to chronic degenerative diseases such as coronary heart disease, hypertension, diabetes and associated diseases. After the White House Conference on Food, Nutrition and Health there was an increasing number of publications discussing the need for a NNP.

In 1972, Mayer (18) reviewed the present state of nutrition policy in the U.S. and events since the 1969 White House Conference on Food, Nutrition and Health. He reiterated the aim of the White House Conference was to evaluate the state of nutrition of American people and to formulate the basis of a NNP. The recommendations from the conference covered four main areas: food assistance for the poor, nutrition and health programs, regulatory aspects of food production and supply, and nutrition education. He cited three changes that occurred after the conference 1) revision and expansion of the food stamp program, 2) gradual withdrawal of commodity program (replaced by expanded food stamp program), and 3) expansion of the school lunch program. There needed to be more progress in terms of general nutrition programs, improved nutritional status of the elderly, improved food labeling and date coding, and increased support

for FDA regarding food safety. He projected the following range problems 1) establishing new guidelines for food enrichment and fortification, 2) increased efforts to reduce sugar, saturated fat and cholesterol content of foods, 3) increased efforts in nutrition education for the public, and 4) increased federal support for nutrition research, nutrition education and food control.

In 1973 Goldsmith (19) stated that a NNP should encourage and support both basic and applied research, training of professionals, education of the public and provision of service in nutrition for all persons in need. She suggested that short and long range priorities must be developed and called on members of the American Soceity for Clinical Nutrition to become political activists to achieve these goals. Goldsmith also suggested that the National Nutrition Consortium (NNC) formulate strong position statements for presentation to the federal government and various interested groups and agencies.

In 1974 the National Nutrition Consortium (NNC) proposed "Guidelines for a National Nutrition Policy" (20). At that time the NNC represented the American Dietetic Association, the American Institute of Nutrition, the American Society for Clinical Nutrition, and Institute of Food Technologists with a combined membership of 40,000 scientifically trained professionals. The NNC contended that a policy was needed to ensure that food will be available to provide an adequate diet at a reasonable cost to every person

within the U.S. The guidelines were organized into five sections including need for NNP, goals of NNP, measures to attain goals, programs to meet objectives and requirements to establish and implement NNP. These guidelines were submitted to the Senate Select Committee on Nutrition and Human Needs just prior to the NNP hearings in 1974.

Dietary Goals

In 1968 the Senate Select Committee on Nutrition and Human Needs, chaired by George McGovern, was established to hold hearings on the importance of nutrition in health and nutrition problems in this country. These hearings prompted the President to call the White House Conference on Food, Nutrition and Health held in December, 1969. Interest in nutrition and a NNP continued after this conference. Within the next few years attention was focused on the interrelationship of environment and health. Public attention has also focused on the evidence that six of the ten leading causes of death in the U.S. are statistically associated with diet. These six causes are heart disease, cancer, cardiovascular disease, diabetes, arteriosclerosis and cirrhosis of liver (1,2). Since diet was cited as an environmental factor which can be modified, the Senate Select Committee on Nutrition and Human Needs held a hearing and then developed and published dietary goals for the U.S. as a whole. These goals are designed to serve as a core of any future NNP.

The first edition of the dietary goals was published in February, 1977 (1). The report listed six dietary goals and suggested changes in food selection and preparation (Appendix C). McGovern explained, in releasing the goals, that the purpose in the report was to "point out that the eating patterns of this century represent as critical a public health concern as any before us" (1). In the report it was pointed out that the American diet has changed radically during this century. There has been a decrease in complex carbohydrate consumed while fat and sugar consumption have increased. Over consumption of fat in general and saturated fat in particular as well as cholesterol, sugar, salt and alcohol have been related to six of the ten leading causes of death cited above (1,2).

The publication of the dietary goals led organizations and individuals to critique these goals and the guidelines for food selection and preparation. The sharpest criticism appeared after the publication of this first edition of the dietary goals. Hegsted (21), the strongest proponent of the goals, stated that the goals were intended to call attention to issues that the "nutrition and biochemical community have failed to deal with in an adequate fashion". He stressed that there is a great deal of evidence continuing to accumulate indicating the diet we eat as major cause of death and disability. He supported the goals urging the professional community to provide leadership rather than saying that the evidence is not conclusive and

we need further research.

Latham and Stephenson (22), in reviewing the goals, approved the merits of a government body setting goals and the basic principles included in the dietary goals. However, they did not support the specific figures recommended in each goal in the first edition but supported the goals as an important public health measure.

The NNC commended the Senate Select Committee on the preparation of the dietary goals but urged that this first edition be considered a working document (23). NNC suggested that workshops be conducted to evaluate and modify the goals.

The American Dietetic Association (ADA) supported the concept of dietary goals but were concerned about the amounts specified in the goals (24). The ADA recommended that there be reevaluation of specificity of the goals, that there be continued investigation of role of diet in preventing disease, that there be studies on the impact of recommending dietary goals on food service, and that there should be nutrition education for professionals.

The American Medical Association (AMA) stated that it was inappropriate at this time to adopt the proposed dietary goals (25). The Association went on to say that the evidence "for assuming that the benefits to be derived from the adoption of such universal dietary goals as set forth in the report is not conclusive and there is a potential for harmful effects from radical long term dietary changes as would occur through adoption of the proposed national

goals" (25). The National Dairy Council supported the position of the AMA (26).

One of the most outspoken opponents of the dietary goals was Harper (27,28), who stated that the goals were based on inadequate and highly selective evidence. He concluded the goals failed to deal appropriately with major nutrition problems in U.S. and that the goals were designed for treatment of complex and chronic diseases that are not primarily nutritional and whose etiology is not understood. He stated Americans are basically healthy people and the proposals for radical changes in the diet should be rejected. Major oversites in the dietary goals were identified by Harper as not dealing with dental caries, obesity, iron deficiency anemia or alcohol.

After holding hearing regarding the reactions of the professional community to the first edition of the dietary goals the Senate Select Committee on Nutrition and Human Needs published a second edition of the Dietary Goals in December, 1977 (Appendix C) (2). This second edition included seven goals with the addition of a goal to "avoid overweight". There were modifications in the amounts and percentages stated in the other dietary goals. There were seven suggested changes in food selection and preparation with slight modifications in wording from the first edition.

Other Dietary Standards

The publication of the second edition of the dietary goals initiated continued discussion and review of the goals by the professional community and many individuals and groups proposed alternative guidelines. In 1978 the American Society for Clinical Nutrition established a Task Force to study all available scientific evidence on six dietary issues thought to "bear significantly on the prevalence of such conditions as arteriosclerosis, diabetes, hypertension, liver disease, dental caries and obesity" (29). The panel was composed of nine scientists with wide experience in clinical medicine, human nutrition and animal experimentation with contributions by 24 consultants. The result of this review was a series of consensus statements one on each of the six chosen dietary issues.

The Task Force supported the goal of maintaining ideal body weight. Their report reviewed the pathogenesis, prevention, treatment, and health implications of obesity. The difficulty in achieving and maintaining weight reduction is so great that they suggest a more desirable alternative of taking preventive measures during childhood and adolescence. The Task Force also stated that there is no clear evidence that excess calories are in any way hazardous to health insofar as they lead to weight gain and obesity. There is strong evidence favoring a casual relationship between obesity and diabetes (30).

In another consensus statement they reported that the benefits that might accrue from ingestion of high carbohydrate low fat diet have never been directly tested in terms of atherosclerotic disease incidence only in terms of reduction of lipids. The possible benefits appeared to be related to lower intake of saturated fat and cholesterol. No risks have been shown for high carbohydrate intake in terms of new events of coronary heart disease (31).

In regard to total fat content of the diet the Task Force report stated there was no evidence that low fat diet is harmful per se (32). The benefits of low fat, low saturated fat and low cholesterol intakes have never been adequately tested except in terms of reductions of plasma lipid levels. Evidence of studies does support the proposition that new atherosclerotic events are lowered by such a diet but mortality was not affected. The risks of high intakes of polyunsaturated fat diets were also discussed.

There was no evidence that low cholesterol diet was harmful or that dietary cholesterol was an essential nutrient in any human condition (33). The Task Force report stated that direct evidence was lacking that the reduction of dietary cholesterol decreases the incidence of atherosclerotic disease. The authors suggested that a reduction of dietary cholesterol per se beginning in childhood, might be postulated to produce a modest reduction in total atherosclerotic disease and would not cause any other known deleterious effects.

The Task Force report related to sodium stated that the data suggest salt itself was responsible for the prevalence of hypertension in "high sodium" societies (34). The members suggested that a lower level of dietary sodium intake is required to correct established hypertension than to prevent its appearance. The advantages of preventing hypertension by reducing salt intake have not been clarified.

By far the Task Force report was the most exhaustive study of the dietary goals but other organizations and individuals also reviewed the goals. The ADA published a reaction paper to the second edition of the dietary goals (35). Again ADA supported the concept of dietary goals, but stated that changes in eating patterns by most Americans would be needed to follow the goals. Few U.S. diets are as high in carbohydrate or as low in fat and sugar as recommended. The ADA stated the goals were a mixture of qualitative and quantitative recommendations that would be difficult to apply to menu planning. The association supported further investigation of the link between dietary factors and prevention of degenerative diseases.

Another researcher, in a paper reviewing the dietary goals, advocated the development of dietary standards for specific groups of people to prevent certain conditions (36). The dietary goals reflect an attempt to provide guidelines for the prevention of diseases considered to be public health hazards. He stated that any dietary guidelines must have as the first objective a sound scientific basis to meet

essential nutrient needs and second contribute to ensuring public health. He supported the following recommendations: provide food to eliminate starvation, improve nutritional status of hospitalized patients, reduce food intake in general and increase exercise to avoid overweight and obesity, reduce sugar consumption, encourage breast feeding and encourage nutrition education of professionals and the public.

Olson (37) supported "selective dietary goals beyond the RDA". He doubted that any single dietary recommendation would be appropriate for all segments of our population. Olson thought a clinical intervention trial on the effect of diet on morbidity and mortality from coronary heart disease was necessary before adopting a regimen designed to prevent disease. He suggested the following criteria for evaluation of programs: need for clinical studies as well as epidemiological studies, need for further evidence of extent to which dietary intervention can be successful in diseases of multiple etiology in which genetic factor is apparent, need for clinical intervention trials using the recommended dietary regimen in population at risk, and need for strong support from medical and paramedical professions for changes in diet before initiating public health nutrition programs.

In 1978 the Institute of Food Technologists (IFT) sponsored a symposium entitled "Nutrition, Diet and Disease" (38). The purpose of the symposium was to review the case for dietary change and implementation of dietary

improvements. The consensus among members participating in the symposium was that Americans in general, except for low income, have a nutritionally adequate diet. There have been changes in the U.S. diet since the turn of the century. Americans are consuming increased amounts of meat, fish, poultry, fruits, vegetables, dairy products and eggs, while they have decreased consumption of cereal products. Total fat consumption has increased while cholesterol content of the diet is about the same. There has been a decrease in the consumption of carbohydrate and fiber.

Hegsted (39), in participating in this symposium, again supported the dietary goals because of the increased incidence of chronic degenerative diseases. He stated the level specified in the dietary goals was a matter for discussion and refinement but the direction of the change was appropriate by "all available evidence and carries no nutritional risk".

Harper (40), another participant, again took exception with the dietary goals stating that Americans have become preoccupied with chronic and degenerative diseases. He offered the following appropriate dietary guidelines: ensure nutritionally adequate diet, encourage a program of physical activity, avoid excessive intake and stress variety in food selection. After reviewing the evidence Leveille (41) supported similar guidelines for consumers: use of the basic four food groups, regulation of calorie intake and physical activity, reduction of fat intake to achieve caloric balance,

an increase in education efforts and work with the food industry.

The American Medical Association (AMA) in a paper entitled "Concepts of Nutrition and Health" encouraged the use of the RDA as standards and encouraged the consumption of a widely varied diet (42). The AMA supported the use of the basic four food guide developed by USDA as a model of moderation in developing dietary habits. In regard to diet and disease they recommended primary emphasis be given to achieving and maintaining ideal body weight through diet and exercise. With regard to hypertension the recommendation was that individuals with family history of hypertension should avoid excess weight gain and restrict sodium intake. For individuals falling into risk categories for coronary heart disease on the basis of lipid profiles should be given individualized dietary advice and maintain ideal body weight.

In January, 1980 the National Nutrition Consortium (NNC) published again guidelines for a national nutrition policy (43). In this report they supported their 1974 guidelines and went on to endorse the principles of dietary guidelines which emphasize weight control and stress moderation in use of alcohol, fat, sugar, and salt. They expressed concern about the dietary goals and "promising benefits beyond those supported by existing data" (43). The authors did think such guidelines represent a step in the right direction but should not be the sole basis of a NNP.

Surgeon General's Report - Healthy People

In July, 1979 the first Surgeon General's Report on Health Promotion and Disease Prevention, entitled "Healthy People" was published (3). Its purpose was to encourage a "second public health revolution". The report represented an emerging consensus among scientists and the health community that the nation's health strategy must be refocused to emphasize the prevention of disease. The report began by stating that the health of Americans has never been better. The report went on to say that 75% of all deaths in this country were due to degenerative diseases. The thesis of the report was that further improvements in the health of Americans can be achieved.

In the section on "Improved Nutrition" the report stated that the evidence was mounting that certain food factors and current dietary habits may be linked with health problems such as heart disease, obesity, and other associated diseases. The report cited evidence that less than one percent of the American people can be considered undernourished and today's nutrition problems are more apt to be associated with eating too much and with imbalance in the kinds of foods eaten than from eating too little (3). The report stated that individual nutritional requirement variations and variations in nutritional needs during different stages of the life cycle make exact dietary standards impossible to establish. Therefore, the report recommended six general standards for the American diet (Appendix C). McGinnis (44),

Deputy Assistant Secretary for the Department of Health and Human Services, challenged dietitians to take an active role in implementing these standards since diet is one of the most critical "tools" and "challenges" for prevention.

Dietary Guidelines

Against this background of controversy over dietary standards a DHHS-USDA Task Force was organized and charged to establish guidelines on the basis of recommendations made in the dietary goals (45,46). The support for these guidelines was the exhaustive review of the evidence supporting the dietary goals completed by the Task Force from the American Society for Clinical Nutrition (29). The result of this joint effort was a 20 page pamphlet entitled "Nutrition and Your Health: Dietary Guidelines for Americans" published in February, 1980 (4). There are seven dietary guidelines with simple recommendations on how to achieve these guidelines (Appendix C). The pamphlet was to be widely distributed by agencies such as extension service, health departments and government agencies.

The guidelines incorporated the concepts supported by many organizations and individuals in the scientific community without including the specificity of levels of nutrients that were criticized so sharply in the dietary goals. The recommendations in the dietary guidelines were supported by the NNC and Bray (47) although their reports were published just prior to the release of the guidelines. Harper (48), most outspoken against the dietary goals, expressed

general satisfaction with the overall direction of the dietary guidelines. He stated that the dietary guidelines "represent an important step in providing sound nutrition advice for the public by those given public trust". His criticisms were in requesting more positive statements recommending fluoridation of water and having blood pressure monitored regularly. Enloe (49) stated that the dietary guidelines deserve our "respect and acceptance". He went on to say that the guidelines represent a concept of nutrition "based on fact, free of careless exaggeration".

Reactions to the Dietary Guidelines

Since the publication of the dietary guidelines the National Research Council has published a report "Toward Healthful Diets" in reaction to the goals, guidelines, and other dietary standards (6). In this report they supported the continued use of the RDA and food guides. They stated that Americans have never been healthier and the American food supply on the whole is nutritious and provides adequate quantities of nutrients. The FNB considered it scientifically unsound to make single all-inclusive recommendations to the public regarding the intake of "energy, protein, fat, cholesterol, carbohydrate, fiber and sodium". The FNB reviewed current evidence pertaining to the relationship between dietary practices and occurrence of obesity, hypertension, cancer and diabetes. As a result of this review they made the following recommendations: select a nutritionally

adequate diet from foods available, select as wide a variety of foods as possible in each of the major food groups, maintain appropriate weight for height, use salt in moderation, and if the requirement for energy is low reduce consumption of alcohol, sugars, fats and oils. The reviewers did not think the evidence supported a recommendation to reduce consumption of cholesterol. This statement received considerable publicity in the popular press.

The American Dietetic Association supported the dietary guidelines as a healthful "way" of eating and asked for further specific recommendations for translation of the terms "too much" and "adequate" used in the guidelines (50). The association noted that the guidelines were stated in terms of recommendations in readable, easily understood terms. They reported that it was appropriate that eating a variety of foods and maintaining ideal weight are the first two guidelines.

Senator Thomas Eagleton, in his role as chairman of the Senate Appropriations Agriculture Subcommittee, held a one day hearing in July, 1980 to critique the dietary guidelines. In his opening statement he charged that authors of the dietary guidelines had gone too far in offering advice to the American public. He stated that the guidelines represent the "first step toward the U.S. Government telling its citizens what they can and cannot consume and telling farmers and the food industry just what kind of food they can produce" (51). He asked USDA to suspend distribution of the

pamphlet.

Foreman (52), USDA Assistant Secretary, Nesheim (51) representing NNC, Hegsted (53), Levy (54), and McGinnis (55) were among the professionals testifying on behalf of the dietary guidelines. The NAS and AMA testified against the dietary guidelines (51). Foreman, in August, 1980, stated in a letter to Senator Eagleton that USDA would continue to publish the dietary guideline in their present form but in the second printing the statement acknowledging the existence of a controversy over such recommendations would be italicized. The statement was placed on page 11 of the pamphlet and reads, "There is controversy about what recommendations are appropriate for healthy Americans" (4). This statement is in reference to the recommendations on fat and cholesterol.

McNutt (56) compared various dietary standards and suggested that there was a consensus among many of the standards (Table 1). There was general agreement that Americans should eat a variety of foods, maintain ideal body weight, avoid too much fat, avoid too much sugar and avoid too much sodium (56). Controversy over recommendations concerning saturated fat and cholesterol intake still exists.

Dietitians are professionals responsible for the nutritional care of individuals and groups (12). McGinnis (44) has challenged dietitians to take an active role and be more assertive in implementing dietary standards. To take

Table 1 McNutt's Comparison of Selected Dietary Standards*

	Maintain Ideal Body Weight	Reduce Total Fat (% Calories)	Reduce Saturated Fat	Increase Poly-unsaturated Fat	Reduce Cholesterol	Reduce Simple Sugar	Increase Complex Carbo-hydrates	Increase Fiber	Reduce Sodium (g NaCl equiv.)
Dietary Goals First Edition 1977	no	yes (30%)	yes	yes	yes (300 mg)	yes	yes	yes	yes (3 g)
Dietary Goals Second Edition 1977	yes	yes (27-33%)	yes	yes	yes (250-350 mg)	yes	yes	yes	yes (8 g)
Healthy People 1979	yes	yes	yes	no	yes	yes	yes	ND	yes
AHA Recom-mendations 1979	yes	.	.	.	.	moderate	ND	ND	yes (<12 g)
NCI Prudent Interim Principles 1979	yes	yes	ND	no	ND	ND	ND	yes	ND
ACSH Report 1980	yes	no	no	no	no	ND	ND	ND	no
USDA-DHEW Guidelines 1980	yes	yes	yes	no	yes	yes	yes	yes	yes
FNB Recom-mendations 1980	yes	adjust to calorie need	no	no	no	.. ...	...	....	yes (3-8 g)

*adapted from McNutt (56)

an active role dietitians must be aware of suggested dietary standards, be knowledgeable about controversies related to these recommendations and have access to resources to make intelligent decisions concerning the recommendations. Therefore, it is appropriate to determine whether dietitians are knowledgeable concerning the different dietary standards and whether they support and implement the dietary standards.

CHAPTER III

METHOD AND PROCEDURE

Research Design

The purpose in this descriptive survey was to survey dietitians in Ohio to determine their awareness, support and implementation of different dietary standards. The dietary standards were published by various professional organizations and government agencies. The dietitians were asked to react to specific dietary standards published by three agencies: Dietary Goals, revised (2), Dietary Guidelines (4), and the dietary standards published in the Surgeon General's Report (3). For these three dietary standards the dietitians were asked to indicate whether or not they supported each dietary recommendation and whether or not they had implemented each dietary recommendation in their personal dietary habits and/or their professional practice. The dietitians were also surveyed concerning their use of sources of nutrition information.

Population and Sample Selection

In 1981 there were approximately 2100 members of the American Dietetic Association in Ohio. A random sample of 450 dietitians was selected for use in this study by the staff of Administrative Services of the American Dietetic

Association. Thus, the dietitians comprising this sample were all members of the American Dietetic Association. No stratification by registration status, employment status, age, or gender was made. Estimating a fifty percent return of questionnaires this sample should represent ten percent of the total population of dietitians in Ohio.

Description of Sample

A total of 278 questionnaires was returned, a response rate of 61.8 percent. Of the 278 questionnaires returned 259 questionnaires, 57.6 percent, were used for data analysis. Nineteen questionnaires contained inadequate responses for data analysis.

The dietitians were asked to indicate their gender, age range, highest education attained and registration status. In this sample there were 248 females and 9 males and 2 with no response. Sixty-nine percent of the sample was between 20 and 40 years of age (Table 2). The highest education attained by dietitians is shown in Table 3. Forty percent of the dietitians completed their formal education with dietetic internships. Thirty-six percent of the dietitians had completed graduate degrees. Ninety percent of the respondents (n=233) were registered.

Functional titles used in the questionnaire were those defined by the American Dietetic Association (12) and classification by this system is shown in Table 4. The largest single class identified was clinical dietitians

Table 2 Distribution of Dietitians by Age Range

Age Range	Number	Percent
20-29	92	35.7
30-39	87	33.7
40-49	40	15.5
50-59	28	10.9
60+	10	3.9

Table 3 Highest Education Level Attained by Dietitians

Educational Level	Number	Percent
Traditional Baccalaureate Program	15	5.8
Coordinated Undergraduate Program	29	11.2
Dietetic Internship	105	40.5
Dietetic Traineeship	13	5.0
Preplanned Work Experience	4	1.5
Master's Degree	80	30.9
Doctoral Degree	13	5.0

represented by 31 percent of the respondents, about 17 percent of the sample identified themselves as administrative dietitians. Fifteen percent of the dietitians did not select a functional title. The dietitians indicated they were employed in positions such as private practice, administrators of departments or facilities, food service director, internship directors, and students. Other positions listed by one or two respondents were renal dietitian, extension agent, systems dietitian, special projects dietitian, Nutrition Education Training Program dietitian and production manager.

The dietitians were requested to indicate their place of employment (Table 5). Almost half of the dietitians were employed in a clinical facility or hospital. Thirteen percent of the dietitians specified other places of employment. Industry, private practice and schools of nursing were listed by six dietitians each (n=18). State or governmental agencies or programs were listed by seven dietitians. Other places of employment included industry feeding, health maintenance organization, diabetic camp, health spa and pharmaceutical company.

For this sample of dietitians the mean number of years in the profession was 11 years, range 0 to 54 years. The mean stated hours of employment was 30 hours, range 0 to 70 hours. There were 11 dietitians that stated more than 40 hours per week and there were 33 dietitians that worked 20 hours per week or less. For the years in their present

Table 4 Classification of Dietitians by Functional Title

Functional Title	Number	Percent
Administrative dietitian	43	16.9
Clinical dietitian	80	31.4
Community dietitian	25	9.8
Consulting dietitian	22	9.6
Research dietitian	6	2.4
Teaching dietitian	18	7.1
Other	39	15.3
Unemployed	18	7.1
Retired	4	1.6

Table 5 Primary Place of Employment of Dietitians

Place of Employment	Number	Percent
Clinical facility/hospital	123	47.9
Community agency or program	27	10.5
Community food service	1	0.4
Nursing home	18	7.0
School food service	9	3.5
University or college	17	6.6
Community college	2	0.8
Other	35	13.6
Non-practicing	25	9.7

position the mean was 4.52, range 0 to 50 years.

Data Collection

A questionnaire was developed for the purpose of this survey. In the first section demographic information was obtained. In the next section dietitians were asked to indicate whether they were aware of and/or had copies of ten dietary standards published since 1977. The next set of questions were related to three specific dietary standards: the Dietary Goals, revised (2), the Dietary Guidelines (4), and the dietary standards published in the Surgeon General's Report (3). The dietitians were asked to indicate whether or not they supported each dietary recommendation in these three dietary standards. The dietitians were then requested to indicate whether they had implemented each dietary recommendation in these three dietary standards in their personal dietary habits and/or in clinical practice, administrative practice or teaching. In the last section of the questionnaire the dietitians were asked to indicate which professional sources of nutrition information they had access to and read.

The dietary standards questionnaire, cover letter and self-addressed, stamped return envelope were mailed to the sample of 450 dietitians in Ohio in July, 1981. The dietitians were requested to complete the questionnaire and return in the envelope by August 15, 1981. Any questionnaire returned to the researcher after the initial mailing by the

postal service was replaced with another subject. This subject was then sent the dietary standards questionnaire. During the first week of August a follow-up postcard was mailed to each non-respondent.

Data Analysis

Data from 259 questionnaires were coded and punched onto computer cards. A program was written for analysis using the Statistical Package for Social Studies (SPSS). The initial data analysis consisted of frequency counts for all items on the Dietary Standards Questionnaire.

In the second run crosstabulations were determined for other relationships. Awareness by dietitians of different dietary standards was analyzed by educational level and functional title. Three levels of education were used: the doctoral level, the master's level and the baccalaureate level including graduates of traditional programs, coordinated undergraduate programs, dietetic internships, dietetic traineeships and preplanned work experience. The functional titles listed in the demographic section of the questionnaire were used for analysis by title.

Support by dietitians of three specific dietary standards was analyzed by education level, age, and title. The three educational levels listed above were used in the data analysis as well as the age ranges and titles given. Implementation by dietitians of three dietary standards was analyzed by title as was the question concerning sources of nutrition information.

The Chi Square statistic was used to determine significant differences. The level of confidence selected was .05.

CHAPTER IV

FINDINGS

Awareness

Ten dietary standards published since 1977 were listed and dietitians were requested to indicate their level of awareness of these dietary standards by checking if they were unaware, aware or had read carefully (Table 6). Over 45 percent of the dietitians indicated they were unaware of 6 of the 10 dietary standards. The RDA had been read carefully by 64 percent of the sample and 71 percent indicated they had copies. The revised Dietary Goals were read carefully by 37.7 percent and 34 percent had a copy. With the exception of the RDA less than 45 percent of the dietitians had copies of the ten designated dietary standards, range from 7.7 percent to 43.7 percent (Table 7).

Level of awareness was crosstabulated with level of education (Table 8). A larger percentage of the dietitians with doctoral degrees had read the dietary standards carefully and these dietitians were at least aware of 8 of 10 of the dietary standards. More dietitians at the baccalaureate level indicated they were unaware of dietary standards than either the master's or doctoral level. Significant differences ($p=.01$) were observed for the level of

Table 6 Percentage of Dietitians Aware of Dietary Standards

Dietary Standards	unaware	aware	read carefully
Dietary Goals, first edition, Feb., 1977	12.3	50.2	37.4
Dietary Goals, second edition, Dec., 1977	13.7	39.5	46.8
AMA Concepts of Nutrition and Health, 1979	47.7	43.0	9.3
"Healthy People" - Surgeon General's Report on Health Promotion and Disease Prevention, 1979	47.3	38.4	14.3
"Evidence Relating Six Dietary Factors to the Nation's Health" - Task Force Report, Amer. Society of Clinical Nutrition, 1979	47.4	41.7	10.9
Ninth Edition of the Recommended Dietary Allowances, NRC, NAS, 1980	2.7	33.2	64.1
"Toward Healthful Diets" - Report of the Food and Nutrition Board, NRC, NAS, 1980	45.4	38.3	16.2
"Nutrition and Your Health: Dietary Guidelines for Americans, DHHS-USDA, 1980	26.3	36.0	37.7
"The Hassle-Free Guide to Better Diet", USDA, 1980	74.0	18.3	7.7
Ideas for Better Eating: Menus and Recipes to make use of Dietary Guidelines, USDA, 1981	59.7	32.3	8.1

Table 7 Percentage of Dietitians Having Copies of Dietary Standards

Dietary Standard	Have	Do Not Have
Dietary Goals, first edition, Feb., 1977	34.3	65.7
Dietary Goals, second edition, Dec., 1977	43.7	56.3
AMA Concepts of Nutrition and Health, 1979	6.6	93.4
"Healthy People" - Surgeon General's Report on Health Promotion and Disease Prevention, 1979	11.2	88.8
"Evidence Relating Six Dietary Factors to the Nation's Health" - Task Force Report, Amer. Society of Clinical Nutrition, 1979	6.8	93.2
Ninth Edition of the Recommended Dietary Allowances, NRC, NAS, 1980	71.1	28.9
"Toward Healthful Diets" - Report of the Food and Nutrition Board, NRC, NAS, 1980	13.8	86.2
"Nutrition and Your Health - Dietary Guidelines for Americans", DHHS-USDA, 1980	34.0	66.0
"The Hassle-Free Guide to a Better Diet", USDA, 1980	7.7	92.3
Ideas for Better Eating: Menus and Recipes to Make Use of Dietary Guidelines, USDA, 1981	10.0	90.0

Table 8 Percentage of Dietitians Classified by Awareness Level and Education Level

Dietary Standards	Baccalaureate level*			Master's level†			Doctoral level‡		
	unaware	aware	read carefully	unaware	aware	read carefully	unaware	aware	read carefully
Dietary Goals, first edition, Feb., 1977	14.2	55.5	30.2	10.1	42.0	47.8	0.0	27.3	72.7 #
Dietary Goals, second edition, Dec., 1977	16.0	42.0	42.0	11.1	37.5	51.4	0.0	18.2	81.8
AMA Concepts of Nutrition and Health, 1979	51.7	40.4	7.9	45.9	48.6	5.4	8.3	41.7	50.0
"Healthy People" - Surgeon General's Report on Health Promotion and Disease Prevention, 1979	54.4	35.9	9.6	39.7	44.9	15.4	0.0	27.3	72.7
"Evidence Relating Six Dietary Factors to the Nation's Health" - Task Force Report, AM. Society of Clinical Nutrition, 1979	48.7	42.9	8.3	50.6	38.0	11.4	8.3	50.0	41.7 ¶
Ninth Edition of the Recommended Dietary Allowances, NRC, NAS, 1980	4.1	37.0	58.9	0.0	28.4	71.6	0.0	10.0	90.0
"Toward Healthful Diets" - Report of the Food and Nutrition Board, NRC, NAS, 1980	52.3	37.1	10.6	35.9	43.6	20.5	18.2	18.2	63.6
"Nutrition and Your Health: Dietary Guidelines for Americans", DHHS-USDA, 1980	32.9	36.8	30.0	16.4	39.7	43.8	0.0	0.0	100
"The Hassle-Free Guide to Better Diet", USDA, 1980	80.0	14.8	5.2	62.8	24.4	12.8	69.2	23.1	7.7
Ideas for Better Eating: Menus and Recipes to Make Use of Dietary Guidelines, USDA, 1981	64.3	28.0	7.6	55.1	35.9	9.0	30.8	61.5	7.7

*n = 166
†n = 80
‡n_2 = 13
χ^2 = 12.7, p = .05
¶ χ^2 = 16.0, p = .05

awareness for two dietary standards, the Dietary Goals and Task Force Report by the American Society for Clinical Nutrition. Differences were not significant for the other dietary standards. Therefore educational level of dietitians was related to the level of awareness for 2 of the 10 designated dietary standards.

Level of awareness was crosstabulated with title of dietitians (Tables 9,10,11). A larger percentage of the research and teaching dietitians had read more of the dietary standards carefully than other dietitians. A larger percentage of the community dietitians had read the dietary guidelines carefully than other dietitians. Significant differences ($p=.05$) were found for the classification of dietitians by title for the Surgeon General's Report and the RDA. Therefore the position of the dietitian was associated with the level of awareness for 2 of the 10 designated dietary standards.

Fifty percent or more of the dietitians in this study were aware of eight of the ten dietary standards published since 1977. In summary dietitians appear to be aware of the various dietary recommendations.

Support of Dietary Standards

Specific recommendations were made in three of the dietary standards for types of foods to be consumed or levels of nutrients to be consumed. The dietitians were requested to indicate whether they agreed or disagreed with

Table 9 Percentage of Dietitians Classified by Title and Level of Awareness

	Dietary Goals I			Dietary Goals II			AMA Concepts			Healthy People†		
Title of Dietitian	U	A	R*	U	A	R*	U	A	R	U	A	R*
Administrative (n=43)	8.3	52.8	38.9	8.1	43.2	48.6	36.1	52.8	11.1	41.5	53.7	4.9
Clinical (n=80)	15.6	50.6	33.8	15.8	38.2	46.1	46.1	48.7	5.3	53.2	36.4	10.4
Community (n=25)	12.5	45.8	41.7	9.1	31.8	59.1	56.5	34.8	8.7	52.2	34.8	13.0
Consulting (n=22)	5.3	47.4	47.4	5.9	29.4	64.7	55.6	38.9	5.6	35.0	45.0	20.0
Research (n=6)	0.0	33.3	66.7	0.0	25.0	75.0	20.0	60.0	20.0	40.0	40.0	20.0
Teaching (n=18)	0.0	47.1	52.9	11.8	29.0	58.8	35.3	35.3	29.4	23.5	35.3	41.2
Other (n=39)	11.8	44.1	44.1	11.4	42.9	45.7	59.5	27.0	13.5	51.4	24.3	24.3
Unemployed (n=18)	22.2	66.7	11.1	27.8	61.1	11.1	50.0	50.0	0.0	61.1	33.3	5.6
Retired (n=4)	25.0	50.0	25.0	25.0	50.0	25.0	50.0	50.0	0.0	25.0	75.0	0.0

*U = unaware, A = Aware, R = Read Carefully
†$\chi^2 = 27.9$, $p = .05$

Table 10 Percentage of Dietitians Classified by Title and Level of Awareness

Title of Dietitian	ASCN Task Force Report			RDA†			"Toward Healthful Diets"		
	U	A	R*	U	A	R	U	A	R*
Administrative (n=43)	29.3	58.5	12.2	0.0	36.8	63.2	46.3	43.9	9.8
Clinical (n=80)	54.5	39.0	6.5	2.9	27.1	70.0	43.4	44.7	11.8
Community (n=25)	50.0	33.3	16.7	0.0	21.7	78.3	59.2	29.7	41.7
Consulting (n=22)	52.4	42.9	4.8	0.0	33.3	66.7	55.6	33.3	11.1
Research (n=6)	60.0	20.0	20.0	0.0	40.0	60.0	40.0	20.0	40.0
Teaching (n=18)	47.1	29.4	23.5	0.0	13.3	86.7	43.8	18.8	37.5
Other (n=39)	45.9	37.8	16.2	9.7	41.9	48.4	50.0	38.9	11.1
Unemployed (n=18)	50.0	44.4	5.6	0.0	50.0	50.0	52.9	35.3	11.8
Retired (n=4)	50.0	50.0	0.0	0.0	100	0.0	50.0	50.0	0.0

*U = Unaware, A = Aware, R = Read Carefully
† $x^2 = 27.9$, $p = .05$

Table 11 Percentage of Dietitians Classified by Title and Level of Awareness

Title of Dietitian	"Dietary Guidelines"			"Hassle-Free Guide"			"Ideas for Better Eating"		
	U	A	R*	U	A	R*	U	A	R*
Administrative (n=43)	20.0	50.0	30.0	75.0	20.0	5.0	57.1	38.1	4.8
Clinical (n=80)	24.7	39.0	36.4	75.6	19.2	5.1	64.1	25.6	10.3
Community (n=25)	21.7	13.0	65.2	54.2	29.2	16.7	54.2	33.3	12.5
Consulting (n=22)	23.5	52.9	23.5	85.0	10.0	5.0	55.0	30.0	15.0
Research (n=6)	20.0	40.0	40.0	66.7	33.3	0.0	40.0	60.0	0.0
Teaching (n=18)	25.0	12.5	62.5	81.3	12.5	6.3	52.9	41.2	5.9
Other (n=39)	34.3	31.4	34.3	68.4	15.8	15.8	55.3	36.8	7.9
Unemployed (n=18)	37.5	37.5	25.0	82.4	11.8	5.9	70.6	29.4	0.0
Retired (n=4)	50.0	25.0	25.0	100	0.0	0.0	100	0.0	0.0

*U = Unaware, A = Aware, R = Read Carefully

the specific recommendations in the Dietary Goals, revised, Surgeon General's Report and the Dietary Guidelines.

More than 90 percent of the dietitians in this sample agreed with each of the Dietary Guidelines (Table 12). There was an equally high level of agreement with the dietary standards in the Surgeon General's Report with the following two exceptions. Eighty-three percent of the dietitians agreed with the standards recommending less saturated fat and cholesterol (number 2) and 76.7 percent agreed with the standard recommending less red meat (number 6).

There was less support for the Dietary Goals. The highest level of support was given to the dietary goal in which maintenance of ideal body weight is recommended (number 1). The percentage of dietitians supporting the other Dietary Goals ranged from 52.5 percent to 86.6 percent. The lowest level of support was for the Dietary Goals in which consumption of 300 mg of cholesterol a day is recommended (number 6).

The support for the specific dietary recommendations was analyzed by level of education (Tables 13,14). Fifty-three percent of the dietitians with doctoral degrees disagreed with Dietary Goal 5 in which levels of saturated and unsaturated fat are recommended; this finding was significantly different ($p=.01$) from other educational groups. Thirty-eight percent of the respondents with doctoral degrees disagreed with a similar recommendation (number 2) in the Surgeon General's Report. This finding was significantly

Table 12 Percentage of Dietitians Supporting Dietary Standards

Dietary Standards	Agree	Disagree	No Opinion
DIETARY GOALS - REVISED			
1. To avoid overweight, consume only as much energy as is expended; if overweight, decrease energy intake and increase energy expenditure.	96.9	1.6	1.6
2. Increase consumption of complex carbohydrate and "naturally occurring" sugars from about 28% of energy intake to about 48% of energy intake.	73.2	17.1	9.7
3. Reduce consumption of refined and processed sugars by about 45% to account for about 10% of the total energy intake.	82.3	11.4	6.3
4. Reduce overall fat consumption from approximately 40% to about 30% of energy intake.	86.6	10.7	2.8
5. Reduce saturated fat consumption to account for about 10% of total energy intake; and balance with polyunsaturated and monosaturated fat, which should account for about 10% of energy intake each.	71.8	18.0	10.2
6. Reduce cholesterol consumption to about 300 mg. a day.	52.5	34.5	12.9
7. Limit the intake of sodium by reducing the intake of salt to about 5 gm. a day.	80.4	15.2	3.4
HEALTHY PEOPLE - SURGEON GENERAL'S REPORT			
1. only sufficient calories to meet body needs and maintain desirable body weight;	94.5	4.7	0.8
2. less saturated fat and cholesterol;	83.5	11.8	4.7
3. less salt;	94.6	3.5	1.9
4. less sugar;	92.1	4.0	4.0
5. relatively more complex carbohydrate such as whole grains, cereals, fruits, and vegetables;	95.7	1.6	2.7
6. relatively more fish, poultry, legumes and less red meat.	76.7	17.0	6.3
DIETARY GUIDELINES			
1. eat a variety of foods	98.8	0.0	1.2
2. maintain ideal weight	97.3	2.6	0.4
3. avoid too much fat, saturated fat and cholesterol	89.9	5.8	4.3
4. eat foods with adequate starch and fiber	96.9	0.8	2.3
5. avoid too much sugar	95.3	1.6	3.1
6. avoid too much sodium	95.3	2.7	1.9
7. if you drink, do so in moderation	95.4	3.5	3.1

Table 13 Percentage of Dietitians Classified by Level of Support and Educational Level

Dietary Standard	Baccalaureate			Masters			Doctoral		
	A	D	NO*	A	D	NO*	A	D	NO*
DIETARY GOALS REVISED									
1. To avoid overweight, consume only as much energy as is expended; if overweight, decrease energy intake and increase energy expenditure.	98.2	1.2	0.6	93.8	2.5	3.8	100		
2. Increase consumption of complex carbohydrate and "Naturally occurring" sugars from about 28% of energy intake to about 48% of energy intake.	73.8	17.1	9.1	68.8	20.0	11.3	92.3	0.0	7.7
3. Reduce consumption of refined and processed sugars by about 45% to account for about 10% of the total energy intake.	83.3	10.5	6.2	79.7	12.7	7.6	84.6	15.4	0.0
4. Reduce overall fat consumption from approximately 40% to about 30% of energy intake.	87.8	9.8	2.4	81.6	14.5	3.9	100†		
5. Reduce saturated fat consumption to account for about 10% of total energy intake: and balance with polyunsaturated and monosaturated fat, which should account for about 10% of energy intake each.	76.8	12.8	10.4	65.4	23.1	11.5	46.2	53.8	0.0
6. Reduce cholesterol consumption to about 300 mg. a day.	54.3	34.6	11.1	48.8	32.5	18.8	53.8	46.2	0.0
7. Limit the intake of sodium by reducing the intake of salt to about 5 gm. a day.	83.0	14.5	2.4	78.8	16.3	5.0	66.7	16.7	16.7

*A = agree, D = disagree, NO = no opinion
†x^2 = 16.5, p = .05

Table 14 Percentage of Dietitians Classified by Level of Support and Educational Level

Dietary Standard	Baccalaureate			Masters			Doctoral		
	A	D	NO*	A	D	NO*	A	D	NO*
HEALTHY PEOPLE - SURGEON GENERAL'S REPORT									
1. only sufficient calories to meet body needs and maintain desirable body weight;	93.3	6.1	0.6	96.2	2.5	1.3	100	38.5	0.0
2. less saturated fat and cholesterol;	84.8	10.3	4.8	84.4	10.4	5.2	61.5	7.7	0.0†
3. less salt;	95.2	3.6	0.8	93.7	2.5	1.2	92.3	7.7	
4. less sugar;	92.6	3.1	4.3	91.0	5.1	3.8	92.3		0.0
5. relatively more complex carbohydrate such as whole grains, cereals, fruits, and vegetables;	96.4	1.8	1.8	93.7	1.3	5.1	100		
6. relatively more fish, poultry, legumes and less red meat;	73.0	20.9	4.0	85.7	7.8	2.0	69.2	23.1	0.4
DIETARY GUIDELINES									
1. eat a variety of foods	98.9	0.0	0.8	98.8	0.0	0.4	100		
2. maintain ideal weight	97.0	3.0	0.0	97.5	1.3	1.3	100		
3. aboid too much fat, saturated fat and cholesterol	91.5	6.1	2.4	87.5	5.0	7.5	84.6	7.7	7.7
4. eat foods with adequate starch and fiber	97.6	1.2	0.8	95.0	0.0	1.6	100		
5. avoid too much sugar	96.4	1.2	2.4	92.5	2.5	5.0	100		
6. avoid too much sodium	95.8	3.0	1.2	95.0	1.3	3.8	92.3	7.7	0.0
7. if you drink, do so in moderation	91.5	4.2	2.7	96.3	2.5	0.4	100		

*A = agree, D = disagree, NO = no opinion
† $x^2 = 9.75$, $p = .05$

different (p=.05) from the other two educational levels. There were no other significant differences by education level. Therefore level of education of dietitians was related to the level of support for two of the dietary recommendations.

For Dietary Goals two through seven and the dietary recommendations one, two and six in the Surgeon General's Report an analysis was computed by age and by title of the dietitians. The percentage of respondents agreeing with each standard by age range is shown in Table 15. A significant difference was found for the Dietary Goal related increasing complex carbohydrate (p=.01) by age of the dietitian. There were no other significant differences by age. The data for dietitians classified by title agreeing with these dietary standards are shown in Table 16. There were no significant differences in level of support by dietitians classified by title. Therefore age of the dietitians was related to level of support for one dietary recommendation but title of dietitians was not related to level of support.

Implementation of Dietary Standards

Dietitians were requested to indicate whether they were implementing the dietary standards listed in the revised edition of the Dietary Goals, the Surgeon General's Report and the Dietary Guidelines in their personal dietary habits and in their professional practices (Tables 17,18). Forty percent or more of the dietitians implemented various dietary recommendations in their personal dietary habits. The

Table 15 Percentage of Dietitians Classified by Level of Support and Age Level

Selected Dietary Standards	Age Range 20-29	30-39	40-49	50-59	60+
DIETARY GOALS REVISED					
2. Increase consumption of complex carbohydrate and "Naturally occurring" sugars from about 28% of energy intake to about 48% of energy intake.	83.7	72.4	60.0	55.6	77.8*
3. Reduce consumption of refined and processed sugars by about 45% to account for about 10% of the total energy intake.	86.8	82.8	65.8	85.2	88.9
4. Reduce overall fat consumption from approximately 40% to about 30% of energy intake.	90.1	79.1	89.7	92.3	88.9
5. Reduce saturated fat consumption to account for about 10% of total energy intake: and balance with polyunsaturated and monosaturated fat, which should account for about 10% of energy intake each.	74.7	66.7	69.2	81.5	66.7
6. Reduce cholesterol consumption to about 300 mg. a day.	53.3	51.7	47.4	59.3	66.7
7. Limit the intake of sodium by reducing the intake of salt to about 5 gm. a day.	79.3	80.2	77.5	89.3	88.9
HEALTHY PEOPLE - SURGEON GENERAL'S REPORT					
1. only sufficient calories to meet body needs and maintain desirable body weight;	93.4	95.4	92.5	100	88.9
2. less saturated fat and cholesterol;	83.5	79.1	87.2	96.4	66.7
6. relatively more fish, poultry, legumes and less red meat;	81.1	77.9	62.5	81.5	62.5

*$x^2 = 19.76$, $p = .05$

Table 16 Percentage of Dietitians Classified by Level of Support and Title

	Administrative	Clinical	Community	Consulting	Teaching	Research	Other	Non-Practicing	Retired
DIETARY GOALS REVISED									
2. Increase consumption of complex carbohydrate and "Naturally occurring" sugars from about 28% of energy intake to about 48% of energy intake.	65.1	80.0	80.0	71.4	66.7	76.5	71.8	50.0	75.0
3. Reduce consumption of refined and processed sugars by about 45% to account for about 10% of the total energy intake.	78.0	86.3	92.0	71.4	66.7	75.0	76.9	88.9	100
4. Reduce overall fat consumption from approximately 40% to about 30% of energy intake.	93.0	85.0	87.5	90.0	66.7	81.3	86.8	77.8	100
5. Reduce saturated fat consumption to account for about 10% of total energy intake: and balance with polyunsaturated and monosaturated fat, which should account for about 10% of energy intake each.	73.8	73.8	72.0	47.6	50.0	62.5	74.4	88.9	75.0
6. Reduce cholesterol consumption to about 300 mg. a day.	66.7	50.0	52.0	38.1	33.3	52.9	51.3	58.8	75.0
7. Limit the intake of sodium by reducing the intake of salt to about 5 gm. a day.	79.1	81.3	96.0	86.4	50.0	70.6	73.7	83.3	100
HEALTHY PEOPLE - SURGEON GENERAL'S REPORT									
1. only sufficient calories to meet body needs and maintain desirable body weight;	95.3	95.0	95.8	95.2	100	94.1	92.3	88.9	100
2. less saturated fat and cholesterol;	93.0	77.5	84.0	66.7	66.7	87.5	86.8	94.4	100
6. relatively more fish, poultry, legumes and less red meat;	78.6	78.2	80.0	72.7	83.3	68.8	81.6	55.6	100

Table 17 Implementation of Dietary Standards by Dietitians in Personal Dietary Habits

Dietary Standards	Number	Percent
DIETARY GOALS - REVISED		
1. To avoid overweight, consume only as much energy as is expended; if overweight, decrease energy intake and increase energy expenditure.	225	87.9
2. Increase consumption of complex carbohydrate and "naturally occurring" sugars from about 28% of energy intake to about 48% of energy intake.	146	57.9
3. Reduce consumption of refined and processed sugars by about 45% to account for about 10% of the total energy intake.	153	61.9
4. Reduce overall fat consumption from approximately 40% to about 30% of energy intake.	164	65.6
5. Reduce saturated fat consumption to account for about 10% of total energy intake; and balance with polyunsaturated and monosaturated fat, which should account for about 10% of energy intake each.	128	51.2
6. Reduce cholesterol consumption to about 300 mg. a day.	101	41.6
7. Limit the intake of sodium by reducing the intake of salt to about 5 gm. a day.	164	65.9
HEALTHY PEOPLE - SURGEON GENERAL'S REPORT		
1. only sufficient calories to meet body needs and maintain desirable body weight;	208	83.9
2. less saturated fat and cholesterol;	182	73.4
3. less salt;	205	81.3
4. less sugar;	200	79.7
5. relatively more complex carbohydrate such as whole grains, cereals, fruits, and vegetables;	208	82.2
6. relatively more fish, poultry, legumes and less red meat.	155	62.0
DIETARY GUIDELINES		
1. eat a variety of foods	241	94.5
2. maintain ideal weight	209	83.6
3. avoid too much fat, saturated fat and cholesterol	203	80.2
4. eat foods with adequate starch and fiber	218	86.2
5. avoid too much sugar	214	83.9
6. avoid too much sodium	214	83.9
7. if you drink, do so in moderation	224	88.5

Table 18 Percentage of Dietitians Classified by Title and Level of Implementation in Professional Practice

Dietary Standards	Clinical* Practice	Administrative† Practice	Teaching‡
DIETARY GOALS - REVISED			
1. To avoid overweight, consume only as much energy as is expended; if overweight, decrease energy intake and increase energy expenditure.	96.3	41.9	77.8
2. Increase consumption of complex carbohydrate and "naturally occurring" sugars from about 28% of energy intake to about 48% of energy intake.	72.2	31.0	44.4
3. Reduce consumption of refined and processed sugars by about 45% to account for about 10% of the total energy intake.	71.4	36.6	38.9
4. Reduce overall fat consumption from approximately 40% to about 30% of energy intake.	72.2	40.5	50.0
5. Reduce saturated fat consumption to account for about 10% of total energy intake; and balance with polyunsaturated and monosaturated fat, which should account for about 10% of energy intake each.	59.0	28.6	44.4
6. Reduce cholesterol consumption to about 300 mg. a day.	51.9	25.6	29.4
7. Limit the intake of sodium by reducing the intake of salt to about 5 gm. a day	64.9	29.3	31.3
HEALTHY PEOPLE - SURGEON GENERAL'S REPORT			
1. only sufficient calories to meet body needs and maintain desirable body weight;	96.1	34.1	66.7
2. less saturated fat and cholesterol;	76.9	42.5	58.8
3. less salt;	83.5	35.7	70.6
4. less sugar;	82.3	42.9	70.6
5. relatively more complex carbohydrate such as whole grains, cereals, fruits, and vegetables;	82.3	47.6	66.7
6. relatively more fish, poultry, legumes and less red meat.	64.9	40.5	44.4
DIETARY GUIDELINES			
1. eat a variety of foods	89.9	65.1	77.8
2. maintain ideal weight	93.7	35.7	77.8
3. avoid too much fat, saturated fat and cholesterol	89.7	39.5	66.7
4. eat foods with adequate starch and fiber	88.5	46.5	77.8
5. avoid too much sugar	89.7	46.5	77.8
6. avoid too much sodium	87.3	46.5	77.8
7. if you drink, do so in moderation	70.9	14.0	76.5

* n = 80
† n = 43
‡ n = 18

percentage of dietitians implementing any of the Dietary Goals in their personal dietary habits ranged from 41.6 to 87.9 percent. Several respondents indicated that it was difficult to implement the precise amounts in these dietary recommendations. Percentage of dietitians implementing the Dietary Guidelines ranged from 80.2 to 94.5 percent. Percentage of respondents implementing the dietary recommendations in the Surgeon General's Report ranged from 62 to 83.9 percent.

The implementation of dietary recommendations in these dietary standards in professional practice was cross-tabulated by title of the dietitian. The percentage of clinical dietitians implementing the Dietary Goals is less than the percentage of clinical dietitians implementing the Dietary Guidelines or the dietary recommendations in the Surgeon General's Report. The lowest percentage for implementation by the clinical dietitians was for the dietary standards related to types of fat and cholesterol. The administrative dietitians indicated the lowest percent implementation of these recommendations. The lowest percentage for implementation by teaching dietitians was for the Dietary Goals and the recommendations related to fat and cholesterol in the Dietary Guidelines and the Surgeon General's Report. Responses by other dietitians by title could not be classified as primarily involved in clinical, administrative or teaching practices.

Sources of Nutrition Information

The dietitians were asked to provide information concerning sources of nutrition information (Table 19). The Journal of the American Dietetic Association and The American Dietetic Association Courier were read regularly by 76 and 70 percent of the sample respectively. An additional 17 percent of the dietitians indicated they read these two publications occasionally. The next highest percentage of dietitians reading a source regularly was Nutrition Today, 25 percent.

With the exception of the Journal of the American Dietetic Association and the American Dietetic Association Courier 28 percent or more of the dietitians did not have access to many of the sources of information listed in this questionnaire. With the exception of the above two publications the percentage of dietitians without access to the other sources of information ranged from 28 to 78.9 percent.

Title of dietitians was related to sources of information read by the dietitians. Significant differences in the use of 8 of the 15 publications listed were found ($p=.05$). Research dietitians read more sources of information on a regular basis (Tables 20-23). The teaching dietitians read a variety of sources of nutrition information on a regular or occasional basis. Administrative dietitians read Institutions and Hospitals, publications with an emphasis on administration, more regularly.

Table 19 Percentage of Dietitians Utilizing Sources of Nutrition Information

Sources of Nutrition Information	No Access	Access	Read Occasionally	Read Regularly
American Dietetic Association Courier	6.5	5.7	17.8	70.3
American Journal of Clinical Nutrition	33.9	21.1	31.4	13.6
American Journal of Public Health	53.4	27.3	14.3	5.0
Community Nutrition Institute Weekly	78.9	10.8	3.9	6.5
Food Technology	55.6	32.9	8.5	3.0
Hospitals	36.2	34.6	18.9	10.3
Institutions	29.3	31.4	20.5	18.8
Journal of American Dietetic Association	0.8	5.5	17.7	76.0
Journal of American Medical Association	28.0	30.5	32.9	8.5
Journal of Nutrition	46.4	28.3	18.6	6.8
Journal of Nutrition Education	46.1	21.2	19.9	12.9
New England Journal of Medicine	35.2	31.1	25.8	7.8
Nutrition and the M.D.	45.4	11.2	19.6	23.7
Nutrition Reviews	34.4	25.0	22.5	18.0
Nutrition Today	31.1	18.9	25.0	25.0

Table 20 Percentage of Dietitians by Title Reading Sources of Nutrition Information Regularly

Sources of Nutrition Information	Administrative	Clinical	Community	Consulting	Research	Teaching	Other	Unemployed	Retired
American Dietetic Association Courier	76.3	79.5	62.5	72.7	50.0	72.0	67.6	50.0	50.0
American Journal of Clinical Nutrition	10.5	14.5	4.3	0.0	50.0	22.2	22.2	6.3	0.0*
American Journal of Public Health	5.1	2.7	4.5	0.0	16.7	11.1	5.6	12.5	0.0*
Community Nutrition Institute Weekly	5.4	4.1	13.6	0.0	20.0	17.6	9.1	0.0	0.0
Food Technology	7.9	4.1	0.0	0.0	20.0	0.0	0.0	0.0	0.0
Hospitals	30.8	9.1	0.0	0.0	16.7	22.2	2.9	0.0	0.0
Institutions	48.7	13.2	13.0	9.5	0.0	17.6	23.5	0.0	0.0
Journal of American Dietetic Association	78.6	83.5	75.0	81.8	83.3	83.3	69.2	50.0	75.0
Journal of American Medical Association	2.6	10.0	4.3	4.8	50.0	22.2	5.6	6.3	0.0
Journal of Nutrition	2.6	3.9	0.0	4.5	33.3	17.6	15.6	6.3	0.0*
Journal of Nutrition Education	7.9	9.0	13.0	13.6	50.0	27.8	18.2	6.3	0.0*
New England Journal of Medicine	2.6	6.4	4.3	0.0	66.7	17.6	11.1	6.3	0.0
Nutrition and the M.D.	16.2	35.1	21.7	18.2	33.3	38.9	14.7	0.0	0.0*
Nutrition Reviews	10.0	19.0	26.1	9.1	50.0	33.3	20.6	6.3	0.0*
Nutrition Today	20.5	27.8	27.3	13.6	33.3	50.0	18.9	18.8	25.0*

*$x_2^2 = .01$
$x^2 = .05$

Table 21 Percentage of Dietitians by Title Reading Sources of Nutrition Information Occasionally

Sources of Nutrition Information	Administrative	Clinical	Community	Consulting	Research	Teaching	Other	Unemployed	Retired
American Dietetic Association Courier	18.4	14.1	16.7	18.2	33.3	16.7	18.9	25.0	0.0
American Journal of Clinical Nutrition	23.7	44.7	26.1	31.8	16.7	33.3	30.6	12.5	0.0*
American Journal of Public Health	7.7	11.0	40.9	4.8	16.7	16.7	25.0	0.0	0.0*
Community Nutrition Institute Weekly	0.0	1.4	13.6	9.1	0.0	11.8	0.0	6.3	0.0
Food Technology	2.6	8.1	17.4	4.8	20.0	11.8	12.1	6.3	0.0
Hospitals	23.1	29.9	13.0	9.1	0.0	0.0	22.9	6.3	0.0
Institutions	25.6	28.9	21.7	14.3	16.7	5.9	17.6	6.3	0.0
Journal of American Dietetic Association	19.0	12.7	25.0	13.6	16.7	16.7	23.1	25.0	0.0
Journal of American Medical Association	23.1	50.0	21.7	14.3	33.3	33.3	36.1	12.5	0.0
Journal of Nutrition	7.9	27.6	26.1	18.2	16.7	11.8	18.8	0.0	0.0
Journal of Nutrition Education	7.9	24.4	34.8	18.2	0.0	27.8	27.3	0.0	0.0
New England Journal of Medicine	5.1	43.6	21.7	13.6	16.7	35.3	30.6	6.3	0.0
Nutrition and the M.D.	24.3	26.0	17.4	4.5	16.7	0.0	29.4	6.3	25.0*
Nutrition Reviews	20.0	36.7	4.3	9.1	16.7	22.2	23.5	6.3	0.0*
Nutrition Today	20.5	39.2	18.2	9.1	33.3	16.7	27.0	0.0	25.0*

*$x^2_2 = .01$
$x^2 = .05$

Table 22 Percentage of Dietitians by Title Indicating They Have Access to Sources of Nutrition Information

Sources of Nutrition Information	Administrative	Clinical	Community	Consulting	Research	Teaching	Other	Unemployed	Retired
American Dietetic Association Courier	2.6	5.1	4.2	4.5	16.7	11.1	5.4	6.3	0.0
American Journal of Clinical Nutrition	13.2	23.7	26.1	18.2	33.3	27.8	19.4	6.3	50.0*
American Journal of Public Health	15.4	27.4	18.2	33.3	50.0	44.4	33.3	6.3	50.0*
Community Nutrition Institute Weekly	10.8	5.4	9.1	13.6	40.0	17.6	15.2	12.5	0.0
Food Technology	31.6	41.9	21.7	28.6	60.0	41.2	27.3	18.8	25.0
Hospitals	10.3	45.5	21.7	31.8	66.7	33.3	48.6	18.8	25.0
Institutions	17.9	38.2	13.0	28.6	66.7	35.3	38.2	18.8	50.0
Journal of American Dietetic Association	0.0	3.8	0.0	4.5	0.0	0.0	7.7	18.8	25.0
Journal of American Medical Association	33.3	33.8	34.8	28.6	16.7	22.2	33.3	12.5	25.0
Journal of Nutrition	21.1	28.9	26.1	27.3	50.0	47.1	25.0	18.8	50.0*
Journal of Nutrition Education	18.4	23.1	13.0	18.2	33.3	22.2	24.2	12.5	50.0*
New England Journal of Medicine	43.6	35.9	26.1	18.2	16.7	29.4	27.8	12.5	25.0
Nutrition and the M.D.	5.4	6.5	26.1	22.7	16.7	16.7	8.8	12.5	0.0*
Nutrition Reviews	25.0	25.3	26.1	18.2	33.3	33.3	26.5	12.5	50.0*
Nutrition Today	46.2	20.3	31.8	54.5	0.0	11.1	24.3	62.5	25.0*

*x^2 = .01
x^2 = .05

Table 23 Percentage of Dietitians by Title Indicating They Have No Access to Sources of Nutrition Information

Sources of Nutrition Information	Administrative	Clinical	Community	Consulting	Research	Teaching	Other	Unemployed	Retired
American Dietetic Association Courier	2.6	1.3	16.7	4.5	0.0	0.0	8.1	18.8	50.0
American Journal of Clinical Nutrition	52.6	17.1	43.5	50.0	0.0	16.7	27.8	75.0	50.0*
American Journal of Public Health	71.8	58.9	36.4	61.9	16.7	27.8	36.8	81.3	50.0*
Community Nutrition Institute Weekly	83.8	89.2	63.5	77.3	40.0	52.9	75.8	81.0	100
Food Technology	57.9	45.9	60.9	66.7	0.0	47.1	60.6	75.0	75.0
Hospitals	35.9	15.6	65.2	59.1	16.7	44.4	25.7	75.0	75.0
Institutions	7.7	19.7	52.2	47.6	16.7	41.2	20.6	75.0	50.0
Journal of American Dietetic Association	2.4	0.0	0.0	0.0	0.0	0.0	0.0	6.3	0.0
Journal of American Medical Association	41.0	6.3	39.1	52.4	0.0	22.7	25.0	68.8	75.0
Journal of Nutrition	68.4	39.5	47.8	50.0	0.0	23.5	40.6	75.0	50.0*
Journal of Nutrition Education	65.8	43.6	39.1	50.0	16.7	22.2	30.3	81.3	50.0*
New England Journal of Medicine	48.7	14.1	47.8	68.2	0.0	17.6	30.6	75.0	75.0
Nutrition and the M.D.	54.1	32.5	34.8	54.5	33.3	44.4	47.1	81.3	75.0*
Nutrition Reviews	45.0	19.0	43.5	63.6	0.0	11.1	29.4	75.0	50.0*
Nutrition Today	46.2	20.3	36.3	54.5	0.0	11.1	24.3	62.5	25.0*

*x^2 = .01
x^2 = .05

The dietitians cited sources of information read other than the publications listed on the questionnaire. Food Management and Journal of Parenteral and Enteral Nutrition were each listed by ten dietitians. Pediatrics and the Journal of Pediatrics were listed by five respondents.

CHAPTER V

DISCUSSION

This sample of Ohio dietitians was predominantly female and under 40 years of age. Sixty-eight percent of the dietitians were under 40 and this value is reflected in the mean number of years in the profession (11.0) and the mean number of years in their present position (4.5). Sixty-four percent of this sample indicated that the highest level of education attained was the baccalaureate degree plus clinical experience. Therefore, this level reflects the minimum level established for membership in the American Dietetic Association. Thirty percent of the respondents had completed Master's Degrees and five percent Doctoral Degrees. Dietitians were not asked if they had used the graduate degree as a route to membership in the professional association. It is likely that some of the 35 percent with graduate degrees used this route to membership.

Ninety percent of the dietitians indicated they were registered. In 1970 the registration procedure was established and successful completion of an examination was required. Registration may now be a requirement for employment. This high percentage of dietitians that are registered probably reflects increased salary benefits.

Classification of dietitians by title and place of employment was similar. Thirty-one percent of the dietitians classified themselves as clinical dietitians and sixteen percent as administrative dietitians. A similar distribution was noted in places of employment. This distribution of dietitians by title and place of employment is similar to the distribution that was cited in the Report of the Study Commission on Dietetics published in 1972 (57). Thus, over the past ten years there appears to have been little change in either functional titles of dietitians or their primary places of employment. These results may reflect the current job opportunities and may also reflect a lack of change in facilities for health care.

Awareness

Dietitians were asked to indicate their awareness of ten dietary standards published since 1977. The majority of respondents (97.3%) were aware of or had read carefully the Recommended Dietary Allowances (RDA) and seventy percent had copies. No other standard was read by such a large percentage of the dietitians. The RDA were established in the early 1940's and are revised periodically. Dietitians are introduced to the RDA early in their formal education and they are presented in practically all nutrition texts. In addition the RDA are utilized by government and non-government agencies as the primary nutrient standards. Therefore it is not surprising that a large percentage of the dietitians have read and have copies of this dietary

standard.

The first edition of the Dietary Goals was published in February, 1977 and 37 percent of the dietitians had read this standard carefully and another 50 percent indicated they were aware of this standard. The Dietary Goals were revised and published again in December, 1977. Forty-seven percent of the dietitians had read this publication carefully and another 40 percent were aware of this standard. These dietary standards published by the Senate Select Committee on Nutrition received wide publicity and generated heated discussion in professional journals and other professional publications. The Dietary Goals were the first standards linking nutrition to chronic disease and making dietary recommendations to the American public to prevent or delay the onset of these chronic diseases. Since these dietary standards have been in existence more than four years and were highly controversial, it would be expected that the dietitians would be at least aware of them.

The Dietary Guidelines, published jointly by the USDA and DHHS in 1980, were distributed free-of-charge through many federal, state and local health and nutrition agencies and programs. This publication is a short, easy to read pamphlet. The Dietary Guidelines also received support by most professional associations. This publication was read carefully by 37.7 percent of the dietitians and another 36 percent indicated they were aware of this dietary standard. Since the Dietary Guidelines were widely distributed and

free-of-charge, this may account for the large percentage of dietitians that are aware of this dietary standard.

Over 40 percent of the dietitians indicated they were unaware of the other dietary standards. Forty-seven percent of the respondents were unaware of the American Medical Association's Concepts of Nutrition and Health. This statement concerning nutrition was published in the Journal of the American Medical Association in 1979 (42). This statement was written in reaction to the Dietary Goals and contains recommendations for dietary modifications for those individuals determined to be at risk of developing chronic diseases. In this sample of dietitians 8.5 percent of the dietitians indicated they read the Journal of the American Medical Association regularly and 32.9 percent indicated they read this journal occasionally. Limited use of this source of nutrition information may explain why many dietitians were unaware of this standard.

The Surgeon General's Report was read carefully by 14 percent of the dietitians. Thirty-eight percent of the dietitians were aware of this publication and 47.3 percent were unaware of this publication. This government publication could be purchased for five dollars through the Government Printing Office. The publication did not generate much discussion in the popular press. Method of distribution, cost and lack of publicity may account for the low level of awareness of this standard.

The Task Force Report by the American Society of Clinical Nutrition was published as a special supplement to the American Journal of Clinical Nutrition. Forty-seven percent of the respondents were unaware of this report which contains consensus statements on the relationship of six dietary factors to health. Only 13.6 percent of the dietitians indicated they read this journal regularly and 33.9 percent of the dietitians do not have access to this journal. Limited access to this publication and lack of publicity may account for the low level of awareness of this standard.

The Food and Nutrition Board published a report entitled "Toward Healthful Diets" in May, 1980. This report could be purchased through the National Academy of Sciences. The report received publicity in the popular press because the authors did not recommend limiting cholesterol intake. Despite the publicity 45 percent of the respondents were unaware of this report.

"The Hassle-free Guide to Better Diet" and "Ideas for Better Eating" were published early in 1981 about six months prior to the survey. The publications were oriented to the lay public and received wide dissemination through the Cooperative Extension Service. Nevertheless 74 percent of the dietitians were unaware of these publications.

A larger percentage of the dietitians with doctoral degrees were aware of or had read the dietary standards more carefully than other dietitians. These dietitians were usually in research and teaching positions and indicated

they had access to more sources of information. These dietitians utilize current nutrition information in their positions.

In summary, unless dietary standards receive wide publicity in popular and professional literature or wide distribution by various agencies, the dietitians are likely to be unaware of the dietary standards. The low level of awareness may also be reflected in lack of regular reading of nutrition oriented journals. Many of these dietary standards were discussed in professional literature to which the dietitians did not have access. The Journal of the American Dietetic Association is the only source of nutrition information read regularly by a large percentage of the dietitians.

Support

Specific dietary recommendations are made for the American public in three of the publications, Dietary Goals, revised, Dietary Guidelines and the Surgeon General's Report. The respondents were asked to indicate whether or not they supported each dietary recommendation in these three publications. The dietitians were given the option of checking no opinion. The majority of the dietitians responded either positively or negatively to each recommendation. This response was not consistent with the level of awareness indicated by the dietitians. Apparently the dietitians were willing to make an evaluation of the dietary recommendations based on the statements listed on the questionnaire.

Over 90 percent of the respondents supported the dietary recommendations in the Dietary Guidelines and a similar level of support was indicated for the dietary recommendations in the Surgeon General's Report. This consensus of support probably reflects the fact that there are no specific quantities of food or nutrients stated in these standards.

The Dietary Goals were more controversial than the Dietary Guidelines and the Surgeon General's Report. Ninety-six percent of the dietitians supported the standard recommending attaining and maintaining ideal body weight. The range of support for the other six Dietary Goals was from 52.5 to 86.6 percent. The lowest level of support was for the Dietary Goal recommending reduction of cholesterol consumption to 300 mg./day. Although reasons were not solicited many dietitians wrote that they could not support the levels of nutrients recommended in these dietary standards. Lack of support by dietitians was similar to lack of support reported in many professional publications. For example, the Food and Nutrition Board in a well publicized statement entitled "Toward Healthful Diets" made no specific recommendation about dietary cholesterol for healthy people and stated that the evidence did not support a recommendation. In the consensus statement concerning cholesterol by the American Society for Clinical Nutrition the authors recommend a reduction of dietary cholesterol beginning in childhood but do not state a level. The American Medical Association and

the National Dairy Council did not support the Dietary Goals while the American Dietetic Association supported the concept of the goal but recommended a re-evaluation of the level recommended. All of these statements could have influenced the level of support given by the dietitians.

There was a difference in the level of support for these dietary standards when education attained was analyzed with the level of support. There was a significant difference between the dietitians with doctoral degrees, masters degrees or baccalaureate degrees for the Dietary Goals related to the type and amount of fat and cholesterol. A larger percentage of the dietitians with doctoral degrees disagreed with this recommendation. The lack of support may reflect the utilized sources of nutrition information by dietitians with doctoral degrees or more reliance on objective research data to support the statements.

There were no significant differences in the level of support when analyzed by title or age range. Apparently the position of the dietitian was not associated with level of support.

In summary, the dietitians supported the concepts stated in these three designated dietary standards but did not support specific levels of nutrients recommended. This was evident in the very high level of support for the Dietary Guidelines and the recommendations in the Surgeon General's Report versus the lower level of support for the Dietary Goals.

Implementation

The dietitians were asked to indicate whether they were implementing the dietary recommendations in these three designated dietary standards in their personal dietary habits and in their professional practices. Over 80 percent of the respondents indicated that they were implementing the Dietary Guidelines in their personal dietary habits. Because each dietitian interpreted the term implementation, this high level of implementation may not truly represent practices. The same would be true for the dietary recommendations in the Surgeon General's Report since they are not quantified. The percentage of dietitians implementing the dietary standards in this report ranged from 62 to 84 percent. The lowest level of implementation was for the dietary standard recommending increased consumption of fish and poultry and less red meat. These high levels of implementation by the dietitians would suggest they are attempting to practice in their personal dietary habits what they support professionally.

The dietitians did not support the Dietary Goals to as high a level as they supported the other two designated dietary standards and they are not implementing the Dietary Goals at the same level. The percentage of dietitians implementing the Dietary Goals ranged from 41.6 to 87.9 percent. The highest level of implementation was for the Dietary Goal related to maintenance of ideal body weight and the lowest level of implementation was for the Dietary Goals related to type and amount of fat and cholesterol. Several

dietitians commented that it was difficult to implement on a daily basis the precise amounts recommended in these dietary standards. It appears that the dietitians agree with concepts in the Dietary Goals.

A larger percentage of the clinical dietitians are implementing the Dietary Guidelines and the dietary standards in the Surgeon General's Report than the Dietary Goals. Several dietitians commented that they would only implement the Dietary Goals under the orders of a physician. Several respondents indicated that the levels of the nutrients specified in the Dietary Goals were difficult for patients to implement on a daily basis. The teaching dietitians showed a similar level of implementation of these three dietary standards in their teaching practices, but generally a lower level than the clinical dietitians. The lowest level of implementation was reported by the administrative dietitians. Less than half of the administrative dietitians implemented any of the designated dietary standards. These dietitians would have primary responsibility for menu planning, food purchasing, preparation methods and would have little direct patient contact. These dietitians showed no difference in their level of support for these dietary standards and their opportunity to influence food habits would be immense.

The professional responsibilities of consulting, community, and research dietitians vary with the type of position. Therefore it is not surprising that there is no clear pattern in their level of implementation.

Sources of Nutrition Information

The only publications read on a regular basis by this sample of Ohio dietitians were the "Journal of the American Dietetic Association" and the "American Dietetic Association Courier". These two publications are received by members of the American Dietetic Association. No other publications were read on a regular basis by such a large percentage of the dietitians.

"The American Journal of Clinical Nutrition", "American Journal of Public Health", "Journal of Nutrition", and "Journal of Nutrition Education" are publications of other professional associations. The dietitians may not have memberships or may not be qualified to be members of these professional associations. These journals are frequently available in university and medical libraries which would increase dietitians' access to them.

The other publications can be received through annual subscription but it would be very expensive for an individual dietitian to subscribe to many of these sources of nutrition information. For those dietitians that are employed, a dietary department or agency may subscribe to the publication.

The sources of nutrition information were analyzed by title of the dietitians. "Hospitals" and "Institutions", publications with an emphasis on administrative issues, were read by more administrative dietitians. More research dietitians and teaching dietitians had access to the sources of nutrition information and read more of the sources on a

regular or occasional basis. These dietitians were employed by universities and medical centers with library facilities.

The dietitians' access to sources of information was reflected in their level of awareness of various dietary standards. As stated before many of the dietary standards appeared in journals that dietitians did not have access to or did not read regularly.

CHAPTER VI

SUMMARY AND IMPLICATIONS

A descriptive survey was designed to determine the level of awareness, support and implementation of selected dietary standards by dietitians in Ohio. Four primary objectives were established for this survey: 1) to determine the level of awareness of dietitians in Ohio of ten dietary standards published since 1977; 2) to determine level of support by dietitians in Ohio for the Dietary Goals, Dietary Guidelines and the Surgeon General's Report; 3) to determine level of implementation by dietitians in Ohio for the Dietary Goals, Dietary Guidelines and Surgeon General's Report; and 4) to determine which sources of nutrition information the dietitians in Ohio have access to and read on an occasional or regular basis.

A questionnaire was developed for the purpose of this survey and mailed to a random sample of 450 dietitians in Ohio. In the first section demographic data were obtained. In the second section the dietitians were asked to indicate level of awareness for ten dietary standards published since 1977. In the next two sections the dietitians were asked to indicate their level of support and implementation for three designated dietary standards. The respondents indicated their access to sources of nutrition and regularity of reading in the last section.

Data from 259 questionnaires, a response rate of 57.6 percent, were coded and analyzed by a program written for use with the Statistical Package for Social Studies (SPSS). The data analysis consisted of total frequency counts on all items in the questionnaire as well as crosstabulations of selected relationships. The Chi Square statistic was used to determine significant differences and the level of confidence selected was .05.

Analysis of the demographic data revealed that the sample of dietitians was predominantly female (248 and 9 males) and 69 percent of the sample was under 40 years of age. The minimum level of education required to attain membership in the American Dietetic Association is a baccalaureate degree and clinical experience. Sixty-four percent of the sample indicated that this was the highest level of education attained and 40 percent of these dietitians had completed dietetic internships. Thirty percent of the sample had completed master's degrees and five percent of the sample had completed doctoral degrees. The mean number of years in the profession was 11 years and the mean number of years in their present position was 4.5 years. Ninety percent of the sample was registered.

Almost half of the dietitians in this sample were employed in clinical facilities or hospitals and 31 percent classified themselves as clinical dietitians. Fifteen percent of the dietitians did not classify themselves. In comparing these data with a study of the Dietetic profession ten years ago (57) there has been little change in the types of dietitians and places of employment for dietitians which may reflect the fact that there has been little change in facilities for health care in the last ten years.

The dietitians were asked to indicate their level of awareness of ten dietary standards. Over 50 percent of the dietitians indicated they were aware of eight of the ten dietary standards. Over 80 percent of the dietitians in this sample were aware of or had read carefully the Recommended Dietary Allowances and the Dietary Goals.

The level of awareness was crosstabulated with level of education and title of the dietitians. Significant differences ($p = .01$) were found for the level of awareness for two dietary standards, Dietary Goals and Task Force Report by the American Society for Clinical Nutrition, by level of education. A larger percentage of the dietitians with doctoral degrees had read the dietary standards carefully.- Significant differences ($p = .05$) were found for the level of awareness for two dietary standards, Surgeon General's Report and the RDA and title of the dietitians.

The Dietary Goals, the Dietary Guidelines and the Surgeon General's Report contained specific dietary recommendations for the American people and the dietitians were requested to indicate their level of support for each of these dietary recommendations. Over 90 percent of the dietitians supported the dietary recommendations in the Dietary Guidelines. There was an equally high level of support for the dietary recommendations in the Surgeon General's Report with two exceptions, 83 percent of the dietitians wupported the standard recommending less saturated fat and cholesterol and 76.7 percent agreed with the standard recommending less red meat. There was less

support for the Dietary Goals, range from 52.5 to 86.6 percent. Many dietitians indicated they could not support the precise level of nutrients recommended in these dietary standards.

Level of education of dietitians was related to the level of support for two of the dietary recommendations. Significant differences ($p = .05$) were observed for the Dietary Goals recommending less saturated fat. Fifty-three percent of the dietitians with doctoral degrees disagreed with this goal. There was a significant difference ($p = .05$) for a similar recommendation in the Surgeon General's Report.

There were no significant differences for the level of support when analyzed by age or title with one exception. There was a significant difference ($p = .01$) for the Dietary Goals recommending increasing complex carbohydrate when analyzed age range.

Dietitians were requested to indicate whether they were implementing the dietary recommendations in the Dietary Goals, Dietary Guidelines and the Surgeon General's Report in personal dietary habits. or professional practices. The percentage of dietitians implementing the Dietary Guidelines in personal dietary habits ranged from 80.2 to 94.5 while the level for the dietary recommendations in the Surgeon General's Report was 62 to 83.9 percent. There was a lower level of implementation for the Dietary Goals, range 41.6 to 87.9 percent. Many dietitians indicated that it was difficult to implement the precise levels recommended in the Dietary Goals.

The clinical dietitians had the highest level of implementation. They were implementing the Dietary Goals less than the other two designated standards. The teaching dietitians showed a similar pattern of implementation. The administrative dietitians had the lowest level of implementation.

The Journal of the American Dietetic Association and the American Dietetic Association Courier were the two publications read regularly by a large percentage of the dietitians, 76 and 70 percent respectively. An additional 17 percent of the dietitians indicated they read these two publications on an occasional basis. These two publications are received by dietitians as members of their professional association. The next highest percentage of dietitians reading a source regularly was "Nutrition Today", 25 percent. Many dietitians indicated that they did not have access to many of the sources of nutrition information listed in this questionnaire.

Significant differences were found for 8 of the 15 publications listed ($p = .05$) when crosstabulated with title. The research dietitians had access to more sources and read more sources on a regular basis. The teaching dietitians read a variety of sources on a regular or occasional basis. The administrative dietitians read those publications with an emphasis on administration more regularly.

The dietitians access to sources of nutrition information was reflected in their level of awareness of different dietary

standards. The level of awareness was lower for dietary standards published in journals the dietitians reported they did not have access to.

Limitations

Many Ohio dietitians do not have access to sources of nutrition information other than the two American Dietetic Association publications. This lack of access may have affected the level of awareness of the dietary standards and thus implementation in professional practices. The editors of these publica- should assume greater responsiblity not only for providing up-to-date information but providing it in a manner that is applicable to all types of dietitians. The professional association should explore ways to increase the access of dietitians to sources of dietary information and methods of implementing such information in professional practices. Dietitians need to be motivated to make use of sources of nutrition information other than the American Dietetic Association publications and this may involve pooling resources among personnel or allocation of resources to purchase journals and other publications.

Administrative dietitians reported the same level of support for dietary standards as the other classifications of dietitians but indicated the lowest level of implementation in professional practices. Since these dietitians have primary responsibility for food purchasing, menu planning and food preparation their opportunity to influence food habits is immense.

Dietitians could work through local, state and national dietetic associations to influence this group of dietitians. Educational efforts could focus on the newly established practice groups in the American Dietetic Association.

Continuing education activities within the Dietetic profession should contain opportunities to learn about new information such as the dietary standards. The sessions should deal with controversies surrounding such information and with methods of application in personal dietary habits and professional practices.

APPENDIX A

OHIO STATE UNIVERSITY
BIOMEDICAL SCIENCES REVIEW COMMITTEE
RESEARCH INVOLVING HUMAN SUBJECTS

PROTOCOL NO. 81H0091
ORIGINAL REVIEW ✓
CONTINUING REVIEW
FIVE-YEAR REVIEW

ACTION OF THE REVIEW COMMITTEE

With regard to the employment of human subjects in the proposed research entitled:

KNOWLEDGE AND IMPLEMENTATION OF DIETARY STANDARDS BY DIETITIANS IN OHIO

Virginia M. Vivian, Susan J. Rudge is listed as the principal investigator.

Human Nutrition and Food Management

THE BIOMEDICAL SCIENCES REVIEW COMMITTEE HAS TAKEN THE FOLLOWING ACTION:

- ☑ Approved
- ☐ Disapproved
- ☐ Approved with stipulations*
- ☑ Waiver of Written Consent Granted

*Stipulations stated by the Committee have been met by the investigator and, therefore, the protocol is approved.

It is the responsibility of the principal investigator to retain a copy of each signed consent form for at least four (4) years beyond the termination of the subject's participation in the proposed activity. Should the principal investigator leave the University, signed consent forms are to be transferred to the Human Subject Review Committee for the required retention period. This application has been approved for the period of one year. You are reminded that you must promptly report any problems to the Review Committee, and that no procedural changes may be made without prior review and approval. You are also reminded that the identity of the research participants must be kept confidential.

Date: MAR 1 8 1981 Signed: [signature], M.D.

Date: MAR 1 8 1981 Concur: [signature]
(Executive Committee Chairperson)
College of Medicine

cc: Investigator (Original)
Department Chairman
Development Officer
File

NOTE: PRINCIPAL INVESTIGATORS OF ON-GOING PROJECTS ARE REMINDED THAT THEY ARE TO USE REVISED OSU CONSENT FORMS PA-028A (FOR PROTOCOLS INVOLVING POSSIBILITY OF PHYSICAL INJURY RESULTING FROM SUBJECTS' PARTICIPATION) OR PA-028B AS SOON AS IT IS FEASIBLE TO DO SO. THESE FORMS MAY BE OBTAINED BY CALLING 2-9046.

PA-032
(Rev. 11/80)

APPENDIX B

OSU

The Ohio State University

Department of Human Nutrition and Food Management
265 Campbell Hall
1787 Neil Avenue
Columbus, Ohio 43210
Phone 614 422-4485

July 6, 1981

Dear Dietitian:

I am writing to request your cooperation in a survey to determine dietitians' reactions to recently published dietary standards. This descriptive survey is a dissertation project conducted under the direction of Dr. Virginia M. Vivian, Department of Human Nutrition and Food Management, School of Home Economics, The Ohio State University.

Since 1977 many professional organizations and government agencies have proposed dietary standards for the American people. Professional associations and government agencies have published statements in response to these dietary recommendations. Dietitians are responsible for the nutritional care of individuals and groups. It is important to determine the practicing dietitians' reactions to these dietary standards and whether dietitians are implementing these dietary standards. The findings will be used to determine implications for dietary practice.

Would you complete the enclosed questionnaire to help us determine your reaction to these dietary recommendations. Your responses will be held in strict confidence. The code on your questionnaire will only be used for follow up to ensure a high response rate.

The questionnaire should take no longer than 20 minutes to complete. Please return the questionnaire in the enclosed self-addressed stamped envelope at your earliest convenience but no later than August 15, 1981.

Thank you for your time and cooperation.

Sincerely,

Susan J. Rudge

Susan J. Rudge, M.S., R.D.

Enclosures

APPENDIX B

DIETARY STANDARDS QUESTIONNAIRE

Answer the following general questions; your responses will remain confidential and be used only in data analysis. For the first six questions check the appropriate category; for questions 7 - 9 fill in the appropriate response.

1. Gender: female ____
   male ____

2. Age range: 20-29 ____
   30-39 ____
   40-49 ____
   50-59 ____
   60+ ____

3. Indicate the highest education attained:

   Bacclaureate
   Traditional program ____
   Coordinated undergraduate program ____
   Clinical Experience
   Dietetic Internship ____
   Dietetic Traineeship ____
   Master's Degree ____
   Doctoral Degree ____

4. Are you a registered dietitian? yes ____ no ____

5. Indicate your functional title in your present position: (Check only one)

   Administrative dietitian ____
   Clinical dietitian ____
   Community dietitian ____
   Consulting dietitian ____
   Research dietitian ____
   Teaching dietitian ____
   Other (specify) ____

6. Indicate your primary place of employment: (Check only one)

   Clinical facility/hospital ____
   Community agency or program ____
   Community Food Service ____
   Nursing Home ____
   School Food Service ____
   University or college ____
   Community College ____
   Other (specify) ____

7. Indicate the number of years in the dietetic profession ____

8. Stated hours of employment: ____ per week

9. How long have you been in your present position: ____ years

PLEASE CONTINUE ON BACK

APPENDIX B

Between 1977 and 1980 several professional organizations and government agencies published dietary standards for the American people. Please indicate your knowledge of these standards by checking the appropriate column. Also, please check the last column if you have a copy of the standard.

	unaware of	aware of	have read carefully	have a copy
Dietary Goals, first edition, Feb., 1977				
Dietary Goals, second edition, Dec., 1977				
AMA Concepts of Nutrition and Health, 1979				
"Healthy People" - Surgeon General's Report on Health Promotion and Disease Prevention, 1979				
"Evidence Relating Six Dietary Factors to the Nation's Health" - Task Force Report, AM. Society of Clinical Nutrition, 1979				
Ninth Edition of the Recommended Dietary Allowances, NRC, NAS, 1980				
"Toward Healthful Diets" - Report of the Food and Nutrition Board, NRC, NAS, 1980				
"Nutrition and Your Health: Dietary Guidelines for Americans", DHHS-USDA, 1980				
"The Hassle-Free Guide to Better Diet", USDA, 1980				
Ideas for Better Eating: Menus and Recipes to make use of Dietary Guidelines, USDA, 1981				

PLEASE CONTINUE ON NEXT PAGE

APPENDIX B

Read through the following three dietary standards: Revised Dietary Goals, The Dietary Guidelines, and dietary standards from "Healthy People", Surgeon General's Report. There are two sets of questions concerning these standards, the first set on this page concerns your support of these standards and the second set on the next page your implementation of these standards. Check the appropriate column.

A. SUPPORT OF THE STANDARDS	agree with standard	disagree with standard	no opinion
DIETARY GOALS REVISED			
1. To avoid overweight, consume only as much energy as is expended; if overweight, decrease energy intake and increase energy expenditure.			
2. Increase consumption of complex carbohydrate and "Naturally occurring" sugars from about 28% of energy intake to about 48% of energy intake.			
3. Reduce consumption of refined and processed sugars by about 45% to account for about 10% of the total energy intake.			
4. Reduce overall fat consumption from approximately 40% to about 30% of energy intake.			
5. Reduce saturated fat consumption to account for about 10% of total energy intake: and balance with polyunsaturated and monosaturated fat, which should account for about 10% of energy intake each.			
6. Reduce cholesterol consumption to about 300 mg. a day.			
7. Limit the intake of sodium by reducing the intake of salt to about 5 gm. a day.			
HEALTHY PEOPLE - SURGEON GENERAL'S REPORT			
1. only sufficient calories to meet body needs and maintain desirable body weight;			
2. less saturated fat and cholesterol;			
3. less salt;			
4. less sugar;			
5. relatively more complex carbohydrate such as whole grains, cereals, fruits, and vegetables;			
6. relatively more fish, poultry, legumes and less red meat;			
DIETARY GUIDELINES			
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, do so in moderation			

PLEASE CONTINUE ON BACK

APPENDIX B

Read through the three dietary standards again and indicate whether you have implemented any of these standards. Check as many columns as apply to you.

B. IMPLEMENTATION OF THE STANDARDS	Implemented in personal dietary habits	Implemented in clinical area in counseling, etc.	Implemented in administrative area, in menus, etc.	Implemented in teaching with students	have not implemented
DIETARY GOALS - REVISED					
1. To avoid overweight, consume only as much energy as is expended; if overweight, decrease energy intake and increase energy expenditure.					
2. Increase consumption of complex carbohydrate and "naturally occurring" sugars from about 28% of energy intake to about 48% of energy intake.					
3. Reduce consumption of refined and processed sugars by about 45% to account for about 10% of the total energy intake.					
4. Reduce overall fat consumption from approximately 40% to about 30% of energy intake.					
5. Reduce saturated fat consumption to account for about 10% of total energy intake; and balance with polyunsaturated and monosaturated fat, which should account for about 10% of energy intake each.					
6. Reduce cholesterol consumption to about 300 mg. a day.					
7. Limit the intake of sodium by reducing the intake of salt to about 5 gm. a day.					
HEALTHY PEOPLE - SURGEON GENERAL'S REPORT					
1. only sufficient calories to meet body needs and maintain desirable body weight;					
2. less saturated fat and cholesterol;					
3. less salt;					
4. less sugar;					
5. relatively more complex carbohydrate such as whole grains, cereals, fruits, and vegetables;					
6. relatively more fish, poultry, legumes and less red meat.					
DIETARY GUIDELINES					
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, do so in moderation					

PLEASE CONTINUE ON NEXT PAGE

APPENDIX B

Indicate the degree of access you have to the sources of nutrition information listed below. Check only one column for each publication.

	do not have access to	have access to	read occasionally	read regularly
American Dietetic Association Courier				
American Journal of Clinical Nutrition				
American Journal of Public Health				
Community Nutrition Institute Weekly				
Food Technology				
Hospitals				
Institutions				
Journal of American Dietetic Association				
Journal of American Medical Association				
Journal of Nutrition				
Journal of Nutrition Education				
New England Journal of Medicine				
Nutrition and the M.D.				
Nutrition Reviews				
Nutrition Today				
Other (please specify)				

This completes the questionnaire. Please return it in the enclosed envelope. Thank you for your assistance.

PLEASE RETURN TO:

Susan J. Rudge
616 S. College Avenue #130
Oxford, Ohio 45056

APPENDIX C

Dietary Goals - First Edition (1)

GOALS

1. Increase carbohydrate consumption to account for approximately 55 to 60 percent of the energy.

2. Reduce overall fat consumption from approximately 40 to 30 percent of energy intake.

3. Reduce saturated fat consumption to account for about 10 percent of total energy intake; and balance with poly-unsaturated and mono-unsaturated fats, which should account for about 10 percent of energy intake each.

4. Reduce cholesterol consumption to about 300 mg a day.

5. Reduce sugar consumption by about 40 percent to account for about 15 percent of total energy intake.

6. Reduce salt consumption by about 50 to 85 percent to about 3 grams per day.

The Goals Suggest the Following Changes in Food Selection and Preparation

1. Increase consumption of fruits and vegetables and whole grains.

2. Decrease consumption of meat and increase consumption of poultry and fish.

3. Decrease consumption of foods high in fat and partially substitute polyunsaturated fat for saturated fat.

4. Substitute non-fat milk for whole milk.

5. Decrease consumption of butterfat, eggs and other high cholesterol sources.

6. Decrease consumption of sugar and foods high in sugar content.

7. Decrease consumption of salt and foods high in salt content.

APPENDIX C

Dietary Goals - Second Edition (2)

GOALS

1. To avoid overweight, consume only as much energy as is expended; if overweight, decrease energy intake and increase energy expenditure.

2. Increase the consumption of complex carbohydrate and "naturally occuring" sugars from about 28% of energy intake to about 48% of energy intake.

3. Reduce the consumption of refined and processed sugars by about 45% to account for about 10% of the total energy intake.

4. Reduce overall fat consumption from approximately 40% to about 30% of energy intake.

5. Reduce saturated fat consumption to account for about 10% of total energy intake; and balance with polyunsaturated and monounsaturated fat, which should account for about 10% of energy intake each.

6. Reduce cholesterol consumption to about 300 mg a day.

7. Limit the intake of sodium by reducing the intake of salt to about 5 gm a day.

The Goals Suggest the Following Changes in Food Selection and Preparation

1. Increase the consumption of fruits and vegetables and whole grains.

2. Decrease consumption of refined and other processed sugars and foods high in such sugars.

3. Decrease consumption of foods high in total fat, and partially replace saturated fats, whether obtained from animal or vegetable sources, with polyunsaturated fats.

4. Decrease consumption of animal fat, and choose meats, poultry and fish which will reduce saturated fat intake.

5. Except for young children, substitute low-fat and nonfat milk for whole milk, and low-fat dairy products for high fat dairy products.

6. Decrease consumption of butterfat, eggs, and other high cholesterol sources. Some consideration should be given to easing the cholesterol goal for premenopausal women, young children, and the elderly in order to obtain the nutritional benefits of eggs in the diet.

7. Decrease consumption of salt and foods high in salt content.

APPENDIX C

Dietary Recommendations from "Healthy People" (3)

Americans would probably be healthier, as a whole, if they consumed:

only sufficient calories to m-et body needs and maintain desirable weight (fewer calories if overweight);

less saturated fat and cholesterol;

less salt;

less sugar;

relatively more complex carbohydrate such as whole grains, cereals, fruits and vegetables; and

relatively more fish, poultry, legumes (e.g. beans, peas, peanuts), and less red meat.

APPENDIX C

Dietary Guidelines for Americans (4)

1. Eat a variety of foods
2. Maintain ideal body 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

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