What’s New?

Low-income Asian and Pacific Islander American (API) children are joining other racial/ethnic groups in the obesity epidemic. The percent change in the prevalence of overweight among low-income API Californian children aged between 5-19 is alarming. From 1992 to 2001 the percent of overweight in these groups has more than doubled from 5.9 percent to 13.4 percent.¹

Table 1: Percent change of overweight* from 1992 to 2001, low-income CA children from 5 to < 20 years old by race/ethnicity.¹

<table>
<thead>
<tr>
<th>Race/Ethnicity</th>
<th>1992</th>
<th>2001</th>
<th>Percent Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alaskan Native/Indian</td>
<td>5%</td>
<td>12%</td>
<td>127%</td>
</tr>
<tr>
<td>Latino</td>
<td>35%</td>
<td>43%</td>
<td>20%</td>
</tr>
<tr>
<td>Black</td>
<td>43%</td>
<td>50%</td>
<td>12%</td>
</tr>
<tr>
<td>White</td>
<td>50%</td>
<td>60%</td>
<td>20%</td>
</tr>
<tr>
<td>Asian/PI</td>
<td>60%</td>
<td>127%</td>
<td></td>
</tr>
</tbody>
</table>

*Overweight = BMI > 95th percentile. Overweight is comparable to obesity in adults.¹

Definition

Asian refers to people having origins in any of the original peoples of the Far East, Southeast Asia, or India. It includes people who indicated their race or races as "Asian Indian," "Chinese," "Filipino," "Korean," "Japanese," "Vietnamese," or "Other Asian," or wrote in entries such as “Burmese,” “Hmong,” “Pakistani,” or “Thai.”
**Pacific Islander** refers to a person having origins in any of the original peoples of Hawaii, Guam, Samoa, or other Pacific Islands. It includes people who indicate their race as "Native Hawaiian," "Guamanian or Chamorro," "Samoan," and "Other Pacific Islander."²

**Incidence and Prevalence**

California is home to the largest Asian population in the United States and these populations continue to grow. Between 1990 and 2000, the Asian population in California grew 11 percent from 2.7 million to 3.7 million.³ According to Census 2000, Chinese are the largest Asian group in California with 980,642 persons.² Filipinos represent the second largest group with 918,678 persons. With an increase of 60 percent during the past decade, the Vietnamese are the fastest growing population in the state and the third largest Asian ethnic community with 447,032 persons. Koreans are the fourth largest group with 345,882. Asian Indians are the fifth largest group with 314,819 and Japanese are the sixth group largest with 288,854. Other Asian subgroups including Cambodian, Hmong, Laotian, Thai, and Malaysian, constitute almost half a million persons in California.

Little is known about the differences in nutritional status and health risks of these Asian subgroups. Moreover, very few studies are available on the food habits of these populations in California. This section presents an overview on food habits and nutritional issues for select Asian subgroups living in California and other parts of the United States.

**Common Concerns/Strategies**

There are many similarities across the Asian subgroups living in California. Many Asians still consume some traditional foods, particularly rice, and a wide variety of fruits, vegetables, meat, poultry, and fish. Overall, an increasing trend of meat consumption is seen among all Asian ethnic populations. Fresh vegetables and fruits are more affordable in their countries of origin while meat products are more affordable in the United States. Furthermore, the availability and consumption of unhealthy foods, including alcohol and snacks high in fat and sugar, contribute to poor health in these populations.

Tea has been a favorite drink of many Asian people through the centuries. It is reputed for its healthy and medicinal properties and is believed to clear the sight and mind, and to fight stress. A growing body of evidence suggests that moderate consumption of tea may protect against several forms of cancer, cardiovascular diseases, formation of kidney stones, bacterial infection, and dental cavities.

The consumption of dairy products among Asian Americans in California appears to be higher than in Asia. However, Asian American women are believed to be at an increased risk for osteoporosis and osteopenia due to low calcium intake. Lactose intolerance (also referred to as "lactase non persistence" or "lactose malabsorption") or a learned aversion to milk products also contributes to this problem. National Osteoporosis Risk Assessment found that 65 percent of Asian-American women have low bone mineral density, the
highest among all racial/ethnic groups.⁴ Seventy-three percent of postmenopausal Asian women have calcium intakes below recommended levels.⁵

Although most Asian Americans know that physical activity is important, exercise is rarely a part of their U.S. lifestyle. Work consumes most of their days, leaving little time for personal activities. Refugees, in particular, have so many things to worry about (i.e. jobs, family stresses, adaptation to a new lifestyle) that exercise is not a priority. Furthermore, community events promoting physical activities are rare. In California, U.S. born men of Chinese, Filipino, Japanese and other Asian heritage are more obese than their ethnic counterparts in their homelands.⁶ The American Heart Association reports that 64 percent of Asian-American women are sedentary, which can contribute to obesity, a risk factor associated with type 2 diabetes.⁷ Diabetes is the fifth leading cause of death for Asian Americans between the ages of 45 and 64.⁸

**Opportunities for Improvement**

For many subgroups, acculturation is negatively affecting their dietary patterns. Some general nutrition recommendations that might be applicable to Asian Americans include the following:

**Encourage:**
1. Breastfeeding. Point out the nutritional and health advantages of breast milk.
2. Maintenance of healthy and nutrient-rich traditional Asian diets.
3. Consumption of whole grain products such as brown rice and whole wheat noodles.
4. Fruit consumption rather than desserts high in fat and total calories.
5. Consumption of low-fat or nonfat dairy products for those who can tolerate and like milk. For lactose intolerant individuals or those who do not consume dairy or milk products: Encourage alternate calcium sources including Lactaid milk; calcium-fortified soymilk, juices and tofu; dried fish; soft-shelled crabs and shrimp; canned fish with edible bones (salmon, sardines); collards and broth made from vinegar-soaked bones.
6. Consumption of lean meats and poultry without skin.
7. Consumption of a variety of shellfish and fish without skin and guts. For consumer educational material about safe seafood consumption, refer to the brochures in the link below. For more information on chemical contaminated fish read the chapter on “Environmental Contaminants of Foods.”

**Reduce:**
1. Oil and fat used in stir-frying and deep-fried cooking. Encourage steaming and boiling rather than deep-fat frying.
2. Consumption of high cholesterol organ meats including liver, heart, kidney, brain, intestine, and tripe.
3. Use of monosodium glutamate (MSG), chicken and beef essence, soy sauce, shrimp paste, fish sauces, and other high sodium sauces and salty traditional snacks for salt-sensitive individuals.
4. Consumption of soft drinks, pastries, and sweet desserts and sauces made with coconut milk and sweetened condensed milk.

While tremendous progress has been achieved to improve the health of the American people, Asian Americans, who suffer from the stereotype of being the “model minority” which presupposes economic success and physical well being, have not fully reaped the benefits of this effort. Nutrition education efforts targeting these communities remain largely underdeveloped.

- Intervention programs and health education materials need to be tailored to different Asian subgroups.
- Dietary recommendations need to be culturally appropriate for Asian Americans whose food customs rely heavily on traditional Asian beliefs and values.
- Nutrition education, about both American and ethnic foods, should be delivered to Asian youth. They eat both foods and are significantly influenced by their families’ practices and cultural tradition as well as their peers in the American culture.
- Physical activities need to be incorporated into nutrition education programs. Tasks should include ways to incorporate physical activities into daily life including how to make time to exercise, how to get started, and how to monitor progress.

Food Patterns and Burden of Asian Races

CHINESE

Food Patterns
A predominant number of Chinese immigrants and refugees living in the U.S. are from China, Hong Kong, Taiwan, and other Southeast Asian countries. Culturally, Chinese often rely on traditional beliefs and practices concerning health and medicine and shop at Asian supermarkets.

- Main staples: rice, rice noodles, egg noodles, wheat noodles, wonton wraps, mung bean noodles, and buns. Bread, oatmeal, and whole grain cereal are also eaten by Chinese Americans.
- Protein sources: beef, pork, chicken, duck, fish, eggs, tofu, and other soy products, shellfish, and other seafood. The consumption of beef and poultry may be higher than other protein sources.
- Fruits and vegetables: Chinese dishes make extensive use of a wide variety of vegetables including asparagus, bamboo shoots, bitter melon, bean sprouts, broccoli, cabbage (bok choy, yau choy, and napa), celery, mushrooms, kohlrabi, water-convolvulus, watercress, and pumpkin. Some traditional fruits and vegetables are replaced by more commonly available American foods such as potatoes, lettuce, apples, peaches, and watermelons.
Flavor is enhanced with the use of fresh coriander/cilantro, five-spice powder, sesame seeds, ginger, and garlic. Condiments such as MSG, soy sauce, oyster sauce, bean sauce, fish sauce, and shrimp paste are used in many dishes.

Sugar intake has increased in this population in the U.S., mainly through soft drinks, candy, and pastries. Fruit, as snacks and dessert, is consumed less often.

**Burden**

- Chinese Americans consume diets exceeding 30 percent of calories from fat.9
- Cardiovascular disease is a leading cause of death among the Chinese population. The prevalence of hypertension among elderly Chinese American women is 34 percent.10
- Foreign-born Chinese Americans may be a high-risk group for osteoporosis.11
- In a study of Chinese Americans aged 60 and over living in Boston, 12.5 percent of men and 13.3 percent of women have diabetes.12
- Risk of colorectal and breast cancer increase with length of stay in U.S. Breast cancer is the most common cancer among Chinese Americans women. There is a high rate of liver cancer compared to other Asian subgroups.4

**FILIPINO**

**Food Patterns**

- Main staples: rice, rice noodles, wheat noodles, mung beans, bread, spaghetti, macaroni, crackers, and cereal. Rice is not usually eaten at breakfast.
- Traditional foods: include ingredients from other cultures. Common Chinese ingredients such as oyster sauce are regularly used. Lime, tamarind, ginger, and coconut milk are also key ingredients.
- Protein sources: The consumption of fish is down while chicken, beef, pork, and egg consumption has increased. Legumes and nuts are used infrequently. Filipinos also like organ meats such as tripe or pork blood. Dinuguan (chocolate meat) is cooked with pork blood, pork, tripe, onion, and garlic.
- Vegetables: Compared to other Asian subgroup, Filipinos eat more salads and raw vegetables. Common vegetable choices are cabbage, leafy greens, broccoli, mustard greens, eggplant, green beans, bitter melon, okra, tomato, potato, and onion. Vegetables are usually boiled or sautéed. Common choices are bamboo shoots, bean sprouts, bitter melon, peppers, okra, squash, and yam leaves.
- Fruits: Filipinos eat a wide variety of fruit including bananas, guava, lychee, both green and ripe mangoes, melon, both green and ripe papaya, pineapple, and apples. Juice is also popular.
- Dairy products: evaporated milk, cheese, ice cream, yogurt, water buffalo milk, and goat's milk.
- The Filipino diet is relatively high in fat and cholesterol compared to other Asian Americans. Dishes such as fried fish, deep fried pork leg, pork rind, deep fried chicken, roasted pig, pancit (sautéed vegetable, shredded chicken, shrimp, and rice noodles), lumpia (fried egg rolls), and adobo (onion, garlic, pork/chicken, soy sauce, and vinegar) are eaten frequently.
- The typical diet uses high-sodium condiments. Fish sauce, shrimp paste, anchovy paste, and soy sauce are popular ingredients.
- Pastries, custards, rice cakes, cookies, soft drinks, and high-fat snack foods are often eaten.

**Burden**
- Filipino Americans exhibit significantly higher levels of hypertension compared to other Asian groups and these levels are similar to those in African Americans who live in the U.S.\(^6\)
- Twenty-six percent of Filipino-American women are obese.\(^4\)
- Cancer of the thyroid is often found in Filipino-American women.\(^4\)
- Prostate cancer is the most common cancer among Filipino-American men.\(^6\)
- Breast cancer is the most common cause of death among Filipino women.\(^4\)

**VIETNAMESE**

**Food Patterns**
- Main staples: rice and rice products such as rice noodles, rice paper, and flour. French-style bread and wheat noodles are also widely consumed. Rice is eaten at least once a day. Some eat rice at breakfast, but a large number consume bread, noodles, and breakfast cereals.
- Protein sources: fish, pork, chicken, beef, and shellfish. Since immigration, Vietnamese eat more meat, poultry, and shellfish and less fish. Pork is preferred to beef.
- Fruits and vegetables: banana, papaya, pineapple, plum, mango, orange, watermelon, Fuji apple, bitter melon, yam, bok choy, ong choy, yam leaves, water spinach, carrots, green beans, broccoli, tomatoes, squash, cabbage, mustard greens, cauliflower, and watercress. Lettuce, bean sprouts, and herbs are often served in the raw form to accompany many dishes.
- Dairy products: Cow's milk and other dairy products are less commonly consumed. Preferred dairy items include Laughing Cow cheese, sweetened condensed milk, and ice cream. Soymilk is also a common beverage.
- Fish sauce is a widely used condiment and often diluted with water, garlic, chili, vinegar, and sugar.
- Other foods that are consumed more often by Vietnamese people in the U.S. than in their homeland include fruit juices and soft drinks. Among Vietnamese-American teens, traditional foods are often eaten, but with acculturation there is an increase in the consumption of steak, pizza, deep fried chicken, ice cream, sodas, and milk.
- Many Vietnamese Americans are shifting toward a diet high in fat and low in fiber.\(^{13}\)

**Burden**
- Some pregnant Vietnamese immigrants have diets that are low in calcium, iron, vitamin E, and thiamin.
- Vietnamese Americans are at risk for hypertension, which makes them vulnerable to strokes. Heart disease is the second leading cause of death among Vietnamese.\(^4\) Studies from 1978-1985 and from 1991 found that
Vietnamese-American women had the highest rates of hypertension among all Asian-American ethnic groups.\textsuperscript{4}

- Cervical cancer is the most common cancer among Vietnamese women. The rate is five times higher than that of Caucasian women.\textsuperscript{15}

**KOREAN**

**Food Patterns**

- Staple foods: rice and noodles from wheat, mung beans, and buckwheat (served with hot or cold soup). Rice is still eaten daily, but overall consumption has decreased. The diet centers around rice accompanied by one protein-rich main dish and various side dishes. Meals customarily include at least one vegetable, one protein side dish, and kimchi.
- Protein sources: beef (especially barbecued), fish, shellfish, and soybean products. Pork is consumed less often than beef and chicken. Beef and beef variety cuts are consumed frequently; fish is consumed weekly.
- Fruits and vegetables: Fresh fruits are often served as desert. Vegetables, legumes, and nuts such as bean sprouts, bamboo shoots, cabbage, lotus root, seaweed, Asian pears, dates, grapes and plums, are consumed often.
- Dairy products: Milk and cheese are not popular in Korea, but are often well accepted in the U.S. Current literature indicates that meat and dairy product consumption are increasing.\textsuperscript{16} American foods such as oranges, low-fat milk, bagels, tomatoes, and bread are regularly consumed at breakfast and lunch.
- Korean foods are usually spicy and salty. Foods are usually seasoned with chili peppers, Chinese parsley, ginger root, sesame oil, corn oil, soy sauce, soy bean paste, garlic, sesame seeds, and rice vinegar.
- Kimchi is a spicy traditional side dish made with various kinds of vegetables (sometimes with fish), with Napa cabbage being the most popular vegetable used. There are more than 200 varieties of kimchi, but the main ingredients are red pepper, garlic, green onion, and ginger.
- The less acculturated Koreans consume more vegetables and less fruits, sweets, and fats than the more acculturated Koreans.\textsuperscript{17}
- Roasted barley or beverages from water of boiled corn are consumed after meals. Ginseng, an ancient therapeutic tea, is believed to be an aphrodisiac that promotes health, strength, and happiness.\textsuperscript{16}

**Burden**

- Data suggest that cancer is the leading cause of death in Korean Americans between the ages of 25-44 years and heart disease is the leading cause of death for those aged in 45-64 years.\textsuperscript{18}
- Colorectal cancer is second most common cancer for Korean-American women (after breast cancer).\textsuperscript{19} Stomach cancer is most common cancer among Korean-American men.\textsuperscript{20}
- High blood pressure is the leading cardiovascular disease risk factor among Korean-American elderly.\textsuperscript{21}
ASIAN INDIAN

Food Patterns

- Asian Indians include many American foods in their meal plans, yet continue to eat many traditional foods. Traditional mixed dishes with grains, legumes, and vegetables are consumed less often in the U.S., but many continue to prepare those dishes at least once a week.
- Main staples: A typical diet is composed of cooked rice, broiled Indian bread, dal, roots, tubers, achar, yogurt, and tea with milk. Dal is a name for lentils, beans, and split peas. Achar are pickles that are prepared with vegetables or fruits such as lime and raw mango to which salt, chili powder, and oil are used as seasonings.
- Protein foods: Legumes such as lentils, garbanzo, and kidney bean. Sprouted dals are also used in raw salad dishes. Animal protein sources are milk and dairy products, goat, fish, poultry, and eggs.
- Consumption of legumes has decreased and meat intake has increased in the U.S.
- Fruit and vegetables: Many types of vegetables are also prepared daily with a variety of spices, condiments, fresh ginger, onions, or garlic. Some common fruits and vegetables include: bananas, dates, figs, oranges, mangos, grapes, nectarines, plums, apples, peaches, watermelons, papayas, pineapples, cabbages, potatoes, carrots, eggplants, spinach, and squash. There is a decrease in vegetable intake in U.S. Asian Indians. Indian consumption of fruit juice, fruits, margarine, chips, cola, alcohol beverages, and coffee has increased.
- Dairy products: More cheese and ice cream are eaten in the U.S. Other common choices include whole milk, buttermilk, and ghee. Ghee is a clarified butter, served with rice or applied to Indian bread. Fermented dairy products such as yogurt are popular. Milk is considered a beverage for children. Paneer is a homemade cottage cheese that is deep-fried and added to vegetable dishes.
- Typical weekday snacks include apples, cookies, nuts, milk, crackers, and chips. Indian snacks are consumed more often on weekends.
- Common for them to follow a vegetarian diet.
- Traditional Hindu beliefs avoid beef and the Muslims avoid pork.

Burden

- Asian Indians in the U.S. have one of the highest rates of coronary heart disease of any ethnic group studied.  
- This population has a predisposition for diabetes. Trends toward increased caloric intake and inadequate exercise may increase risk of type 2 diabetes.
- Asian Indian women in America have the highest rate of gestational diabetes in the country, with a prevalence rate of 56.1 per 100,000.
JAPANESE

Food Patterns
- Main staple: short grain rice (sticky rice). Rice may be mixed with rice vinegar and served with sliced raw fish.
- Protein sources: soybean products and a wide variety of fish and shellfish.
- Fruits and vegetables: are preserved or dried, but fresh ones are preferred. Some preserved and dried fruits and vegetables include daikon (white radish), seaweed, chrysanthemum leaves, algae, and tangerines.
- Dairy products: are still not popular with first generation Japanese Americans. Milk, butter, and ice cream are consumed more by subsequent generations.
- The Japanese use a large amount of seaweed and algae in their cooking for seasoning, as a wrapping, or in salads and soups. Grated daikon is mixed with lemon juice or vinegar to make dressing for vegetables, poultry, or seafood.
- Most second generation (and up) Japanese Americans eat a typical American diet, but use more rice and soy products than other ethnic groups.
- The Japanese-American diet is high in calories, protein, fat, and carbohydrates. The mean daily intake of fat in Japanese-American men was 32.4 grams, in contrast to a mean intake of only 16.7 grams of fat in Japanese men.6
- Japanese Americans use more fats, oil, and sugar. They also eat more poultry and meat than fish and fewer fruits and vegetables than the Japanese in Japan.

Burden
- Japanese Americans have a stomach cancer rate that is twice as high as most other populations in the U.S., that is believed to be related to eating nitrite-rich salty foods (e.g., cured meats).24
- The Western diet may increase the risk of colon cancer, heart disease, and diabetes among Japanese Americans. Relatively high rates of Type 2 diabetes have been reported among second-generation Japanese-American men (20 percent) and women (16 percent) aged 44-74.25
- Prostate cancer is the most common cancer among Japanese-American men.6
- Japanese-American men and women have the highest adjusted mean of cholesterol levels compared to other Asian groups.26
- Eighteen percent of Japanese American women are obese.4

HMONG

The Hmong originally migrated southward from China about 300 years ago, settling in the remote mountainous area of Laos, Vietnam, and Thailand. Since many Hmong fought for the U.S. in Laos during the Vietnam war, their lives, and the lives of their families, were in danger when the U.S. pulled out. Hmong refugees were transported to the U.S. from their homeland in Northern Laos because of promises of protection.

Food Patterns
- Main staples: rice, sticky rice, rice noodles, rice paper, cellophane, or mung bean noodles. Flour noodles, French bread, and cereal are also common items.
• Protein sources: legumes (mung beans, soybeans, tofu), beef, chicken, pork, and fish.
• Vegetables: A wide variety are eaten. Popular vegetable choices include mustard greens, squash, lemon cucumbers, chayote leaves, yam leaves, bitter melon leaves, onchoy, pepper leaves, snap peas, mustard greens, beans, chili peppers, bamboo shoots, fresh coriander/cilantro, cucuzzi squash, pumpkin, and sugar cane.
• Dairy products: milk and cheese are consumed in very low amounts and many adults do not drink milk regularly. Whole milk may be preferred.
• Contemporary food practices include a higher consumption of eggs, but meat is still preferred. Fish is eaten in a much lower amount.
• Fresh produce is highly valued by Hmong Americans.
• Other foods include coconut milk.
• Seasonings such as fish sauce and soy sauce, both of which are high in sodium, are an essential aspect of Hmong cooking. Hot peppers, ginger, garlic, coriander, coconut, and lemon grass also contribute to the robust flavor of Hmong diet.27
• Most Hmong do not consume tea, coffee, or other flavored beverages with their meals. The traditional Hmong diet includes very little sugar.

**Burden**
• Riboflavin, calcium, iron, magnesium, and zinc consumption were found to be less than 80 percent of the RDAs in the Hmong adult.28
• Some Hmong also experience lactose intolerance.28
• Pregnant Hmong women do not appear to make dietary changes to accommodate pregnancy. As one study shows, they only consumed 100 calories more than non-pregnant counterparts.29 This can be detrimental for the development and growth of the fetus and also harm the mother’s health. The postpartum diet is very limited and be may be of concern.
• Major health concerns include increased risk of heart disease, diabetes, and increased incidence of obesity.39

**References, Resources, and Web Sites**


