United States
Department of
Agriculture

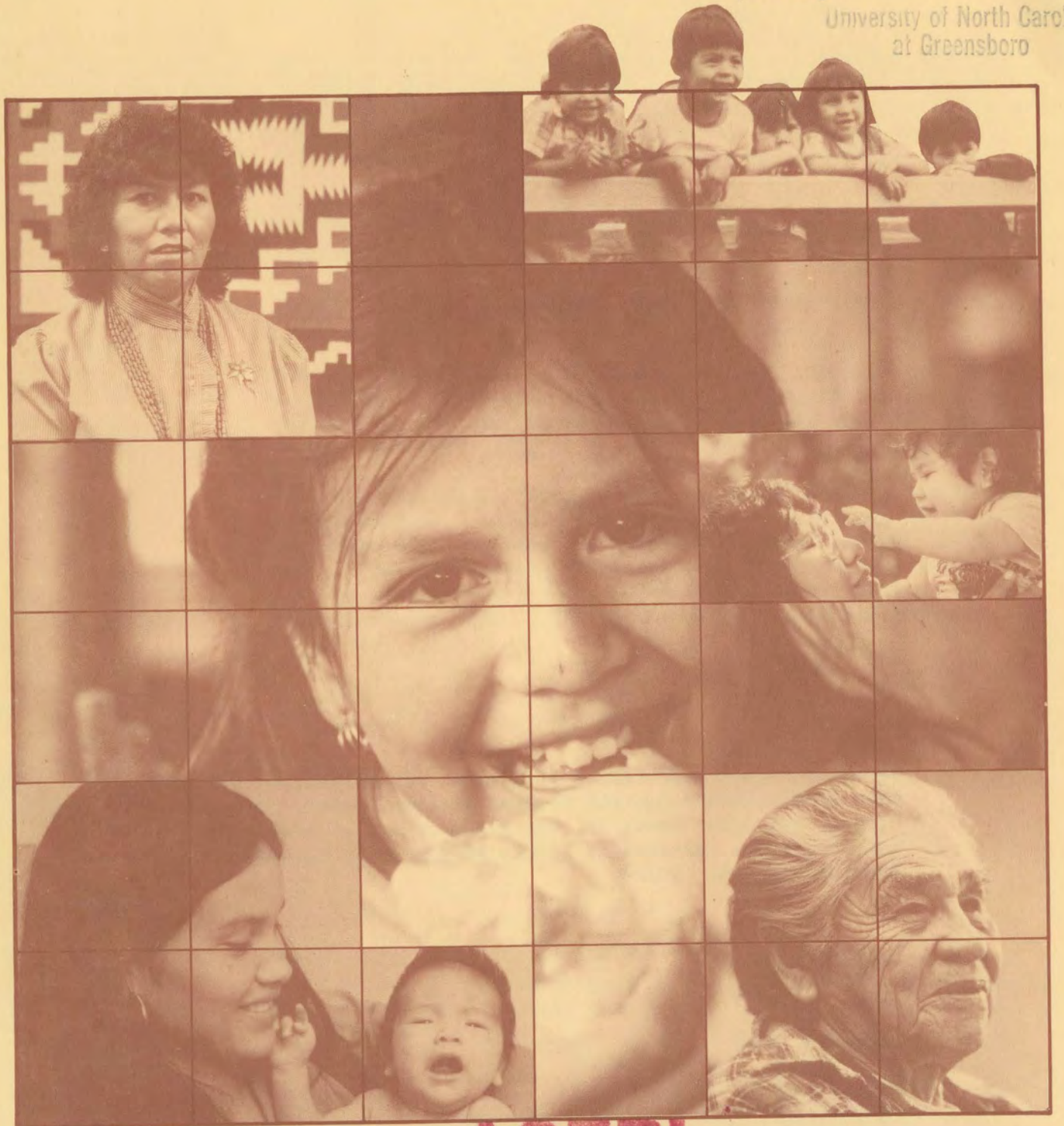
Food and
Nutrition
Service

FNS-249

# Nutrition Education for Native Americans:

## A Guide for Nutrition Educators





September 1984

# Acknowledgments

The following persons were responsible for the preparation of this guide:

Technical Content: Nutrition and Technical Services Division (NTSD): Joyce Arango, M.P.H., R.D., Margaret Fujikawa, M.S., M.P.A., R.D., Ching-Ye Lee, M.S., M.A., Professional Diploma for Specialist in Nutrition Education (formerly with NTSD), Jim Krebs-Smith, M.P.H., R.D. (formerly with NTSD)

Editorial Assistance: Helen Lilly, M.S. (NTSD), Martha Poolton, Ed.D. (NTSD), Beverly Westmoreland, Public Information

Format and Word Processing: Mary Jean Daniels, Regina Hart, Joyce Hawkins

The authors would like to thank especially the many individuals who reviewed the numerous drafts of the publication and gave us the benefit of their knowledge and experience in working with Native Americans.

This publication was prepared in collaboration with the Indian Health Service (Patricia Roseleigh, M.S., R.D.) and the Bureau of Health Care Delivery and Assistance (Doris Lauber, M.P.H., R.D., formerly Regional Nutrition Consultant, Public Health Service (PHS), Region IX), Health Resources and Service Administration, PHS, U.S. Department of Health and Human Services.

# Contents

TABLES



FIGURE

# Introduction

The purpose of this guide is to help nutrition educators* working with food assistance and other programs with a nutrition component to better address the nutritional concerns and unique nutrition education needs of Native Americans. It is written primarily as an aid to understanding the cultural characteristics and basic health and diet-related problems of Native Americans to promote more effective nutrition counseling and community nutrition education. The guide contains three major sections: 1) background information, 2) suggestions for counseling, and 3) resources for nutrition education.

Background Information. This section of the guide briefly discusses the nutritional status, nutrition-related illnesses, and traditional and contemporary dietary practices of Native Americans. Included is some information on lifestyles and food behavior, adaptation of materials for Native American cultures, and current nutrition education activities in various programs or delivery systems that may be of help to nutrition educators. References pertaining to these topics are provided at the end of the section.

Suggestions for Counseling. This section provides several counseling strategies offered by some individuals who work with or have worked closely with Native Americans in different geographic locations. This section was developed especially for those nutrition educators who may not have experience working with Native Americans. References pertaining to counseling are provided at the end of the section.

Resources for Nutrition Education. The final section of the guide offers a variety of resources for nutrition educators. It includes both government and private sector resources.

---

*"Nutrition educator," as used here, refers to a professional who may be involved in nutrition education in food assistance programs and other programs with a nutrition component. Such professionals may include physicians, dentists, nurses, health educators, teachers, nutritionists and dietitians, and home economists.

# I. Background Information

## Nutritional Status and Nutrition-Related Illnesses

Nutrition-related health problems of Native Americans can be identified throughout the life cycle (table 1). Nutrition education efforts may focus on making healthy children and adults aware of the role of good nutrition in disease prevention. In addition, nutrition education efforts may help prevent further complications in those persons who already have nutrition-related health problems.

Nutritional adequacy of a population is often reflected by the socioeconomic status of the people. Many Native Americans live in remote and harsh areas of the country. Isolation often leads to difficulties in acquiring or purchasing food. A harsh climate and land also make it difficult to grow food. Well over two-thirds of the Native American population live on land which does not produce adequate food, or in areas where jobs are limited to infrequent seasonal work. The employment rate is about 49 percent (12[1]).

Seventy-five percent of Native American families have annual incomes below the poverty level of $7,000 (12). As a population, Native Americans have certain diseases and health problems in all age groups that are greater in magnitude than in other Americans. This is indicative of a link between income level and health. Medical problems related to nutrition occur throughout the population.

The severity of health problems among Native Americans is compounded by environmental conditions. One common health problem caused by poor environmental conditions is diarrhea, especially among Native American infants and children. Diarrhea interferes with normal nutrient absorption. Recurrent episodes of diarrhea can reduce or limit the nutrient supply to the body, which can then affect normal growth and development. In 1979, the death rate from gastrointestinal disease for Native Americans was 1.8 times higher than the rate for all races in the general U.S. population.

---

[1]Underscored numbers in parentheses refer to the references at the end of each section.

## Table 1. Summary of Nutrition-Related Health Problems and Appropriate Nutrition Interventions for Native Americans

| POPULATION | HEALTH PROBLEMS | NUTRITION INTERVENTION |
|---|---|---|
| Women of Childbearing Age | Obesity | Reduce foods high in calories<br>Increase nutrient dense foods |
| | Anemia | Increase iron, protein, vitamin C, folic acid |
| Infants and Children | Digestive Diseases | Improve food sanitation |
| | Respiratory Diseases | Improve general nutrition |
| | Anemia | Increase iron, protein, vitamin C |
| | Dental Caries | Reduce sugar, sticky sweets |
| | Obesity | Reduce foods high in calories<br>Increase nutrient dense foods |
| | Underweight | Increase nutritious foods high in calories |
| | Underdeveloped (Stunting) | Increase foods high in calories, protein, calcium, vitamins A, C |
| Adolescents | Obesity. | Reduce foods high in calories<br>Increase nutrient dense foods |
| | Dental Caries | Reduce sugar, sticky sweets |
| Adults and Elderly | Obesity | Reduce foods high in calories<br>Increase nutrient dense foods |
| | Diabetes | Necessary dietary management |
| | Hypertension | Reduce foods high in sodium |
| | Cardiovascular Diseases | Reduce foods high in saturated fat, cholesterol, sodium, calories |

Source: Compiled by Nutrition and Technical Services Staff, Food and Nutrition Service, U.S. Department of Agriculture, from various references cited and comments from specialists who work with Native Americans.

Some homes on Indian reservations lack refrigeration facilities; storage space for food is often inadequate and may not be rodent proof. Many homes also lack running water and sanitary waste disposal systems. Flies are a serious problem in many areas, as is unsanitary disposal of food waste and a lack of screens on doors and windows. All these conditions compound health problems.

### Pregnant and Breastfeeding Women

A low prevalence of abnormal hemoglobin values was found among the Native American women whose values were reported to the Pregnancy Nutrition Surveillance System of the Centers for Disease Control (CDC) in 1980 (9). Low birth weight, less than 2,501 grams or about 5-1/2 pounds, was more prevalent among Native American infants than among infants of all other ethnic origins, according to the data in the 1980 CDC Pediatric Nutrition Surveillance System Summary (9). The same surveillance data revealed that Native American mothers were more likely to breastfeed than mothers of other ethnic groups, with 46.7 percent having breastfed their infants.

### Infants and Children

Native American children were found to have the second highest prevalence of nutrition-related abnormalities in children of all ethnic groups, according to the 1980 CDC Nutrition Surveillance System Summary (9). A high prevalence of short stature, low height for age, and overweight among preschool Native American children was a consistent finding. The prevalence of short stature was low, 3.5 percent, for infants less than 3 months old; however, it increased with age until the peak prevalence of 13.9 percent was reached between ages 12 months and 23 months. Among children 6 through 9 years old, the prevalence of short stature had decreased to 2.7 percent.

Among children, the prevalence of overweight was lowest among the youngest and the oldest age groups, 5.4 percent and 5.3 percent, respectively. The peak prevalence of 16.3 percent was found among those children 2 through 5 years old. Relative to other ethnic groups, Native American children 6 months through 5 years old have the highest weight-for-height. Whether or not this early propensity for overweight is associated with ethnic-specific feeding patterns, or with other environmental factors, cannot yet be determined. However, the prevalence reflects a clear risk of overweight for one out of six Native American children (9).

Among Native American children less than 2 years old, 8.6 percent of the children were thin, which was considerably higher than expected. However, of all ethnic groups,

Native American children from birth through 9 years old tended to be the least anemic (9).

### Adults

Adults, ages 20 and over, make up 55 percent of the Native American population, with 29 percent aged 35 years and over. This compares with 68 percent ages 20 and over, and 42 percent, ages 35 and over, for the All Races category in the general U.S. population (10). The frequency of poor nutritional status of Native American adults is reflected in their nutrition-related health problems. These problems include obesity, diabetes, diseases of the heart, and alcoholism. Although reliable data on the prevalence of obesity among Native Americans are not available, obesity is now generally accepted as an important risk factor for development of diabetes, heart disease, and high blood pressure. The high morbidity and mortality due to diabetes among the adult Native American population poses a major health problem.

Data collected by the Indian Health Service for 1982 (10) show that the death rate from diabetes among the Native American population is consistently much higher than that of the general U.S. population. For the age group 25 to 34 years, the diabetes mellitus death rate for Native Americans was 1.2 times the rate for all races in the United States. Succeeding 10-year groups experienced death rates 2.7, 3.9, 2.7, and 2.4 times as high as the rate for all races in the general U.S. population. Since diabetes affects the circulatory system, diabetics are more prone to the development of heart and small blood vessel diseases.

The death rate attributed to major cardiovascular diseases among Native Americans is higher than that of the general U.S. population up to age 44 (10). After age 44, the death rate of the general U.S. population is higher than that of Native Americans. In both groups, the death rate from cardiovascular diseases doubles in each succeeding 10-year period after age 44. However, these diseases kill a greater percentage of Native Americans during their younger years, when they are able to be most productive in their communities.

Deaths of Native Americans due to alcoholism are very high, with a rate that is 7.7 times higher than that of the general U.S. population (10). The nutritional effects on those who consume large quantities of alcohol can be quite significant over time. These effects include nutrient deficiencies, obesity, and birth defects in children whose mothers drink during pregnancy.

## Traditional and Contemporary Native American Dietary Practices

Dietary practices of individuals and groups of Native Americans vary from region to region (see figure). As with any culture, these dietary patterns reflect the physiological, sociological, and psychological needs of those who adhere to them.

Native Americans encompass many groups with distinctly different cultural patterns. Anthropologists have grouped them into basic geographic areas representing different climatic zones with different plant and animal distributions. The zones in the United States are: Eastern Woodlands, Plains, Southwest, California Basin and Plateau, Northwest Coast, and Alaska.

The diets of the Native American groups living within each of these zones have been influenced by the natural food supplies of the environment. Although migration of tribes has brought about cultural exchanges, basic dietary patterns have persisted (11).

### Traditional Practices

People of the Eastern Woodlands zone traditionally consumed mostly small game, fish and seafood from coastal waters and streams, and a wide variety of plant food.

The hunters of the Plains relied heavily on the abundance of buffalo and other game for their food.

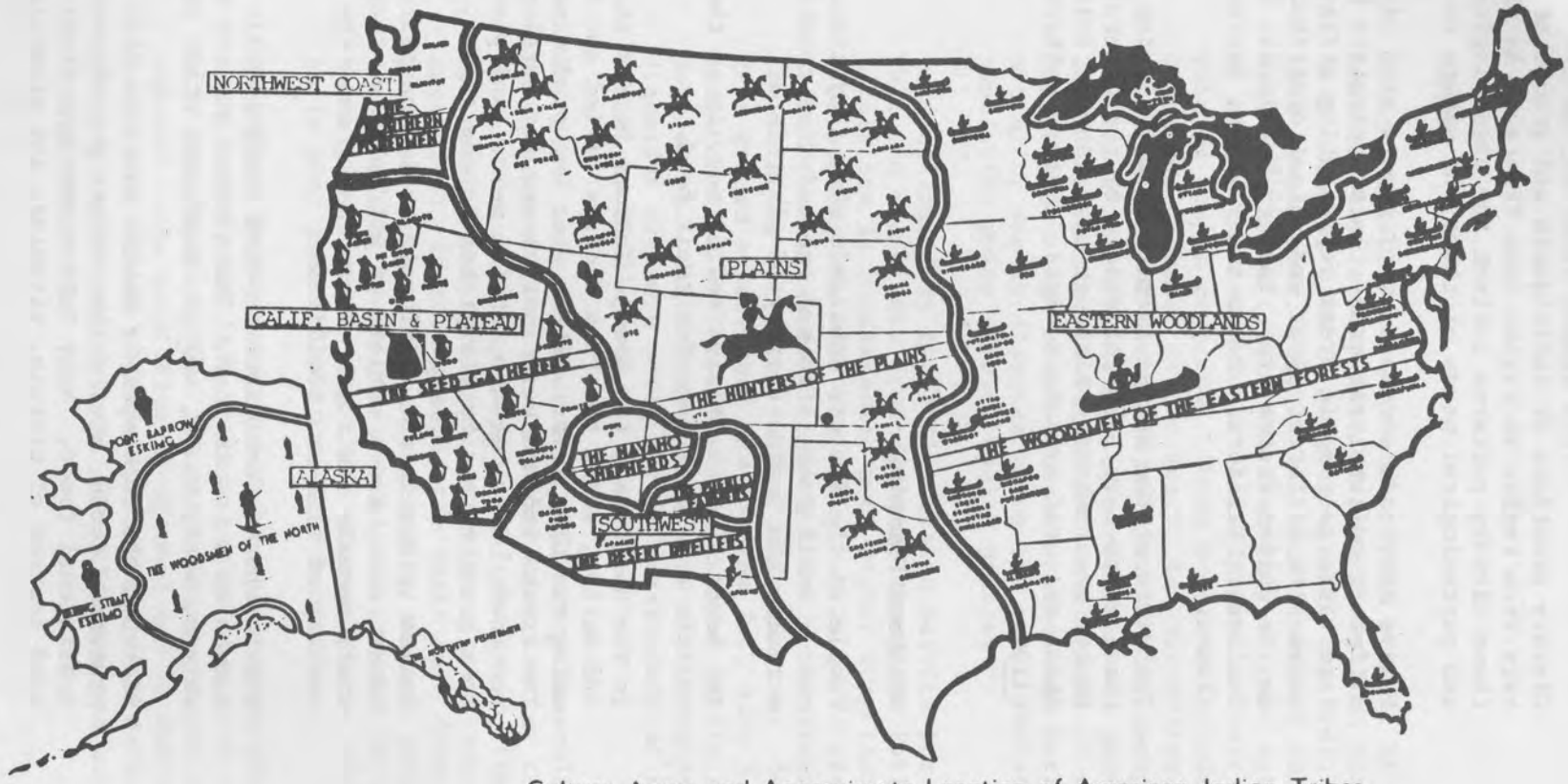
In the Southwest, the Navajo Indians herded sheep and ate lamb and mutton, while the Pima Indians tilled and irrigated land using the Gila River. Their diet was predominantly vegetarian. The Apache Indians were hunters and ate antelope and small game and fowl. Corn, squash, chili, melon, and pinon nuts were used to a great extent by all tribes in the region.

Indian tribes in the California Basin and Plateau zone gathered seeds, nuts, and a variety of wild plants; they also hunted small mammals and fowl. Those living near the coast also ate a variety of fish and shellfish.

The Northwest Coast Indians were traditionally fishermen, using salmon as a staple food. The Alaskan Natives ate a variety of salmon, seal, whale, walrus, bear, and other game and fowl.

Although the contemporary Native American diet includes modern processed foods, most tribes retain a preference for certain traditional foods. Many Native American traditional foods are good sources of protein, vitamins, and minerals.

When game and fish are plentiful, they are important sources of food for those tribes that rely on fishing and hunting




Culture Areas and Approximate Location of American Indian Tribes Today (originally published by the Indian Arts and Crafts Board)

INTERIOR, HASKELL PRESS: 5-70-07-25M

**Figure: Areas of Native American Culture in the United States**

expeditions. However, feast or famine conditions may still exist in those areas. Fruits, berries, roots, and wild greens are highly valued foods, but have become scarce in many areas. When in season, fresh produce is eaten in large quantities. Preservation, either by drying or cold storage, is a common practice.

Native Americans traditionally are efficient in their use of foods. In Alaska, when a seal is caught, the whole village shares in the feast and none is wasted. When a sheep or goat is slaughtered by tribes of the Southwest Region, the entire carcass, including all organs and blood, is used in stews and cornmeal casseroles.

In some cases, traditional food preparation methods may increase the availability of some nutrients contained in traditional foods. For example, Hopi Indians add plant ash to corn, which may make more of the minerals in the corn available for absorption (4).

Table 2 identifies traditional food habits of Native Americans located in different geographic areas.

### Contemporary Practices

The contemporary diet of the Native American combines indigenous natural foods of their cultural heritage with processed foods and fresh foods, when available. However, since those indigenous foods often are not available, especially to those Native Americans living off the reservation, the daily diet of many people consists mainly of commodity foods donated by the U.S. Department of Agriculture (USDA) and foods purchased at stores. Fresh fruits and vegetables may not be available for purchase, or may be too expensive in many areas, unless they are locally grown.

Studies on current dietary practices among many Native American population groups show that their diets are often high in calories, carbohydrates, and saturated fat (1,2,5,6). Excess caloric intake and a low level of activity over a period of time result in obesity, which may predispose the onset of diabetes in certain adults. Saturated fat in the diet may contribute to the development of coronary heart disease, which is often a complication of diabetes.

Table 3 shows that there is much similarity in foods now eaten by Native Americans in various regions. Some reported meal patterns, however, show that the contemporary diet of many Native Americans lacks a wide variety of foods. The diet may then be inadequate in several key nutrients, and the nutrient density may be low. In many cases, the meal pattern is also high in refined sugar, cholesterol, fat, and salt.

## Table 2. Some Traditional Foods Eaten by Native Americans

| FOODS REGIONS: | ALASKA | NORTHWEST COAST | CALIF. BASIN & PLATEAU | PLAINS | EASTERN WOODLANDS | SOUTHWEST |
|---|---|---|---|---|---|---|
| Game<br>Fowl | Bear, seal, walrus, whale, deer, wild fowl | Deer and small mammals, wild fowl | Deer, elk, other game, Grouse, wild turkey, and other fowl | Buffalo, elk, antelope, and a variety of small mammals and fowl | Deer and small mammals, wild fowl | Deer meat jerky, Mutton (sheep, goat), wild fowl |
| Seafood | Salmon, other fish shellfish | Fish - especially salmon<br>Eel<br>Clams, mussels, oysters | Fish - salmon, others<br>Eel<br>Clams, mussels | Fish | Fish - variety<br>Clams, mussels, | Fish - small amount<br>oysters |
| Grains<br>Seeds<br>Roots | | Corn, beans<br>Roots - variety | Corn, beans,<br>bitter roots,<br>biscuit camus, wild carrots, wild turnips, wild potato | Corn, beans,<br>wild rice,<br>wild potato,<br>turnip | Corn, beans,<br>wide range of roots, wild rice, wild potato potatoes | Corn, beans,<br>blue cornmeal, bread, dumplings, biscuits |
| Wild greens<br>Flowers<br>Vegetables | Variety in spring & fall | Fern<br>Greens - wide variety<br>Squash | Wild celery, Greens - wide variety<br>Squash | Greens - wide variety<br>rose hips, rose buds<br>Mint | Fern<br>Greens - wide variety<br>Squash | Wild spinach, chili peppers, cacti, Cholla buds, Squash |
| Fruits | Berries | Berries - huckleberry, service berry, salmon berry<br>Choke cherry, wild plum | Berries - huckleberry, service berry, salmon berry<br>Choke cherry, wild plum<br>Melons, peaches | Berry - strawberry, service berry<br>Choke cherry, wild plum<br>Red haw, rose hips | Fruits and berries - wide variety | Melons, pumpkins |
| Nuts | | Hazel nuts, roasted squash and pumpkin seeds | Hazel nuts, roasted squash and pumpkin seeds, acorns | Nuts, seeds - wide variety | Nuts, seeds - variety<br>Acorns | Pinon nuts, roasted squash, pumpkin, and watermelon seeds |
| Others | Animal Fat | Lichens<br>Lard<br>Fry bread<br>Dumplings, biscuits | Lichens<br>Lard<br>Fry bread<br>Wheat flour, dumplings, biscuits | Lard<br>Fry bread<br>Maple sugar | Lichens<br>Lard<br>Maple sugar | Lard, other animal fat<br>Fry bread<br>Wheat tortilla<br>Indian teas |

Source: Compiled by Nutrition and Technical Services Staff, Food and Nutrition Service, U.S. Department of Agriculture, from various references cited and comments from specialists who work with Native Americans.

## Table 3. Contemporary Foods Eaten by Native Americans

| FOODS REGIONS | ALASKA | NORTHWEST COAST | CALIF. BASIN & PLATEAU | PLAINS | EASTERN WOODLANDS | SOUTHWEST |
|---|---|---|---|---|---|---|
| Meat<br>Poultry<br><br>Seafood<br>Egg<br>Nuts | *Traditional foods - bear, seal, walrus, whale, deer, wild fowl meat and fish<br>Fish - fresh, canned<br>Egg mix<br>Peanut butter | *Traditional foods - deer, small mammals, wild fowl<br>Beef, pork, canned meat, luncheon meat, bacon, sausage, chicken, turkey<br>Fish - fresh, canned<br>Fresh and dried eggs<br>Peanuts, peanut butter<br>Roasted squash and pumpkin seeds | Similar to Northwest Coast | Similar to Northwest Coast<br>Less fish and seafood | Similar to Northwest Coast | Beef, pork, chicken, mutton, deer jerky, organ meats<br>Small amount - canned fish, canned meat, chorizo, luncheon meats,<br>Eggs - fresh and dried,<br>Peanuts, peanut butter, pinon, other nuts, and seeds |
| Bread<br>Cereal | Cereals - hot and cold | Cereals - hot and cold<br>Pancakes, biscuits, bread, rice, macaroni<br>Traditional foods - dumplings, fry bread | Similar to Northwest Coast | Similar to Northwest Coast | Similar to Northwest Coast | Cereals - hot and cold<br>Flour tortilla, blue cornmeal, mush bread, pudding,<br><br>Traditional foods - dumplings, biscuits, fry bread |
| Fruits and Fruit juice | Canned, dried, seasonal berries<br>Canned fruit juice | Fresh fruit in season - cherries, berries, apricot, peach, apple, pear, plum, orange, melon, banana,<br>Canned fruit - fruit cocktail, pear, peach, apricot, pineapple<br>Canned fruit juice | Similar to Northwest Coast | Similar to Northwest Coast | Similar to Northwest Coast | Fresh fruit in season - melon, plum, orange, apple, apricot, peach<br>Canned fruit juices<br>Dried fruit<br>Melon, pumpkin, other fruit<br>Cholla buds |

*Contemporary diet still contains some traditional foods.

Continued

## Table 3. Contemporary Foods Eaten by Native Americans—Continued

| FOODS REGIONS | ALASKA | NORTHWEST COAST | CALIF. BASIN & PLATEAU | PLAINS | EASTERN WOODLANDS | SOUTHWEST |
|---|---|---|---|---|---|---|
| Vegetables<br>Roots<br>Seeds | Canned items<br>Fresh items locally available in spring and fall | Canned - corn, beans, peas<br>Fresh - cabbage, carrot, celery, green beans, corn, asparagus, tomato, squash, peas, potatoes, wild roots<br>Wild greens in season<br>Dried beans | Similar to Northwest Coast | Similar to Northwest Coast | Similar to Northwest Coast | Potatoes, cabbage, onions, pumpkins,<br>Fresh vegetables in season - lettuce, spinach, squash, beans, chili pepper, tomatoes, corn, carrots<br>Canned green beans, corn and tomatoes<br>When available, wild greens, asparagus |
| Milk and Cheese | Milk - canned, powdered<br>Cheese | Milk - fresh, canned, powdered<br>Cheese<br>Ice Cream | Similar to Northwest Coast | Similar to Northwest Coast | Similar to Northwest Coast | Similar to Northwest Coast<br>Fresh milk little used if no refrigeration available |
| Beverages<br>Sweets<br>Fats<br>Other | Coffee<br>Candy, jam, jelly, honey<br>Cookies<br>Shortening and animal fat | Coffee, tea,<br>Juice drinks, soft drinks<br>Syrup, jam, jelly<br>Cookies, cakes, pies, pastries, donuts<br>Shortening, margarine<br>Potato chips, salt pork, bacon, ham hock | Similar to Northwest Coast | Similar to Northwest Coast | Similar to Northwest Coast | Similar to Northwest Coast |

Source: Compiled by Nutrition and Technical Services Staff, Food and Nutrition Service, U.S. Department of Agriculture, from various references cited and comments from specialists who work with Native Americans.

Since there is some diversity in eating patterns of Native Americans from various zones, as well as within tribes, there is no single appropriate way of approaching each of the diet-related problems of Native Americans. Instead, nutrition educators must decide the best approach to take when discussing health problems with the members of the tribal communities they serve, whether on or off the reservation. Additionally, it is important that nutrition educators attempt to determine current dietary patterns before counseling.

## Lifestyle and Food Behavior

While nutrition education for Native Americans is usually focused on dietary changes related to a specific condition or diet-related disease, the lifestyle of the client/patient needs to be considered. This lifestyle usually centers around the family and tribal community. Often traditional values are reflected in food behavior.

It is the nature of most Native Americans to share food with strangers, and it is considered impolite to ever refuse food offered (11). The extended family structure of many tribes is reflected at the dining table. Family structure may also strongly affect food preferences and practices. Food is an important element of feasts on ceremonial occasions such as weddings, rites of passage, seasonal changes, and modern holidays. These ceremonies serve as a means to share food resources, as well as a means to symbolically express friendship or social status (11).

There are many culturally related food concepts that determine food acceptance. One of these is the dipolar concept of food, which is common among some tribes. According to this concept, some foods are considered "strong," while other foods are considered "weak." An example of this can be found among the Navajo, where meat and blue cornmeal are considered "strong" foods, while milk is considered a "weak" food (11).

Religious or ceremonial significance is attached to many foods. Corn is considered sacred to many cultures and is often used in ceremonies, such as weddings. Blue corn is especially important to Hopi and Navajo tribes.

Dietary taboos against many foods exist among different tribes. For example, many Crow Indians place a taboo on fish and stream "creatures," and Delaware Indians often discourage pregnant women from eating cabbage, onions, or salt.

Since USDA commodity foods are available to many tribes nationwide, some indications of their cultural acceptance may be useful. Table 4 identifies commodities currently offered and provides comments regarding cultural acceptance of these items among various tribes and groups.

## Table 4. Cultural Acceptance of Commodity Foods

| | | | |
|---|---|---|---|
| | **Meat/Meat Alternates** | | |
| Dry Beans - | Highly acceptable to many tribes; generally acceptable to others except that beans require long cooking, which may not be desirable for families with limited cooking facilities. | Egg Mix - | Acceptable to some tribes and primarily used as breakfast food, but not well accepted by others. Many tribes do not know how to use egg mix in preparing common recipes that call for eggs. |
| Canned Meats - | Meat is considered an important food to Navajos, but not very important to Papagos, whose diet is high in carbohydrates and plant food. | Canned Fish (Tuna) - | Highly acceptable to Northwest and California groups where fish is a traditional diet component; not eaten by Southwest groups except on special occasions; considered a "taboo" food by some Plains Indians. |
| Peanut Butter And Peanuts - | Generally acceptable to all groups, especially those which traditionally gathered nuts. | | |
| | **Milk and Cheeses** | | |
| Dry Milk - | Not widely accepted; considered a "weak" food by Navajos; many groups do not know how to use dry milk in preparing common recipes. | Evaporated Milk - | Usually considered an infant food by Papagos, used by Navajos in coffee; generally more acceptable than dry milk. |
| Processed Cheese - | Generally well accepted among all groups. | | |

Continued

## Table 4. Cultural Acceptance of Commodity Foods—Continued

| | | | |
|---|---|---|---|
| | **Breads and Cereals** | | |
| Flour - | Most widely accepted commodity; very important to the Navajo and Papago diet for breadmaking. | Rice - | Highly acceptable to many tribes where wild rice is culturally important. |
| Cornmeal - | Well accepted by many tribes except the Navajo and Sioux tribes. Navajos prefer "blue" cornmeal. | Oats - | Generally acceptable to most groups, but especially the Plains tribes. |
| | **Fruits and Vegetables** | | |
| Canned Vegetables - | Culturally linked to agricultural societies (i.e., Eastern Woodlands), especially corn, beans, and pumpkin; not as important to Southwest groups. | Potatoes, Instant - | Potatoes are an important staple to many groups, especially Navajo. |
| | | Canned Fruit, Fruit Juices - | Highly acceptable to all groups. |
| | **Other** | | |
| Butter - | Primarily used for seasoning by Navajos, but not well accepted by many groups due to inadequate storage facilities. | Shortening - | High usage by Southwest, Northwest, and Plains Groups for frying. |

Source: Compiled by Nutrition and Technical Services Staff, Food and Nutrition Service, U.S. Department of Agriculture, from various references cited and comments from specialists who work with Native Americans.

However, these comments are generalizations, and variations in acceptance of certain foods are to be expected, both within tribes and within regions. We suggest that nutrition educators contact the regional and State resource people listed in the appendixes to get ideas on how to improve the acceptance of foods among Native Americans. Many times the lack of acceptance of foods is due to unfamiliarity with the form of the food that is available, for example, egg mix or dry milk. Incorporating these foods into culturally accepted or familiar recipes can increase their acceptance.

## Effective Communication Through Materials Adaptation

Most Native Americans use the English language in everyday life. Although about 250 Indian languages still exist today in the United States, few are widely spoken. Navajo, Cherokee, and Teton Sioux, however, are still spoken by many people (3). A high percentage of Native American adults have less than a high school education (8), and many tribal groups have low reading levels.

Therefore, in designing educational posters and pamphlets, nutrition educators should use simple and concise language, and illustrations compatible with the Native American culture. For example, use simple, multicolored line drawings on a flip chart to convey a single message on each page. Include a seal, walrus, or salmon, and a variety of seafood in the meat group in a publication for Alaskan Natives to increase the relevance of the concepts to the audience.

Nutrition educators also can adapt various nutrition education aids to help communicate dietary changes. Using food models of both traditional and nontraditional foods can show nutritious combinations and serving sizes. Developing food guides that incorporate commonly consumed food items also can demonstrate to Native Americans how to achieve variety and a balanced diet.

In general, nutrition educators should prepare materials for local use for a selected audience, and should incorporate the audience's particular customs and values. Using simple, single concept messages and keeping the print to a minimum is most desirable. Graphics are an important means of conveying messages, and should incorporate culturally appropriate colors, signs, symbols, and pictures. Materials should also incorporate traditional foods and methods of preparation. Therapeutic diets can be adapted to include more traditionally or regionally popular foods; for example, adaptation of the diabetic exchange list.

## Potential for Nutrition Education Activities in Various Programs and Delivery Systems Serving Native Americans

Many programs and delivery systems appropriate for nutrition education can be found in most tribal communities and other areas where Native Americans reside. Although it can vary from place to place, nutrition information can be, and often is, conveyed through any or all of the ongoing nutrition and health programs serving the tribal community, or through the mass media. A coordinated approach and consistency of the message will help to increase the effectiveness of nutrition education efforts.

### Food Assistance Programs

Nutrition education activities can be provided at the local sites where participants in the various federally funded food programs come to obtain assistance. See page 38 for a list of food assistance programs administered by the Food and Nutrition Service (FNS), U.S. Department of Agriculture. Appendix A gives the addresses of regional FNS offices. Commodity distribution centers, food stamp offices, and Special Supplemental Food Program for Women, Infants, and Children (WIC) certification offices are examples of places where nutrition education is being provided, or can be introduced to program participants. Where congregate meals are served for the elderly, often in school cafeterias or senior citizen centers, effective nutrition education activities can be planned cooperatively with the staffs of these programs. See the listing on page 40, Office of State and Tribal Programs, Administration on Aging, for information on the services provided to people under the Older Americans Act.

Helping preschool children develop good food habits is an integral part of the Head Start program, and should be encouraged in day care centers. To assist care providers with ideas for appropriate activities for these children, FNS has prepared a resource guide in nutrition education for preschoolers (7).

For school-age children, the Nutrition Education and Training Program (NET) has been available in many areas since 1979. NET has provided funds through a system of grants to State educational agencies, or alternate agencies such as the State health departments, for the purposes of:

- encouraging good eating habits and teaching children the relationship between food and health;
- training food service personnel in nutrition and food service management and encouraging the use of the cafeteria as an environment for learning about food and nutrition;

- instructing educators in nutrition education and in the uses of the cafeteria as a learning laboratory; and

- developing appropriate education materials and curricula.

Some of the ways in which nutrition education can be provided, depending on the setting, are:

1) simple, self-instructional posters and audiovisuals;

2) printed information sheets;

3) onsite nutrition educators and paraprofessionals to provide group or individual counseling; and

4) classroom nutrition education activities involving teachers, school food service personnel, parents, and students.

### Health Programs

Nutrition is an important component of health service programs. Public health nutritionists are employed by several agencies including: 1) Indian Health Service (IHS) in Area and Program Offices; 2) Maternal and Child Health in Regional Offices, Public Health Service (PHS); 3) Tribal Health Departments; 4) State and local health departments. Nutritionists in these agencies can provide technical assistance for nutrition education efforts. Explanations of the services provided by these health agencies begin on page 39.

### Other Programs

Several other programs conducted by local governments, voluntary organizations, industry, and educational institutions include nutrition activities. Examples include the Cooperative Extension Service, which administers the Expanded Food and Nutrition Education Program (EFNEP) (see page 38), organizations concerned with specific health problems such as diabetes and heart disease, food and utility companies, and food and nutrition departments of colleges and universities.

## References


1. Bass, M.A. and Wakefield, L.M., "Nutrient Intake and Food Patterns of Indians on Standing Rock Reservation." Journal of the American Dietetic Association 63:36-41, 1974.

2. Collected information from the U.S. Department of Health and Human Services, Indian Health Service, Nutrition and Dietetics Branch, 1981.

3. Kuhnlein, H.V. et al., "Composition of Traditional Hopi Foods." Journal of the American Dietetic Association 75: 37-41, 1979.

4. Martin, E.A., Nutrition in Action. 4th Edition. New York: Holt, Rinehart and Winston, Inc., 1978.

5. Nance, E.G., "A Study of Food Consumed by Navajo People Receiving Food Donated by the United States Department of Agriculture." Master of Science Thesis. Texas Woman's University, Denton, Texas, 1972.

6. U.S. Department of Agriculture, Food and Nutrition Service, Nutrition Education for Preschoolers, A Resource Guide for Use in the Child Care Food Program, FNS-241. U.S. Government Printing Office, Washington, D.C., October 1983.

7. U.S. Department of Commerce, Bureau of the Census, Population Characteristics Series, General Social and Economic Chart. Publication No. P-C80-1-C (1980).

8. U.S. Department of Health and Human Services, Centers for Disease Control, Nutrition Surveillance 1980. HHS Publication No. (CDC) 83-8295. U.S. Government Printing Office, Washington, D.C. Issued November 1982.

9. U.S. Department of Health and Human Services, Health Resources and Service Administration, Indian Health Service, Fiscal Year 1984 Budget Appropriation, Indian Health Service, "Chart Series" Tables. Issued April 1983.

10. U.S. Department of Health, Education and Welfare, National Institute of Child Health and Human Development, Nutrition, Growth and Development of North American Indian Children, DHEW Publication No. (NIH) 72-26. U.S. Government Printing Office, Washington, D.C., 1972.

11. U.S. Department of the Interior, Bureau of Indian Affairs, Indian Service Population Labor Force Report. January 1983.

12. U.S. Department of the Interior, Bureau of Indian Affairs, Information About Indians. 1978.

## Bibliography

### Nutritional Status and Nutrition-Related Illnesses


Aase, J.M., "The Fetal Alcohol Syndrome in American Indians: A High Risk Group." Neurobehavioral Toxicology and Teratology 3:153-156, 1981.

Bass, M.A. and Wakefield, L.M., "Nutrient Intake and Food Patterns of Indians on Standing Rock Reservation." Journal of the American Dietetic Association 63:36-41, 1974.

Beltrame, T. and McQueen, D.V., "Urban and Rural Indian Drinking Patterns: The Special Case of the Lumbee." International Journal of Addiction 14:533-548, 1979.

Bennion, L.J. and Li, T., "Alcohol Metabolism in American Indians and Whites." New England Journal of Medicine 294:9-13, January 1976.

Bennett, P.H., "The Pima Indians: Do They Hold the Key?" Diabetes Forecast 30:22-24, 1977.

Blumenthal, D.S. et al., "Nutritional Status of Residents of the Blackfeet Indian Reservation. II. Comparison of the Results of the 1961 and 1973 Surveys." Nutrition Reports International 23:377-390, 1981.

Brosseau, J.D. et al., "Diabetes Among the Three Affiliated Tribes: Correlation with Degree of Indian Inheritance." American Journal of Public Health 69:1277-1278, 1979.

Broussard, B.A. et al., "The Cherokee Diabetic View of Dietary Non-Compliance." Paper presented at the Society for Nutrition Education Annual Meeting. 1981.

Butte, N.F. et al., "Nutritional Assessment of Pregnant and Lactating Navajo Women." American Journal of Clinical Nutrition 34:2216-2228, 1981.

Calloway, D.H. and Gibbs, J.C., "Food Patterns and Food Assistance Programs in the Cocopah Indian Community." Ecology of Food and Nutrition 5:183-196, 1976.

Ellestad-Sayad, J.J. et al., "Milk Intolerance in Manitoba Indian School Children." American Journal of Clinical Nutrition 33:2198-2201, 1980.

Foman, M.R. et al., "The Pima Infant Feeding Study." American Journal of Clinical Nutrition 25:1477-1486, 1982.

Hollow, W.B. and Wilkins, R.L., "Hypertension in an Urban Indian Practice Population." Preventive Medicine 9:436-437, 1980.

Horner, M.R. et al., "Nutritional Status of Chippewa Head Start Children in Wisconsin." American Journal of Public Health 67:185, 1977.

Johnston, F.E. et al., "Physical Growth and Development of Urban Native Americans: A Study of Urbanization and Its Implications for Nutritional Status." American Journal of Clinical Nutrition 31:1017-1027, 1978.

Knapp, B. and Panruk, P., "Southwest Alaskan USA Eskimo Dietary Survey of 1978." Proceedings of the 30th Alaska Scientific Conference, 1979.

Knowler, W.C. et al., "Mortality and Body Mass Index in a Population With a High Incidence of Diabetes." American Journal of Epidemiology 112:437, 1980.

MacNeill, C.A. et al., "Nutritional Status of Residents of the Blackfeet Indian Reservation." Nutrition Reports International 23:327-345, 1981.

May, P.A. and Broudy, D.W., Health Problems of the Navajo Area and Suggested Interventions. Publication No. (HRA) 232-80-0007. Indian Health Service. 1979.

Nutrition, Growth, and Development of North American Indian Children. DHEW Publication No. (NIH) 72:26. U.S. Government Printing Office. Washington, D.C., 1972.

Owen, G.M. et al., "Nutrition Studies with White Mountain Apache Preschool Children in 1976 and 1969." American Journal of Clinical Nutrition 34:226, 1981.

Read, M.H. and Boling, M.A., "Effect of Feeding Practices on the Incidence of Iron Deficiency Anemia and Obesity in a Native American Population." Nutrition Reports International 26:689-694, 1982.

Reid, J.M. et al., "Nutrient Intake of Pima Indian Women; Relationships to Diabetes Mellitis and Gallbladder Diseases." American Journal of Clinical Nutrition 24:1281-1289, 1971.

Robson, J.R.K. and Wadsworth, G.R., "The Health and Nutrition Status of Primitive Populations." Ecology of Food and Nutrition 6:187-202, 1977.

Rusch, J.L., "Assessment of Nutritional Status of Pregnant Teenagers Served by the Phoenix Indian Medical Center." Arizona State University. December 1981.

Story, M., "Food and Nutrient Intake Practices and Anthropometric Data of Cherokee Indian High School Students in Cherokee, North Carolina." Doctoral Dissertation, Florida State University. June 1980.

Streissgurth, A.P. et al., "Teratogenic Effects of Alcohol in Humans and Laboratory Animals." Science 209:353, 1980.

Van Duzen, J.L. et al., "Protein and Caloric Malnutrition Among Preschool Navajo Indian Children: A Follow-up." American Journal of Clinical Nutrition 29:657-662, 1976.

West, K.M., "Diabetes in American Indians and Other Native Populations of the New World." Diabetes 23:841-855, 1974.

West, K.M., Epidemiology of Diabetes and Its Vascular Lesions. New York, Elsevier. 1978.

## Traditional and Contemporary Dietary Practices and Food Composition

Alaska's Game Is Good Food. Cooperative Extension Service. University of Alaska Publication 126. July 1974.

Alford, B.B. and Nance, E.B., "Customary Foods of the Navajo Diet." Journal of the American Dietetic Association 68:538-539, 1976.

Bean, L.S. and Saubel, K.S., Temalpakh: Cahuilla Indian Knowledge and Usage of Plants. Banning, California: Malki Museum Press. 1972.

Benson, E.M. et al., "Wild Edible Plants of the Pacific Northwest." Journal of the American Dietetic Association 62:143-147, 1973.

Berkes, F. and Farkas, C.S., "Eastern James Bay Cree Indians: Changing Patterns of Wild Food Use and Nutrition." Ecology of Food and Nutrition 7:155-172, 1978.

Broussard, B.A., Bass, M.A., and Jackson, M.Y., "Reasons for Diabetic Diet Noncompliance Among Cherokee Indians." Journal of Nutrition Education 14:56-57, 1982.

Calloway, D.H. et al., "The Superior Mineral Content of Some Indian Foods in Comparison to Federally Donated Counterpart Commodities." Ecology of Food and Nutrition 3:203, 1974.

Draper, H.H., "The Aboriginal Eskimo Diet in Modern Perspective." American Anthropology 79:309-316, 1977.

Felger, R. and Moser, M.B., "Eelgrass (Zostera marina L.) in the Gulf of California: Discovery of Its Nutritional Value By the Seri Indians." Science 181:355-356, 1973.

Guide to the Nutritive Value of Traditional Navajo Foods. University of Arizona, Tucson. 1983.

Hamel, P.B. and Chiltoskey, M.U., "Cherokee Plants - Their Uses. A 400 Year History." The Cherokee Museum, Cherokee, North Carolina. 1975.

Holden, G.K. and Lamb, M.W., "Early Foods of the Southwest." Journal of the American Dietetic Association 40:218-223, 1962.

Hooper, H.M., Nutrient Analysis of Twenty Southeast Alaska Native Foods. Reports 1 and 2. Indian Health Service. 1981.

Katz, S.H. et al., "Traditional Maize in the New World." Science 184:765-773, 1974.

Knapp, B. and Panruh, P., "Southwest Alaska Eskimo Dietary Survey of 1978." The Yukon Kuskokwim Health Corporation, Bethel, Alaska. 1979.

Konlande, J.E. and Robson, J.R.K., "The Nutritive Value of Cooked Camas As Consumed By Flathead Indians." Ecology of Food and Nutrition 1:193-195, 1972.

Kuhnlein, H.V. and Calloway, D.H., "Contemporary Hopi Food Intake Patterns." Ecology of Food and Nutrition 6:159-173, 1977.

Kuhnlein, H.V. et al., "Composition of Traditional Hopi Foods." Journal of the American Dietetic Association 75:37-41, 1979.

Niethammer, C., American Indian Food and Lore. New York, MacMillan Publishing Company, Inc. 1974.

Nutritive Values of Native Foods of Warm Springs Indians. Extension Service. Oregon State University. Circular 809. July 1972.

Renaud, E.B., "Influence of Food on Indian Culture." Social Forces 10:97-101, 1931.

Stevens, O.R., "Plants Used By Indians in the Missouri River Area." North Dakota History 32:101-106, 1965.

Toma, R.B. and Curry, M.L., "North Dakota Indians Traditional Foods." Journal of the American Dietetic Association 76:589, 1980.

Watson, J.B., "How the Hopi Classify Their Foods." Plateau 15:49-52, 1943.

Will, G.F. and Hyde, G.E., Corn Among the Indians of the Upper Missouri. University of Nebraska Press. 1976.

## II. Suggestions for Counseling

Nutrition counseling techniques for use with Native Americans are much the same as those for other Americans. However, Native American cultural attitudes and practices are distinct from those of other cultural and ethnic groups. Effective communication is essential to the counseling process. Therefore, understanding these unique attitudes and practices can help the nutrition educator. This is especially true if he or she has a cultural orientation different from Native Americans and has not worked extensively with tribal communities.

Keep in mind the various stages that are involved in achieving planned behavioral change by the learner in the counseling situation (2). These stages include the following sequence:

1. Awareness:

   Helping the individual, family, or group to identify problems related to food consumption.

2. Receptiveness:

   a) Developing a receptive framework for learning by establishing the credibility of the nutrition educator.

   b) Becoming aware of the learner's prior perceptions about food and nutrition.

   c) Helping the learner to state the desirable changes in food practices and to decide which are feasible.

3. Experimentation:

   Testing ideas, techniques, and the teaching programs until acceptable ones are identified.

4. Reinforcement:

   Strengthening the learning gained during the experimentation period.

5. Adoption of Change:

   Guiding the decision to accept the change and to put it into practice.

In summary:

> "Eating behavior is psychologically motivated, but is culturally and biologically determined. Any effective educational program must recognize this interaction even though it may deal actively with only one part. The solutions to nutrition problems must be diversified in approach if they are to have a signficant, overall effect.
>
> Values, attitudes, and beliefs control man's behavior; therefore, planned change is a deliberate effort to improve nutrition through intervention, and it occurs by design."(2)

The counseling suggestions that follow are compiled from the literature and from comments provided by nutritionists and paraprofessionals who work closely with Native American people in a variety of geographic locations. We appreciate their generosity, and hope you find these suggestions helpful.

## Cultural Values

In order to communicate easily and to exchange meaningful information, the counselor needs to understand the client's cultural values. Not all Native Americans adhere to "traditional" values. Even for those who do adhere, some variation from those values is to be expected; therefore, stereotyping should be avoided. One suggestion is to function within the Native American cultural framework, and to avoid injecting non-Native American cultural standards. This requires knowledge of tribal cultures. Seeking information directly from Native Americans may be the most effective way to learn. The following examples adapted from Zintz (3) can help the educator understand the differences that may exist in cultural values of Native Americans and other Americans.

| SOME TRADITIONAL NATIVE AMERICAN CULTURAL VALUES | SOME NON-NATIVE AMERICAN CULTURAL VALUES |
|---|---|
| Traditional Native American families may be said to have accepted general patterns as described below: | Non-Native Americans generally place greater value on these practices: |
| Harmony with nature. Nature will provide for man if he will behave as he should and obey nature's laws. Treatment is sought when one is out of harmony with nature. | Mastery over nature. Man must harness and cause the forces of nature to work for him. It is within our control to conquer diseases and to determine our health and longevity. |

| | |
|---|---|
| Present time orientation. Life is concerned with the here and now. Accept nature in its season; we will get through the years, one at a time. "If the things I am doing now are good, to be doing these things all my life will be good." To wait is considered a good quality. | Future time orientation. Non-Native Americans essentially look to tomorrow. Such items as insurance, savings for college, and plans for vacation suggest the extent to which non-Native Americans hold this value. |
| Level of aspiration. Follow in the ways of the old people. Young people keep quiet because they lack maturity and experience. A de-emphasis on experiment, innovation, and change. | Level of aspiration. Climb the ladder of success. Success is measured by a wide range of superlatives: first, the most, best, etc. |
| Work. One should work to satisfy present needs. Accumulating more than one needs could be construed as selfish, stingy, or bigoted. | Work. Success will be achieved by hard work. Accumulation of wealth is good and a higher income is actively sought. |
| Sharing. One shares freely what he has. One traditional practice was that a man could provide a ceremonial feast for the village if he were able to do so. | Saving. Everybody should save for the future. "A penny saved is a penny earned." "Put something away for a rainy day." If you work hard and save money, you'll be rewarded. |
| Non-scientific explanation for natural phenomena. Mythology, fear of the supernatural, witches, and sorcery may be used to explain behavior. | Scientific explanation for all behavior. Nothing happens contrary to natural law. There is a scientific explanation for everything. |
| Cooperation. Remaining submerged within the group. Traditionally a man did not seek offices or leadership or attempt to dominate his people. No one owned land. In sports, if he won once, he was now ready to let others win. | Competition. One competes to win. Winning first prize all the time is a coveted goal. Assertiveness and aggressiveness at times are acceptable. |
| Anonymity. Accepting group sanctions, keeping life routinized. Soft spoken and non-directive. May not establish eye contact. Extended family living. | Individuality. Each one shapes his own destiny. Self-realization for each person is not limited. Nuclear family unit is predominant. |

## Noninterference with Others

The principle of noninterference with others is shared by many Native Americans, and needs to be considered in the counseling situation (1). This is particularly important when counseling

Native Americans who still adhere to traditional cultural values. Acknowledging and complying with this principle can help the counselor avoid misunderstandings and increase the effectiveness of the counseling relationship.

According to this principle, Native Americans place great importance on respect and consideration for others. They resist what appears to be interference or meddling of any kind. Suggestions, even discreet ones, and commands are considered interference.

Many Native Americans also consider their inner thoughts and personal lives to be private and do not want to share them with others until those people are known and trusted. In the counseling situation, this may appear as though the client lacks interest or is indifferent to the counselor or to the subject being discussed. Actually, the client is carefully observing the counselor's manner of presentation and behavior.

Several procedures can increase a person's effectiveness as a counselor. First, it is important to have patience, which requires adjusting one's ideas of time to those of "Indian time," that relates to natural events instead of clocks. Next, do not "push" concepts and expectations, particularly at the beginning of a counseling relationship. Avoid the slightest suggestion that could be perceived as coercive. Rather, while discussing topics or events of interest, discreetly interject a few helpful ideas. When the client finally decides to try out your ideas, recognize the importance of the opportunity to give a positive solution to the problem. When the client finds the solution to be successful, word will travel quickly and other clients will be encouraged to seek your advice.

## Preventive Care/Self-Help Approach

Preventive health care, specifically the self-help approach, is a difficult concept to communicate to Native Americans, especially to those who adhere to traditional cultural values. The traditional cultural values of present time orientation and anonymity may conflict with those ideas which focus attention on the individual and on his or her changes in behavior which will gain future benefits. This conflict may be evident particularly in counseling older members of the tribal community. Poverty may also influence a person's self-concept.

Some Native Americans have a feeling of hopelessness about their health in old age. Also, they may not view obesity as a serious health risk. Fat babies and children may be seen as more healthy than thin ones. Also, some persons may think it is a compliment to a host to eat a lot of food. While in some cultures, it is considered that weight reduction will improve physical appearance, many Native Americans do not think they would look good if they lost weight. Further, some Native Americans feel that they have no control over their own bodies when a disease such as diabetes occurs.

There are methods that may help to change these feelings and attitudes. It is important to get to know your clients and their activity level, lifestyle, and living situation. By understanding the clients' backgrounds and by knowing their interests, you are better able to help them help themselves. You can use examples from daily life that draw upon those interests to help make a point. Storytelling is one way to provide indirect suggestions or guidance that may help clients understand that specific behaviors can contribute to improved health and well-being for them and their families.

Here are some examples of effective storytelling suggested by nutritionists. "Being obese is like carrying around an extra heavy backpack day and night and never being able to put it down. By losing some weight you are reducing the extra burden or stress on your body and heart, just as though you were lightening the backpack or taking it off." When talking about the value of exercise to weight reduction, it may be helpful to mention that "ranchers keep animals confined in a pen while they are trying to fatten them up for the market. The animals would not get fat if they were allowed to roam freely."

Storytelling can be used to teach other concepts. For example, "Shalako" houses are built in preparation for a Zuni tribal ceremony each winter. Usually, the inside of the house is left unfinished until after the ceremony when the family uses it as their home. This analogy is used to teach the concept of proper development of the fetus during pregnancy. Through the story, the counselor can convey what happens when a child is born with poor brain development or incomplete growth. The "shell" of the child is there, but it is incomplete, due to poor nutrition of the mother during pregnancy.

Referring to the traditional value of harmony with nature may provide an incentive to avoid overweight. Some tribes consider overweight a condition which conflicts with the laws of nature; it is wise "to be in harmony with nature and only eat what one needs." The counselor can reinforce positive habits by pointing out good foods and preparation techniques already being used by the client. This should be done even before recommending other ways in which the diet may be improved. This will further encourage the client to assume responsibility for his or her own well-being.

## Use and Preparation of Traditional Foods

In some regions of the country, traditional foods are not readily available or are served only on special occasions. In other regions, such foods are still a regular part of the daily fare.

It is a good idea to talk with clients about the use of traditional foods. However, the counselor may want to suggest

that they balance or enhance these foods with nontraditional foods, if necessary. Be careful not to declare either traditional or nontraditional foods as "better," but encourage their complementary use.

In cases where foods are prepared by frying, the counselor may want to suggest other methods of preparation using less fat, such as baking, boiling, or broiling. Another suggestion may be to replace lard and shortening with unsaturated fats (i.e., vegetable oils) where possible. These alternative methods of food preparation can make a significant dietary impact, if they are accepted. Clients may be interested to know that frying is a relatively new method of Indian food preparation adopted from the Europeans. More traditional preparation methods include barbecuing, steaming, and drying.

## Counseling Techniques

### Extended Family

The extended family unit is a dominant force in the traditional Native American community. Therefore, gradually work toward involving all interested family members when counseling a client. Individuals respect the opinions of their family members and depend on them for support. Since opinions of the older family members are particularly respected, the counselor may want to talk to grandparents, too.

When extended family members live together, one person will often prepare the meals for all. Therefore, it is important to include that person in the counseling sessions, particularly when counseling older people who do not do their own cooking, or a pregnant teenager whose mother prepares the meals. The person who prepares meals also needs to be informed of any diet modifications, and to be consulted about these changes.

Since several family members may be involved in different nutrition programs, such as WIC, Head Start, or the Elderly Nutrition Program, it is important to interact with staff from these programs. This may help to coordinate and increase the consistency of the messages given during counseling sessions.

### Involving the Community

The community plays a very important role in the lives of most Native Americans. By involving other community members in counseling and teaching, especially those who are most respected in the tribe, you are likely to indirectly reach a great number of people. This is particularly true with older individuals and spiritual leaders. Information transmitted by them will carry more weight because they are so highly regarded.

For example, one particular concept that has been used successfully in weight control is a team concept. Several groups compete with one another to see who can achieve their weight goal. At the end of the "game," a party is held and a tribal leader is asked to be the guest speaker and present a plaque or prize to the winning team. The party involves the whole community. Generally, low-calorie drinks and snacks are served.

### Scheduling

Although it may be best to counsel Native American clients in a private place on a one-to-one basis, there are also other ways of communicating. Some types of information can be transmitted in casual meetings, such as at the post office or local store. Sometimes it may be possible to disseminate nutrition information at gatherings such as powwows or community dinners.

Depending on the orientation of the tribe and individual to the concept of time, it may be better not to set specific appointment times. Instead, choose a date, and schedule either a morning or afternoon, for counseling. This allows the client flexibility in making arrangements for transportation or child care. When possible, combine the client's visit with a doctor's appointment, food distribution pickup, or food stamp certification. This may prevent an extra trip to the clinic or a lengthy wait between appointments. More structured appointments may, however, be necessary in satellite clinics or other sites that operate only a few days each month.

### Single Concept Approach

One of the best ways to provide information is to present only one main idea or concept at a time. This will help avoid confusion that may be caused by providing too much detail or nonessential information all in one session. Most nutrition educators who work with Native Americans recommend a patient, nonthreatening approach. They establish priorities according to the information that is most important to the client at that particular time.

At a later meeting the counselor can fill in details and provide supplementary information. Remember that graphics and concrete examples help to achieve simplicity and a better understanding by the client. Also, written materials appropriate to the reading level of the client can help reinforce the concepts presented.

### Eye Contact

Some groups of Native Americans traditionally do not make eye contact with the speaker. This lack of contact should not be interpreted as a sign of meekness or humility. Rather, in most instances, it is a demonstration of respect for others. When in a one-to-one situation, especially with an older person, it may make the person uncomfortable to meet your eyes. Do not press the issue. The suggestion has been made that the counselor first talk with the client about his or her family or community events, which may help both you and the client relax. As a general practice, counselors may use eye contact, but they should realize that it may not be returned. In time, you may achieve eye contact and this may be an important signal that the message has been received.

### Vocabulary

Avoid technical terms and medical jargon when counseling. When using such terms, be sure to explain them in easy-to-understand language. Do not hurry, and take time to be sure that the client understands. The use of repetition, examples, and analogies is also helpful when explaining something that may be difficult for a client to grasp. One example of this method is explaining the concept of energy from food by relating it to the gasoline that runs a car. Another analogy can be made to cars: "Cars need checkups to run smoothly, and so do people." Again, remember that graphics and pictorial representations are useful when trying to simplify a difficult concept.

It is important to allow clients to make the decisions regarding their own health care. One should treat adults with lower education levels as adults, but simplify the terminology. Clients should be given enough information to allow them to make informed health decisions, along with suggestions as to what changes they might make to improve their health and to decrease their risk of disease.

## References


1. Good Tracks, J.G., "Native American Non-Interference." Social Work 18(6):30-34, 1973.

2. "Position Paper on Nutrition Education for the Public." Journal of the American Dietetic Association 62(4):429-430, 1973.

3. Zintz, M.V., Director, The Indian Research Study: The Adjustment of Indian and Non-Indian Children in the Public Schools of New Mexico. 1957-1960 Final Report. Albuquerque, New Mexico, College of Education, University of New Mexico, 1961(?).

## Bibliography

### Counseling Skills and Nutrition Education


Andrews, B.J., "Interviewing and Counseling Skills." Journal of the American Dietetic Association 66:576, 1975.

Barlow, D.H. and Tillotson, J.L., "Behavioral Science and Nutrition: A New Perspective." Journal of the American Dietetic Association 72:368-371, 1978.

Bryde, J.F., Modern Indian Psychology, Vermillion, South Dakota, The Institute of Indian Studies. University of South Dakota. 1971.

Culture Bound and Sensory Barriers to Communication With Patients: Strategies and Resources for Health Education. Division of Health Education, Center for Health Promotion and Education, Centers for Disease Control, Atlanta, Georgia 30333, 1982.

Danish, S.J. et al., "The Anatomy of a Dietetic Counseling Interview." Journal of the American Dietetic Association 75:626-630, 1979.

Diet Therapy Section Committee, The American Dietetic Association, "Guidelines for Diet Counseling." Journal of the American Dietetic Association 66:571-575, June 1975.

Evans, R.I. and Hall, Y., "Social-Psychologic Perspective in Motivating Changes in Eating Behavior." Journal of the American Dietetic Association 72:378-383, 1978.

Frankle, R.T. and Owen, A.Y., "Community Nutrition Programs: Strategies at the Local Level," in Nutrition in the Community, The Art of Delivering Service, Chapter 5, pp. 132-136, St. Louis, Missouri: C.V. Mosby Co., 1978.

Gifft, H.H. et al., Nutrition, Behavior and Change. Englewood Cliffs, New Jersey: Prentice-Hall, 1972.

Glanz, K., "Dietitians' Effectiveness and Patient Compliance with Dietary Regimens: A Pilot Study." Journal of the American Dietetic Association 75:631-636, 1979.

Hochbaum, G.M., "Human Behavior and Nutrition Education." Nutrition News 40 (1), National Dairy Council, 1977.

Leverton, R.M., "What Is Nutrition Education?" Journal of the American Dietetic Association 64:17-18, 1974.

Lowenburg, M.E., "The Development of Food Patterns." Journal of the American Dietetic Association 65:263-268, 1974.

"Nutrition Services in State and Local Public Health Agencies. A Policy Paper." Public Health Reports 98:7-20, 1983.

U.S. Department of Health Education and Welfare, Office of the Assistant Secretary for Health and the Surgeon General, Healthy People, The Surgeon General's Report on Health Promotion and Disease Prevention. DHEW Publication No. (PHS) 79-55071, U.S. Government Printing Office, Washington, D.C., 1979.

Sherman, A.K., Lewis, K.J., and Guthrie, H.A., "Learner Objectives for a Nutrition Education Curriculum." Journal of Nutrition Education 10:63-68, 1978.

Shortridge, R.C., "Learner Success or Failure?" Journal of Nutrition Education 8:18-20, 1976.

Simonds, S.K., "Psychosocial Determinants of Dietitians' Listening Patterns." Journal of the American Dietetic Association 63:615-619, 1973.

Strickland, B. and Arnn, J., "Orientation on Understanding Interpersonal Influence." Journal of the American Dietetic Association 71:229-234, 1977.

Zifferblatt, S.M. and Wilbur, C.S., "Dietary Counseling: Some Realistic Expectations and Guidelines." Journal of the American Dietetic Association 70:591-595, 1977.

# III. Resources for Nutrition Education

The resources that follow were selected based on their potential usefulness to those people who work with Native Americans. Two categories are included: 1) technical assistance resources, and 2) sources for consumers and professionals. We recognize that many people work on reservations that are in remote areas and may not have access to resource information that is available to those working in nonreservation settings. Thus, some additional detailed information is included regarding the technical assistance resources. Extensive listings of regional and State offices of various agencies are given in the appendixes.

The technical assistance resources include those related to government-sponsored food assistance and nutrition education programs, health agencies that serve Native Americans in a variety of settings, and several other related agencies. For each resource listed a description is given of the types of information and assistance available to counselors for developing nutrition education services for Native Americans.

The information sources for consumers and professionals provide services and materials on a national, rather than local, basis. These resources are from both government supported services and private sector organizations. The government-supported services are primarily information centers and clearinghouses. The private sector organizations represent professional, nonprofit, and consumer-oriented groups. Taken together, they represent a broad spectrum of perspectives on nutrition education topics and issues, with an emphasis on those that are most relevant to Native American concerns. Other information sources serving particular cities or geographic areas are available and can be located through local directories or referral networks.

## Technical Assistance Resources

### Food Assistance and Nutrition Education Programs

1. Nutrition and Technical Services Division
   Food and Nutrition Service, USDA
   3101 Park Center Drive, Room 602
   Alexandria, Virginia 22302
   (703) 756-3554

(See appendix A for addresses of Food and Nutrition Service (FNS) regional offices.)

The Food and Nutrition Service, U.S. Department of Agriculture, administers 10 food assistance programs: Food Stamp Program, National School Lunch and School Breakfast Programs, Child Care Food Program, Summer Food Service Program, Special Milk Program, Special Supplemental Food Program for Women, Infants, and Children (WIC), Commodity Supplemental Food Program (CSFP), Food Distribution Program, and the Nutrition Education and Training (NET) Program. The FNS regional offices can provide specific information about each of these programs.

The nutritionists and food service/food technology specialists of the Nutrition and Technical Services staffs in the headquarters and regional offices provide consultation and technical assistance to State and local program staffs. They also prepare program guidance and technical assistance materials on nutrition education and food service topics. Additionally, they coordinate with other USDA agencies and with several agencies of the Department of Health and Human Services, including the Indian Health Service and the Division of Maternal and Child Health of the Public Health Service.

2. Home Economics and Human Nutrition
   Extension Service, USDA
   South Agricultural Building, Room 3443
   14th and Independence Ave., S.W.
   Washington, D.C. 20250
   (202) 447-2908

(See appendix B for addresses of State Extension Service offices.)

The Extension Service located at the land-grant university in each State is cooperatively funded, administered, and managed by Federal, State, and local governments. At the Federal level, a small staff of program leaders and specialists administer and coordinate the various programs in the Federal/State/county partnership, providing national leadership and cooperation with related agencies.

Extension home economics program leaders and specialists at State land-grant colleges and universities give direction and backup support to local county extension home economists. State staff provide the county staff with research results and current information on topics of interest and concern to families. They also provide in-service training and teaching materials to county field staff. Field staff then adapt and apply that information to meet identified local needs with special emphasis on food and nutrition educational services and materials for homemakers and families. The Expanded Food and Nutrition Education Program (EFNEP) is a special Extension Service program that employs paraprofessional aides to teach low-income homemakers on a one-to-one basis, or in small groups, how to improve their families' diets with their existing resources.

To obtain service, the first contact should be with the county agent or county home economist in the county Extension Service office. EFNEP is also a source of information. If there is no EFNEP operating in the county Extension Service office, inquiries should be made at the State Extension Service office located at the land-grant university.

### Health Agencies

Health Resources and Services Administration, Public Health Service, Department of Health and Human Services

1. Indian Health Service, DHHS
   Parklawn Building, Room 5A-10
   5600 Fishers Lane
   Rockville, Maryland 20857
   (301) 443-1114

(See appendix C for addresses of regional offices.)

The Indian Health Service (IHS) provides comprehensive health services and programs. The Nutrition and Dietetics Branch has program responsibility for total education in nutrition and nutritional care services. This is accomplished through Area/Program Offices and Service Unit personnel who are excellent resources for technical assistance.

2. Division of Maternal and Child Health
   Bureau of Health Care Delivery and Assistance
   Health Resources and Service Administration, DHHS
   Parklawn Building, Room 6-05
   5600 Fishers Lane
   Rockville, Maryland 20857
   (301) 443-2370

(See appendix D for addresses of regional offices.)

The Division helps States to maintain and improve the health of mothers and children through the Maternal and Child Health (MCH) Services Block Grant and through special projects of regional and national significance. The public health nutritionists in the central and regional offices provide leadership in developing public health nutrition services. They also provide nutrition consultation and technical assistance to State and local health agencies serving mothers and children, and provide direction and assistance to educational institutions in the development and implementation of short- and long-term training programs related to nutrition and maternal and child health. Additionally, they serve as liaison with USDA staff, including WIC and other staff of the Food and Nutrition Service.

### Tribal Corporation Health Departments

(See appendix C for addresses of regional offices.)

Through Public Law 93-638, Indian Tribes and Alaska Corporations have the authority to administer their own health departments funded by the Indian Health Service. Nutrition services are part of the overall health care delivery. For specific Tribal Health Departments, contact either the Tribal Government Office or the Nutrition and Dietetics Branch Chief in the specific areas.

### State and Local Health Departments

(See appendix E for addresses.)

Nutritionists who work in State health agencies primarily provide technical assistance and consultation to key administrative and professional staff in the agency, administrators and staff of local health agencies, organizations, and institutions. In some State agencies, public health nutritionists also provide or contract for the direct delivery of nutrition services to the public. At the local level, public health nutritionists act as specialists in specific programs that serve defined populations or as generalists responsible for providing a broad array of services in assigned geographic areas.

### Other Agencies

1. Office of State and Tribal Programs
   Administration on Aging
   Department of Health and Human Services
   330 Independence Ave., S.W.
   Washington, DC 20201
   (202) 245-0011

(See appendix F for addresses of regional offices.)

The Administration on Aging (AOA) administers the Older Americans Act, under which congregate and home delivered meal service is provided to older persons. State agencies on aging receive an allocation of funds based on a formula and manage the operation of nutrition services within the State. Under Title VI of the Older Americans Act the AOA makes direct grants to tribal governments for the development of aging services for older citizens including congregate and home delivered meal service.

For consultation and assistance on State-operated nutrition services under the Older Americans Act, contact the appropriate State agency on aging or regional offices of the AOA listed in

appendix F. For information and assistance provided under Title VI of the Older Americans Act, contact the Office of State and Tribal Programs, AOA, Washington, D.C.

2. Office of Public Information and Education
Administration for Children, Youth, and Families (ACYF), DHHS
P.O. Box 1182
Washington, D.C. 20013
(202) 755-7724

(See appendix H for addresses of regional offices.)

The Office serves as the central informational resource for the ACYF. Inquiries are answered using publications from various offices of the ACYF on the subjects of child abuse, day care, domestic violence, and Head Start. This Office publishes the journal, Children Today (bimonthly), with articles by and for those whose jobs and interests are children, youth, and families.

3. Center for Health Promotion and Education
Centers for Disease Control
1600 Clifton Rd., Bldg. 3, Room SSB 33A
Atlanta, GA 30333
(404) 329-3492 or (404) 329-3698

The Center provides leadership and program direction for the prevention of disease, disability, premature death, and undesirable and unnecessary health problems through health education.

4. Office of Consumer Affairs, Consumer Inquiries Staff
Food and Drug Administration (FDA), DHHS
5600 Fishers Lane (HFE-88)
Rockville, MD 20857
(301) 443-3170

(See appendix G for addresses of regional offices.)

Consumer Affairs Officers are available for technical assistance to professionals and responses to consumer inquiries. They also provide consumer publications on a variety of topics such as vitamins and minerals, food additives, food safety, and food facts and fallacies.

## Information Sources for Consumers and Professionals

### Government Supported Resources

1. Consumer Information Center
   Pueblo, CO 81009
   (202) 566-1794

The Center distributes consumer publications on topics such as children, food and nutrition, health, exercise, and weight control. The Consumer Information Catalog, published periodically, is available free from the Center and must be used to identify publications being requested.

2. Food and Nutrition Information Center (FNIC)
   National Agricultural Library Building, Room 304
   Beltsville, MD 20705
   (301) 344-3719

The Center provides information to professionals interested in nutrition education and food service management. The Center acquires books, journals, and audiovisual materials ranging from research literature to children's books. Reference responses are provided to all inquirers. Those who are eligible for lending privileges include individuals employed by Federal and State Governments and anyone associated with USDA programs.

3. High Blood Pressure Information Center
   120/80 National Institutes of Health
   Bethesda, MD 20205
   (301) 496-1809

The Center provides information on the detection, diagnosis, and management of high blood pressure to consumers and health professionals.

4. National Center for Education in
   Maternal and Child Health
   3520 Prospect St., N.W., Suite 1
   Washington, DC 20057
   (202) 625-8400

The Center provides information on maternal and child health to both consumers and health professionals.

5. National Clearinghouse for Alcohol Information
   P.O. Box 2345
   Rockville, MD 20852
   (301) 468-2600

The clearinghouse gathers and disseminates current information on alcohol-related subjects to the public, as well as health professionals. A variety of publications on alcohol abuse are available.

6. National Diabetes Information Clearinghouse
   Box: NDIC
   Bethesda, MD 20205
   (301) 468-2162

The clearinghouse collects and disseminates information on patient education materials and coordinates the development of materials and programs for diabetes education.

7. National Health Information Clearinghouse
   P.O. Box 1133
   Washington, DC 20013-1133
   (800) 336-4797; (703) 522-2590 (in VA)

The clearinghouse helps the public locate health information through identification of resources and an inquiry and referral system. Inquirers are referred to appropriate health resources that, in turn, respond directly to them.

8. President's Council on Physical Fitness and Sports
   450 5th St., N.W., Suite 7103
   Washington, DC 20001
   (202) 272-3430

The Council conducts a public service advertising program and cooperates with governmental and private groups to promote the development of physical fitness leadership, facilities, and programs. The Council produces informational materials on exercise, school physical education programs, sports, and physical fitness for youth, adults, and the elderly.

### Private Sector Organizations

The following agencies and organizations are possible sources of nutrition and health information in the private sector. Many other qualified sources of such information exist, including tribal and State and local health agencies, which generally serve as comprehensive repositories of consumer-oriented health information. Most of the groups listed here offer free or low-cost literature. The statements or viewpoints of the organizations listed are not necessarily supported by the USDA.

1. American Academy of Pediatrics
   1801 Hinman Avenue
   Evanston, IL 60204
   (312) 869-4255

2. American Alliance for Health, Physical Education, Recreation, and Dance
Promotions Unit
1201 Sixteenth Street, N.W.
Washington, DC 20036
(202) 833-5534

3. American College of Obstetricians and Gynecologists
Resource Center
Suite 2700
1 East Wacker Drive
Chicago, IL 60601
(312) 222-1600

4. American College of Sports Medicine
1440 Monroe Street
Madison, WI 53706
(608) 262-3632

5. American Dental Association
Bureau of Health Education and Audiovisual Services
Chicago, IL 60611
(312) 440-2593

6. American Diabetes Association, Inc.
2 Park Avenue
New York, NY 10016
(212) 683-7444

7. American Heart Association
7320 Greenville Avenue
Dallas, TX 75231
(214) 750-5300

8. American Home Economics Association
2010 Massachusetts Avenue, N.W.
Washington, DC 20036-1028
(202) 862-8300

9. American Indian Health Care Association
245 E. 6th Street, Suite 815
St. Paul, MN 55101
(612) 293-0233

10. American Lung Association
(contact your local American Lung Association)

11. Blue Cross and Blue Shield Associations
Public Relations Office
840 North Lake Shore Drive
Chicago, IL 60611
(312) 440-5955

12. La Leche League International, Inc.
    9616 Minneapolis Avenue
    Franklin Park, IL 60131
    (312) 455-7730

13. National Center for Health Education
    211 Sutter Street (4th Floor)
    San Francisco, CA 94108
    (415) 781-6144

14. National Council on Alcoholism
    733 Third Avenue
    New York, NY 10017
    (212) 986-4433

15. National Foundation - March of Dimes
    Public Health Education Department
    1275 Mamaroneck Avenue
    White Plains, NY 10605
    (914) 428-7100

16. National Indian Health Board
    1602 S. Parker Road, Suite 200
    Denver, CO 80231
    (303) 752-0931

17. Society for Nutrition Education
    1736 Franklin Street, Suite 900
    Oakland, CA 94612
    (415) 444-7133

18. The American Dietetic Association
    430 North Michigan Avenue
    Chicago, IL 60611
    (312) 280-5000

19. The Nutrition Foundation, Inc.
    Suite 300
    888 Seventeenth Street, N.W.
    Washington, DC 20006
    (202) 872-0778

# Appendix A

Regional Offices
Food and Nutrition Service
U.S. Department of Agriculture

Mid-Atlantic Region

Director
Nutrition and Technical Services
Food and Nutrition Service, USDA
Mid-Atlantic Regional Office
Mercer Corporate Park
Corporate Blvd. CN 02150
Trenton, NJ 08650
(609) 259-5010

Midwest Region

Director
Nutrition and Technical Services
Food and Nutrition Service, USDA
Midwest Regional Office
50 E. Washington Street
Chicago, IL 60602
(312) 886-5301

Mountain Plains Region

Director
Nutrition and Technical Services
Food and Nutrition Service, USDA
Mountain Plains Regional Office
2420 West 26th Avenue
Denver, CO 80211
(303) 844-5116

Northeast Region

Director
Nutrition and Technical Services
Food and Nutrition Service, USDA
Northeast Regional Office
33 North Avenue
Burlington, MA 01803
(617) 272-8833

Southeast Region

Director
Nutrition and Technical Services
Food and Nutrition Service, USDA
Southeast Regional Office
1100 Spring Street, N.W.
Atlanta, GA 30309
(404) 881-4028

Southwest Region

Director
Nutrition and Technical Services
Food and Nutrition Service, USDA
Southwest Regional Office
1100 Commerce Street
Dallas, TX 75202
(214) 767-0204

Western Region

Director
Nutrition and Technical Services
Food and Nutrition Service, USDA
Western Regional Office
550 Kearny Street
San Francisco, CA 94108
(415) 556-4939

# Appendix A

## Regional Offices
## Food and Nutrition Service
## U.S. Department of Agriculture

### Mid-Atlantic Region

Director
Nutrition and Technical Services
Food and Nutrition Service, USDA
Mid-Atlantic Regional Office
Mercer Corporate Park
Corporate Blvd. CN 02150
Trenton, NJ 08650
(609) 259-5000

### Midwest Region

Director
Nutrition and Technical Services
Food and Nutrition Service, USDA
Midwest Regional Office
30 E. Washington Street
Chicago, IL 60602
(312) 886-3924

### Mountain Plains Region

Director
Nutrition and Technical Services
Food and Nutrition Service, USDA
Mountain Plains Regional Office
1244 Speer Boulevard
Denver, CO 80204
(303) 844-0338

### Northeast Region

Director
Nutrition and Technical Services
Food and Nutrition Service, USDA
Northeast Regional Office
10 Park Avenue
Burlington, MA 01803
(617) 273-0333

### Southeast Region

Director
Nutrition and Technical Services
Food and Nutrition Service, USDA
Southeast Regional Office
1100 Spring Street, N.W.
Atlanta, GA 30309
(404) 881-4000

### Southwest Region

Director
Nutrition and Technical Services
Food and Nutrition Service, USDA
Southwest Regional Office
1100 Commerce Street
Dallas, TX 75202
(214) 767-0222

### Western Region

Director
Nutrition and Technical Services
Food and Nutrition Service, USDA
Western Regional Office
550 Kearny Street
San Francisco, CA 94108
(415) 556-4070

# Appendix B

State Offices
Extension Service
U.S. Department of Agriculture

County Extension Service offices are located in the county seat town, generally in the courthouse, post office, or other government buildings. The Extension Service is usually listed under county government in the telephone directory.

For further assistance in locating the county Extension Service office, write to the appropriate State Director of the Extension Service as listed below:

| | |
|---|---|
| Alabama | Auburn University, Auburn 36849<br>Alabama A&M University, Normal 25762<br>Tuskegee Institute, Tuskegee 36088 |
| Alaska | University of Alaska, Fairbanks 99701 |
| Arizona | University of Arizona, Tucson 85721 |
| Arkansas | University of Arkansas, Little Rock 72203<br>University of Arkansas, Pine Bluff 71601 |
| California | University of California, Berkeley 94720 |
| Colorado | Colorado State University, Fort Collins 80523 |
| Connecticut | University of Connecticut, Storrs 06268 |
| Delaware | University of Delaware, Newark 19711<br>Delaware State College, Dover 19901 |
| District of Columbia | University of the District of Columbia, Washington, D.C. 20005 |
| Florida | University of Florida, Gainesville 32611<br>Florida A&M University, Tallahassee 32307 |
| Georgia | University of Georgia, Athens 30602<br>The Fort Valley State College, Fort Valley 31030 |
| Guam | University of Guam, Agana 96910 |
| Hawaii | University of Hawaii, Honolulu 96822 |
| Idaho | University of Idaho, Moscow 83843 |
| Illinois | University of Illinois, Urbana 61801 |

| | |
|---|---|
| Indiana | Purdue University, West Lafayette 47907 |
| Iowa | Iowa State University, Ames 50011 |
| Kansas | Kansas State University, Manhattan 66506 |
| Kentucky | University of Kentucky, Lexington 40506<br>Kentucky State University, Frankfort 40601 |
| Louisiana | Louisiana State University, Baton Rouge 70803<br>Southern University and A&M College, Baton Rouge 70813 |
| Maine | University of Maine, Orono 04473 |
| Maryland | University of Maryland, College Park 20742<br>University of Maryland, Eastern Shore, Princess Anne 21853 |
| Massachusetts | University of Massachusetts, Amherst 01003 |
| Michigan | Michigan State University, East Lansing 48824 |
| Minnesota | University of Minnesota, St. Paul 55108 |
| Mississippi | Mississippi State University, Mississippi State 39762<br>Alcorn State College, Lorman 39096 |
| Missouri | University of Missouri, Columbia 65211<br>Lincoln University, Jefferson City 65101 |
| Montana | Montana State University, Bozeman 59715 |
| Nebraska | University of Nebraska, Lincoln 68583 |
| Nevada | University of Nevada, Reno 89557 |
| New Hampshire | University of New Hampshire, Durham 03824 |
| New Jersey | Rutgers State University, New Brunswick 08903 |
| New Mexico | New Mexico State University, Las Cruces 88003 |
| New York | New York State College of Agriculture, Ithaca 14853 |
| North Carolina | North Carolina State University, Raleigh 27650<br>North Carolina A&T State University, Greensboro 27420 |

| | |
|---|---|
| North Dakota | North Dakota State University, Fargo 58105 |
| Ohio | The Ohio State University, Columbus 43210 |
| Oklahoma | Oklahoma State University, Stillwater 74078<br>Langston University, Langston 73050 |
| Oregon | Oregon State University, Corvallis 97331 |
| Pennsylvania | The Pennsylvania State University, University Park 16802 |
| Puerto Rico | University of Puerto Rico, Mayaguez 00708 |
| Rhode Island | University of Rhode Island, Kingston 02881 |
| South Carolina | Clemson University, Clemson 29631<br>South Carolina State College, Orangeburg 29115 |
| South Dakota | South Dakota State University, Brookings 57006 |
| Tennessee | University of Tennessee, Knoxville 37901<br>Tennessee State University, Nashville 37203 |
| Texas | Texas A&M University, College Station 77843<br>Prairie View A&M College, Prairie View 77445 |
| Utah | Utah State University, Logan 84321 |
| Vermont | University of Vermont, Burlington 05401 |
| Virginia | Virginia Polytechnic Institute and State University, Blacksburg 24061<br>Virginia State College, Petersburg 23803 |
| Virgin Islands | College of the Virgin Islands, St. Croix 00850 |
| Washington | Washington State University, Pullman 99164 |
| West Virginia | West Virginia University, Morgantown 26506 |
| Wisconsin | University of Wisconsin, Madison 53706 |
| Wyoming | University of Wyoming, Laramie 82070 |

For information on the Extension Service at the national and international level, write to the Extension Service, U.S. Department of Agriculture, Washington, DC 20250.

# Appendix C

Administrative Offices
Indian Health Service
U.S. Department of Health and Human Services

| Headquarters | Contact: |
|---|---|
| Indian Health Service, DHHS<br>Parklawn Building<br>5600 Fishers Lane<br>Rockville, MD 20857 | Chief, Nutrition and Dietetics Branch<br>(301) 443-1114 |

Area Offices

| | |
|---|---|
| Aberdeen Area<br>Indian Health Service, DHHS<br>Federal Building<br>115 4th Avenue Southeast<br>Aberdeen, SD 57401 | Nutrition Consultant<br>(605) 225-0250 |
| Alaska Area<br>Native Health Service, DHHS<br>P.O. Box 7-741<br>Anchorage, AK 99510 | Nutrition Consultant<br>(907) 279-6661 |
| Albuquerque Area<br>Indian Health Service, DHHS<br>Room 4005, Federal Building &<br>U.S. Courthouse<br>500 Gold Avenue, S.W.<br>Albuquerque, NM 87101 | Nutrition Consultant<br>(505) 766-2151 |
| Billings Area<br>Indian Health Service, DHHS<br>P.O. Box 2143<br>Billings, MT 59103 | Nutrition Consultant<br>(406) 657-6403 |
| Navajo Area<br>Indian Health Service, DHHS<br>P.O. Box G<br>Window Rock, AZ 86515 | Nutrition Consultant<br>(602) 871-5811 |
| Oklahoma City Area<br>Indian Health Service, DHHS<br>215 Dean A. McGee Street, N.W.<br>Oklahoma City, OK 73102-3477 | Nutrition Consultant<br>(405) 231-4796 |
| Phoenix Area<br>Indian Health Service, DHHS<br>3738 N. 16th Street, Suite A<br>Phoenix, AZ 85016-5981 | Nutrition Consultant<br>(602) 241-2052 |

Portland Area
Indian Health Service, DHHS
Federal Building, Room 476
1220 S.W. 3rd Avenue
Portland, OR 97204-2892

Nutrition Consultant
(503) 221-2020

Program Offices

Bemidji Indian Health
Program Office, DHHS
203 Federal Building
P.O. Box 489
Bemidji, MN 56601

Nutrition Consultant
(218) 751-7701

California Indian Health
Program Office, DHHS
2999 Fulton Avenue
Sacramento, CA 95821

Nutrition Consultant
(916) 484-4836

Nashville Indian Health
Program Office, DHHS
1101 Kermit Drive, Suite 810
Nashville, TN 37217-2191

Nutrition Consultant
(615) 251-5104

Nutrition and Dietetics
Training Center
Indian Health Service, DHHS
P.O. Box 5558
Santa Fe, NM 87502

Nutrition Consultant
(505) 988-6470

# Appendix D

Regional Nutrition Consultants
Division of Maternal and Child Health
Bureau of Health Care Delivery and Assistance
Health Resources and Service Administration
Public Health Service
U.S. Department of Health and Human Services

Region I

Regional Nutrition Consultant
PHS/HHS/Family/Child Health and
Special Programs
JFK Federal Bldg., Rm. 1401
Boston, MA 02203
(617) 223-6668

Region II

Regional Nutrition Consultant
Family Health Branch
PHS/HHS/Division of Health Delivery
Federal Bldg.
26 Federal Plaza, Rm. 3300
New York, NY 10278
(212) 264-2547

Region III

Regional Nutrition Consultant
PHS/HHS/Division of Health
Services
P.O. Box 13716
3535 Market Street
4127 Gateway Bldg.
Philadelphia, PA 19104
(215) 596-6686

Region IV

Regional Nutrition Consultant
PHS/HHS/Division of Health Services
101 Marietta Towers, Rm. 1202
Atlanta, GA 30323
(404) 221-5254

Region V

Regional Nutrition Consultant
Maternal and Child Health
PHS/HHS/Bureau of Community
Health Services Delivery
300 South Wacker Drive, 34th Fl.
Chicago, IL 60606
(312) 353-1700

Region VI

Regional Nutrition Consultant
PHS/HHS/Division of Health
Services Delivery
1200 Main Tower, Rm. 1835
Dallas, TX 75202
(214) 767-6578

Region VII

Regional Nutrition Consultant
PHS/HHS/Division of Health
Services Delivery
601 East 12th St., 5th Fl. West
Kansas City, MO 64106
(816) 374-2916

Region VIII

Regional Nutrition Consultant
PHS/HHS/Family Health Branch
1961 Stout Street, Rm. 1194
Denver, CO 80294
(303) 837-3203

Region IX

Regional Nutrition Consultant
PHS/HHS/Division of Health Service
50 United Nations Plaza, Rm. 341
San Francisco, CA 94102
(415) 556-8673

Region X

Regional Nutrition Consultant
PHS/HHS/Family and Child Health Program
Arcade Plaza Bldg.
1321 Second Avenue, Mail Stop 833
Seattle, WA 98101
(206) 442-1020

# Appendix E

Directors of Nutrition Services in State Health Agencies

Note: For names and addresses of local health department nutritionists, contact the State nutritionist for the area concerned.

Alabama

Nutrition Services Administrator
Administration of Local Health Services
Alabama Dept. of Public Health
State Office Building
Montgomery, AL 36103
(205) 832-6776

Alaska

Chief Nutritionist
Alaska Department of Health and Social Services
Pouch H-06B
Juneau, AK 99801
(907) 465-3100

Arizona

Chief, Bureau Nutrition Services
Arizona Dept. of Health Services
3424 N. Central Avenue, Suite 300
Phoenix, AZ 85012
(602) 255-1215

Arkansas

Nutrition Supervisor
Arkansas Dept. of Health
4815 West Markham Street
Little Rock, AR 72201
(501) 661-2250

California

Nutrition Consultant
California Department of Health
714 "P" Street
Sacramento, CA 95814
(916) 322-4787

Colorado

Nutrition Consultant
Colorado Dept. of Health
4210 East 11th Avenue
Denver, CO 80220
(303) 320-8333, ext. 4407

Connecticut

Chief, Nutrition Section
Community Health Division
Connecticut State Dept. of Health
79 Elm Street
Hartford, CT 06115
(203) 566-2520

Delaware

Director, Nutrition Section
Division of Public Health
Dept. of Health and Social Services
Jesse Cooper Bldg.
Dover, DE 19901
(302) 678-4725

District of Columbia

Nutrition Coordinator, MCH
Dept. of Human Services
1875 Connecticut Ave., N.W., 8th Fl.
Washington, DC 20009
(202) 673-6707

Florida

Supervisor, Nutrition Unit
Florida Dept. of Health and Rehabilitative Services
1323 Winewood Boulevard
Tallahassee, FL 32301
(904) 488-6565

Georgia

Chief Nutritionist
Division of Physical Health
Georgia Dept. of Human Resources
47 Trinity Ave., S.W., Rm. 354-S
Atlanta, GA 30334
(404) 656-4826

Hawaii

Chief, Nutrition Branch
Hawaii State Dept. of Health
P.O. Box 3378
Honolulu, HI 95801
(808) 548-6552

Idaho

Nutrition Consultant
Bureau of Child Health
Idaho Dept. of Health and Welfare
State House
Boise, ID 83720
(208) 384-3471

Illinois

Nutrition Section Coordinator
Illinois Dept. of Public Health
535 West Jefferson Street
Springfield, IL 62761
(312) 293-6840

Indiana

Director, Nutrition Division
Indiana State Board of Health
1330 West Michigan Street
Indianapolis, IN 46206
(317) 633-0206

Iowa

Director, Nutrition and Dietary Management Section
Iowa State Dept. of Health
Lucas State Office Bldg.
Des Moines, IA 50318
(515) 281-4124

Kansas

Nutrition Consultant
Bureau of MCH
Kansas Dept. of Health & Environment
Forbes Field, Bldg. 740
Topeka, KS 66620
(913) 862-9360

Kentucky

Administrator, Nutrition Section
Division of MCH Services
Kentucky Dept. of Human Resources
275 East Main Street
Frankfort, KY 40601
(502) 564-3527

Louisiana

Administrator, Nutrition Services
Louisiana Dept. of Health and Human Resources
Office of Health Services & Environmental Quality
P.O. Box 60630
New Orleans, LA 70160
(504) 568-5065

Maine

Nutrition Consultant
Dept. of Human Services
State House
Augusta, ME 04333
(207) 289-2546

Maryland

Chief, Nutrition Services
Chronic Disease Control
Maryland State Dept. of Health and Mental Hygiene
201 West Preston Street
Baltimore, MD 21201
(301) 383-6521

Massachusetts

Public Health Nutritionist
Massachusetts Dept. of Public Health
600 Washington Street
Boston, MA 02111
(617) 727-2642

Michigan

Chief Nutritionist
Bureau of Personal Health Service
Michigan Dept. of Public Health
P.O. Box 30035
Lansing, MI 48909
(517) 374-9500

Minnesota

Supervisor of Nutritionists
Minnesota Dept. of Health
717 Delaware Street, S.E.
Minneapolis, MN 55440
(612) 296-5437

Mississippi

Coordinator of Nutrition Services
Mississippi State Board of Health
P. O. Box 1700
Jackson, MS 39205
(601) 354-6680

Missouri

Director, Bureau of Nutrition
Division of Health
Missouri Dept. of Social Service
P. O. Box 570
Jefferson City, MO 65102
(314) 751-2713

Montana

Nutrition Consultant
Maternal & Child Health Bureau
State Dept. of Health and
Environmental Sciences
Cogswell Bldg.
Helena, MT 59601
(406) 449-2554

Nebraska

Director, Nutrition Division
Nebraska Dept. of Health
P.O. Box 95007
Lincoln, NB 68509
(402) 471-2781

Nevada

Nutrition Consultant
Nevada Division of Health
Capitol Complex, Kinkead Bldg.
505 East King Street
Carson City, NV 89710
(702) 885-4797

New Hampshire

Nutritionist, Public Health
Nutrition Program
New Hampshire Division of Public Health
Hazen Drive
Concord, NH 03301
(603) 271-4550/4551

New Jersey

Nutrition Consultant
New Jersey State Department of Health
John Fitch Way, Box 1540
Trenton, NJ 08615
(609) 292-8106

New Mexico

Head, Nutrition Unit
Health Services Division
Health & Environment Dept.
P.O. Box 968
Santa Fe, NM 87503
(505) 827-3201, ext. 485

New York

Nutrition Consultant
Division of Child Health
New York State Dept. of Health
Empire State Plaza - Tower Bldg.
Albany, NY 12237
(518) 474-4374

North Carolina

Head, Nutrition and Dietary
Services Branch
Division of Health Services
North Carolina Dept. of Human Resources
P.O. Box 2091
Raleigh, NC 27602
(919) 733-2351

North Dakota

Dietitian, Division of Maternal
& Child Health
North Dakota State Health Dept.
State Capitol Building
Bismarck, ND 58505
(701) 224-2493

Ohio

Chief, Nutrition Division
Ohio Dept. of Health
266 N. Fourth Street, Box 118
Columbus, OH 43216
(614) 271-4676

Oklahoma

Director, Nutrition Division
Oklahoma State Dept. of Health
N.E. 10th Street & Stonewell
Oklahoma City, OK 73105
(405) 271-4676

Oregon

Nutrition Consultant
Oregon State Division of Health
P. O. Box 231
Portland, OR 97207
(503) 229-5745

Pennsylvania

Director, Division of Nutrition
Pennsylvania Dept. of Health
604 Health & Welfare Bldg.
Harrisburg, PA 17120
(717) 787-5376

Rhode Island

Chief, Public Health Nutrition
Rhode Island Dept. of Health
75 Davis Street
Providence, RI 02908
(401) 277-3093

South Carolina

Director, Division of Nutrition
South Carolina Dept. of Health
& Enviromental Control
2600 Bull Street
Columbia, SC 29201
(803) 758-5443

South Dakota

Nutritionist/MCH Program
South Dakota Dept. of Health
Pierre, SD 57501
(605) 773-4794

Tennessee

Director, Div. of Nutrition Services
R. S. Gass State Office Bldg.
Ben Allen Road
Nashville, TN 37216
(615) 741-7218

Texas

Director, Nutrition Services
Bureau of Personal Health Services
Texas Dept. of Health Resources
1100 West 49th Street
Austin, TX 78756
(512) 458-7668

Utah

Maternal & Child Health
Nutrition Consultant
State Dept. of Health
44 Medical Drive
Salt Lake City, UT 94113
(801) 533-6181

Vermont

Public Health Nutrition Chief
Vermont Dept. of Health
115 Colchester Avenue
Burlington, VT 05401
(802) 862-5701

Virginia

Director, Nutrition
State Dept. of Health
109 Governor Street
Richmond, VA 23219
(804) 786-4865

Washington

Nutritionist
Washington Dept. of Social and Health Services
P. O. Box 1788, M.S. LC-11-A
Olympia, WA 98504
(206) 753-7520

West Virginia

Director, Bureau of Nutrition
West Virginia Dept. of Health
1800 Washington Street, East
Charleston, WV 25305
(304) 348-2985

Wisconsin

Chief, Section of Nutrition
Wisconsin State Division of Health
P.O. Box 309
Madison, WI 53701
(608) 266-2661

Wyoming

Director of Nutrition & Dietary Services
Division of Health & Medical Services
Hathaway Bldg.
Cheyenne, WY 82002
(307) 777-7166

# Appendix F

Regional Offices
Administration on Aging
U.S. Department of Health and Human Services

Region I

Regional Program Director
Administration on Aging
DHHS Regional Office
JFK Federal Bldg., Room 207
Boston, MA 02203
(617) 223-6885

Region II

Regional Program Director
Administration on Aging
DHHS Regional Office
Federal Bldg., 26 Federal Plaza
New York, NY 10007
(212) 264-4592

Region III

Regional Program Director
Administration on Aging
DHHS Regional Office
P. O. Box 13716
Philadephia, PA 19101
(215) 596-6892

Region IV

Regional Program Director
Administration on Aging
DHHS Regional Office
101 Marietta Towers
Atlanta, GA 30323
(404) 242-2972

Region V

Regional Program Director
Administration on Aging
DHHS Regional Office
300 South Wacker Drive
Chicago, IL 60606
(312) 353-3141

Region VI

Regional Program Director
Administration on Aging
DHHS Regional Office
Fidelity Union Towers Bldg.
1509 Pacific Avenue
Dallas, TX 75201
(214) 655-2971

Region VII

Regional Program Director
Administration on Aging
DHHS Regional Office
601 East 12th Street
Kansas City, MO 64106
(816) 374-2955

Region VIII

Regional Program Director
Administration on Aging
DHHS Regional Office
1961 Stout Street
Denver, CO 80294
(303) 844-2951

Region IX

Regional Program Director
Administration on Aging
DHHS Regional Office
50 United Nations Plaza
San Francisco, CA 94102
(415) 556-6003

Region X

Regional Program Director
Administration on Aging
DHHS Regional Office
Arcade Plaza Bldg.
1321 Second Avenue
Seattle, WA 98101
(206) 442-5341

# Appendix F

# Appendix G

Regional Consumer Affairs Officers
Food and Drug Administration
U.S. Department of Health and Human Services

Region I

Consumer Affairs Officers
Food and Drug Administration, DHHS
585 Commercial Street
Boston, MA 02109
(617) 223-5857

Region II

Consumer Affairs Officers
Food and Drug Administration, DHHS
850 Third Avenue
Brooklyn, NY 11232
(212) 965-5043 or 5754

Region III

Consumer Affairs Officers
Food and Drug Administration, DHHS
900 U.S. Customhouse, Rm. 900
2nd and Chestnut Streets
Philadephia, PA 19106
(215) 597-0837

Region IV

Consumer Affairs Officers
Food and Drug Administration, DHHS
1182 W. Peachtree Street, N.W.
Atlanta, GA 30309
(404) 881-7355

Region V

Consumer Affairs Officers
Food and Drug Administration, DHHS
1222 Main Post Office Bldg.
433 W. Van Buren Street
Chicago, IL 60604
(312) 353-7126

Region VI

Consumer Affairs Officers
Food and Drug Administration, DHHS
1200 Main Tower Bldg., Rm. 1545
Dallas, TX 75202
(214) 767-5433

Region VII

Consumer Affairs Officers
Food and Drug Administration, DHHS
1009 Cherry Street
Kansas City, MO 64106
(816) 374-3817

Region VIII

Consumer Affairs Officers
Food and Drug Administration, DHHS
500 U.S. Customhouse
19th and California Streets
Denver, CO 80202
(303) 837-4915

Region IX

Consumer Affairs Officers
Food and Drug Administration, DHHS
50 United Nations Plaza
Rm. 524
San Francisco, CA 94102
(415) 556-2682

Region X

Consumer Affairs Officers
Food and Drug Administration, DHHS
Federal Office Bldg.
909 First Avenue, Room 5009
Seattle, WA 98174
(206) 442-5258

# Appendix H

Regional Offices
Administration for Children, Youth, and Families (ACYF)
U.S. Department of Health and Human Services

Region I

Regional Program Director, ACYF, DHHS
JFK Bldg., Room 2011
Boston, MA 02203
(617) 223-3236

Region II

Regional Program Director, ACYF, DHHS
Federal Bldg., 41st Fl.
26 Federal Plaza
New York, NY 10278
(212) 264-2974

Region III

Regional Program Director, ACYF, DHHS
Box 13716
3535 Market Street, Rm. 5450
Philadephia, PA 19101
(215) 596-0356

Region IV

Regional Program Director, ACYF, DHHS
101 Marietta Tower, Suite 903
Atlanta, GA 30323
(404) 221-2134

Region V

Regional Program Director, ACYF, DHHS
300 South Wacker Drive, 13th Fl.
Chicago, IL 60606
(312) 353-6503

Region VI

Regional Program Director, ACYF, DHHS
1200 Main Tower Bldg., Rm. 2040
Dallas, TX 75202
(214) 767-2976

Region VII

Regional Program Director, ACYF, DHHS
601 E. 12th Street, Rm. 384
Kansas City, MO 64106
(816) 374-5401

Region VIII

Regional Program Director, ACYF, DHHS
Federal Office Bldg.
1961 Stout Street, Rm. 908
Denver, CO 80294
(303) 844-3106

Region IX

Regional Program Director, ACYF, DHHS
50 United Nations Plaza, Rm. 477
San Francisco, Ca 94102
(415) 556-6153

Region X

Regional Program Director, ACYF, DHHS
Third and Broad Bldg., M/S 413
2901 Third Avenue
Seattle, WA 98121
(206) 442-0838