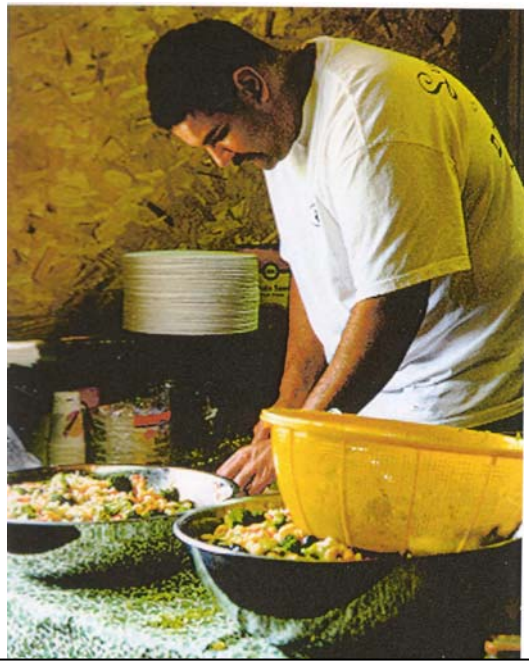
California Food Guide

Health and Dietary Issues Affecting American Indians

By Stacey Kennedy, M.S., R.D.



What's New

According to the 2000 census, 333,300 people of American Indian/Alaska Native (AI/AN) descent live in California, making the Golden State with the highest number of American Indians. AI/AN have the highest prevalence of type 2 diabetes in the world.

Public Health Implications

Diabetes is being diagnosed at young ages in Native American Indian Communities and has become an urgent priority. AI/AN adults ages 50-64 in California have a significantly higher prevalence rate of diabetes (19.6 percent) compared with Whites (8.3 percent).[1] Cardiovascular disease (CVD) used to be rare among AI/AN. The current rates of CVD in American Indians exceed rates in other U.S. populations and can be fatal.[2] AI/ANs historically have had very low rates of cancer but cancer is now the second leading cause of death for AI/AN over the age of 45, and rates appear to be increasing.[3]

Definition

AMERICAN INDIAN TRADITIONAL FOODS

In the 1800s wild plants and wild game dominated the land in California. Before the time of agriculture, they were probably dominant in the areas that later became agricultural. The abundance of wild vegetable foods in California was largely determined by the geographical environment.

Indians boiled foods in almost all native cultures. Stone boiling was the dominant method in California. The earth oven was used to prepare plant and animal foods. Some foods were heat and steam cooked (normally overnight). Broiling or roasting were common methods of preparation. Smoking and drying meat was also common

and a great variety of vegetable foods were preserved by drying.

Food has immense social and spiritual importance in the culture of American Indians. Every tribe prepared and preserved its food in some way to store food for future use. Recipes are well reported in many localities. In areas where hunting and fishing dominated, the Indians were well nourished. Acorns were a staple food, the nutmeats were ground and then leached before final preparation and consumption.

Foods traditionally eaten by some American Indians in California include the following:[4]

Game and wild fowl (squirrel, deer, rabbit, elk, grouse, quail, and other fowl)
Seafood (salmon, trout, eel, clams, mussels)
Nuts and seeds (acorn meal, hazelnuts, black walnuts, pine nuts, grass seeds)
Grains and beans (corn, beans, corn tortillas)
Vegetables (turnip, wild potato, wild carrots, bitter roots, camass bulbs, squash, wild celery, greens, yucca, cactus, mushrooms, wild onions, garlic)
Fruits and flowers (cactus fruit, yucca flowers, squash blossoms, wild strawberry, gooseberry, raspberry, blackberry, tuber berries, huckleberry, service berry, salmon berry, choke cherry, wild plum, melons, peach).

Burden

Lifestyles of California tribes have drastically changed over time. Compared with their ancestors many Indians have a more sedentary lifestyle. Diabetes, obesity, and poverty are now epidemic among tribes in California. Moreover diet has changed dramatically for American Indians. Poor diet is known to be a contributing risk factor to diabetes, obesity and CVD. Current foods eaten by American Indians contain more fat, sugar, preservatives, and artificial ingredients than the traditional foods.

Incidence and Prevalence

The AI/AN population is one of the smallest minorities, compromising only 1.6 percent of the total United States population. California is home to more AI/AN than any other state. California Indian country is 4.5 times larger than the Navajo Nation of Arizona, stretching over 123,000 square miles. There are 107 federally recognized tribes. Of the 627,600 self-reported American Indians in California, the largest number of people reside in Los Angeles County according to the Census 2000. There are 221,000 AI/AN currently living in non-urban portions of California that make up the Indian Health Service population area. Despite their numbers as a group, California's Indians are the most medically underserved in the nation.

Prevalence data in this section has been collected for both American Indians and Alaskan Natives due to the fact that most research and census data report both groups together.

- American Indian and Alaskan Native adults, ages 50-64, in California, have a significantly higher prevalence rate of diabetes (19.6 percent) compared with Whites (8.3 percent).[2] One in five AI/AN adults age 65 and over report having diabetes.[5]
- Approximately six in ten AI/AN California adults diagnosed with diabetes have also been diagnosed with high blood pressure -- nearly 2.8 times the rate of diabetes in AI/AN adults not diagnosed with diabetes.[5]
- Approximately one in four (26.2 percent) AI/AN adults with diabetes in California has also been diagnosed with heart disease, nearly 3.4 times the rate of adults not diagnosed with diabetes.[5]
- Approximately four in five AI/AN California adults with diabetes (81.1 percent) are overweight or obese. This proportion is highest among AI/AN adults ages 18-64 (86.4 percent).[5]

Trends/Contributing Factors

When American Indians were uprooted from their lands, many became dependent on commodity foods. These foods include canned meat, poultry, fruit juice, peanut butter, eggs, powdered and evaporated milk, dried beans, instant potatoes, peas, and string beans. Younger American Indians in California are less likely than their grandparents to supplement their diets with wild game and wild foods like squirrel, rabbit, deer, acorn mush (puree), greens, nuts, berries, and mushrooms. Many southwestern items, like beans, rice, and tortillas, are now listed as traditional American Indian foods. One study carried out among 198 rural women living in California found that 60 percent of the women did not eat any fruit and 28 percent did not eat any vegetables on the previous day.[6] The regular consumption of milk and vegetables was positively related to dietary quality in these women.

Only 50 years ago, infectious diseases, malnutrition, and infant mortality were the leading health problems for AI/AN populations. Because of advances in sanitation and improved access to food and modern medical care, those problems have been reduced, but not eliminated. Modern diseases (e.g., obesity and diabetes) are on the rise. These modern or chronic diseases are in turn related to multiple factors that might be cultural, genetic, socioeconomic, or behavioral.[7]

Obesity increases the risk for certain chronic diseases, including cardiovascular disease and diabetes. The prevalence of overweight and obesity has increased for the general U.S. population as well as among AI/AN. California data derived from the U.S. Behavioral Risk Factor Surveillance System (BRFSS) indicates that AI/AN individuals were more likely to report obesity (BMI of $\geq$30 kg/m^2) (23.9 percent) than respondents of other racial/ethnic groups (18.7 percent). These estimates are probably conservative, because respondents tend to underreport weight.[7]

Research derived from BRFSS has demonstrated that the prevalence of diabetes among AI/ANs is increasing among all age groups. Diabetes awareness (defined as ever having been told by a health professional that he or she has diabetes) was much higher in the AI/AN population (9.7 percent) than respondents of other racial/ethnic groups (5.7 percent). Pacific Coast Indians had a rate of 10.6 percent. The percentage of adults who actually have diabetes is likely higher because, in certain cases, the respondents were unaware of their health status regarding this condition. In fact, the National Health and Nutrition Examination Survey III reported that for every two U.S. adults with diagnosed diabetes, one person has undiagnosed diabetes. Thus, the burden of diabetes for AI/ANs might be even more substantial than these estimates indicate.[7]

Although tribes differ in their use and abuse of alcohol, American Indians as a group report the highest prevalence of alcohol dependence and the highest number of alcohol-related deaths of all ethnic groups in the U.S. Indian Health Service estimates age-adjusted alcohol-related deaths to be five times higher than the general U.S. population. Alcohol consumption is higher in men than in women. Despite the negative impact alcohol consumption has had on some tribes, it remains unclear how and why alcohol use disorders develop in greater proportion in American Indians than in the general U.S. population.[8]

Barriers to Implementation/Myths

Living in poverty has taken its toll on the health and nutritional status of American Indians in California. The consequences of poverty are exacerbated for the many American Indians living in communities such as reservations located in rural areas. Often in these rural areas food costs are high and availability, in addition to selection, is limited. Poverty also imposes barriers on transportation options. Isolation and financial constraints have forced families in these rural areas to rely on less expensive, often high-fat foods, and few fruits and vegetables. American-Indian communities often cite lack of availability, poor quality, and high expense as barriers to fruit and vegetable intake.[9]

The USDA Food Distribution Program on American Indian Reservations provides commodities that are a significant source of food in many AI/AN communities. Unfortunately, until recently, the commodity foods, which provide the basis for many American Indian diets, were very high in fat.

Common Concerns/Strategies

In some areas traditional foods may not be available. Sharing information about lower fat versions of modern and traditional foods may provide opportunities for health promotion among those who live in urban locations. A daily diet containing a variety of vegetables, fruits, grains, legumes, lean meats, and fish offers a reduced risk of heart disease, cancer, diabetes, and other diseases. These nutrient rich foods contribute to a

healthful lifestyle and a fuller life. Traditional forms of physical activity such as dancing or gathering materials for basket weaving, carving, and regalia making as well as collecting native foods for ceremonial and personal use should be recognized and encouraged as part of a healthy lifestyle. The many health benefits from traditional food choices and preparation methods are now acknowledged.

Opportunities for Improvement

Eating a regular diet of native and natural foods will help American Indians prevent and control many of today's chronic diseases. Most native foods are appropriate for diabetics, people with heart disease, and most people with gastrointestinal problems. They are low in fat, high in nutrients, and a good fiber source.

Cultural awareness is an essential quality to effective nutrition education. It is an in-depth understanding, acceptance, and respect for the values, assumptions, and beliefs widely shared by a group of people, which structure behaviors of group members from birth until death.[10] Among health service providers there is often an assumption that diversity will disappear as a result of assimilation. However AI/AN, like many ethnic groups are committed to sustaining their cultural identity. Increasingly, cultural knowledge and understanding are important to personnel responsible for quality programs.

The design of “one-size-fits all” nutrition education programs that are aimed at the dominant culture may or may not provide relevant, applicable information for the native population. To provide quality nutrition education it is important to become familiar with the values, customs, and behaviors of American Indians. In the native culture, the family is highly valued and cooperation rather than competition among community members may be emphasized. Many families have evolved from an extended kinship family to a nuclear family. American Indian groups learn best by doing, and teaching comes from oral tradition. American Indians believe food is medicine and often times traditional medicine is integrated with Western medicine. Food habits occur within a cultural context and the nutrition educator has responsibility to become familiar with the broader aspect of culture as it relates to other dietary habits and heath. American Indian groups, in the midst of widespread social, environmental, and economic changes, are in need of better food resources and culturally sensitive nutrition education.

Clinical Implications

Poor dietary habits as well as obesity appear to play a major role in the development of type 2 diabetes among indigenous peoples living in California. The reduction in consumption of the traditional foods appears to play a key role in the increased prevalence of certain chronic diseases in the American Indian population in California.

Resources/Web Sites

1. "California Indian Women: Good Nutrition for All," an 18 minute videotape summarizing the results of a collaborative study between the University of California Cooperative Extension and Indian Health Service Clinics focuses on the healthy food habits of American Indian women and their families. This program features members of California Indian tribes. 1995. If you would like a copy, please contact Rita Mitchell at ritamitc@berkeley.edu

2. The Hearst Museum of Anthropology at UC Berkeley http://hearstmuseum.berkeley.edu/

3. Indian Health Service, National Diabetes Program www.ihs.gov/MedicalPrograms/diabetes/nutrition/n_facts.asp

4. American Indian Health Resources: Research and Education Resources http://www.ldb.org/vl/geo/america/indi_hr.htm

5. Native American Nutrition Education Database http://www.nal.usda.gov/fnic/NatAm_database.html

6. A Resource List for Educators from the Native American Nutrition Education Database http://peaches.nal.usda.gov/pubs/ethnic/NativeAmericanResources.asp

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