



# Obesity in Asian Americans, Native Hawaiians, and Pacific Islanders

## Overview

Obesity is a chronic disease characterized by excess or abnormal body fat that inhibits health and social well-being, which can result from a number of factors ranging from genetic, environmental, behavioral, social, cultural, and more (1). Children with obesity are more likely to also have obesity as adults, increasing their risk of developing other chronic conditions such as heart disease, type 2 diabetes, and some types of cancer. (2)

Obesity is understudied in Asian Americans (AA), who are the fastest growing racial/ethnic group overall in the United States (3). In 2015–2016, 23.2% of Asian American children in the United States were overweight, while 12.1% were obese. The national prevalence of obesity among Asian American girls dramatically rose from 6.6% in 2011–2012 to 11.3% in 2015–2016 (4).

Native Hawaiians consistently have higher rates of overweight and obesity (82%) compared to the national prevalence of 53%

According to U.S. census data from 2021, an estimated 1.7 million NHPI individuals currently reside in the United States (12). The study of obesity in Native Hawaiian and Pacific Islander (NHPI) populations has also been understudied and often aggregated into the same category as Asians, masking obesity disparities between and within these groups.

Obesity is also understudied in Native Hawaiians or Pacific Islanders (NHOPIs), who for example were not included in the previous study. However, other research found that 76.2% of NHOPIs were overweight or obese in 2014, with percentages slightly lower for Native Hawaiians than for other Pacific Islanders (29).

However, In a review of 15 studies, researchers found that Native Hawaiians consistently had higher rates of overweight and obesity (82%) compared to other ethnic groups, and compared to the national prevalence of 53% (12).



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## Health Impacts and Disparities

While Asian Americans are believed to have a relatively low risk of elevated BMI compared to other racial/ethnic groups, a substantial proportion of Asian Americans are at risk for cardiometabolic diseases at BMIs below the standard threshold of being overweight (25–29.9 kg/m<sup>2</sup>) (5).

WHO recommended that the obesity threshold for AAs be  $\geq 27.5$  kg/m<sup>2</sup> instead of the standard  $\geq 30.0$  kg/m<sup>2</sup>, taking into account that Asians tend to have higher body fat percentages, particularly in the central part of the body (6). When using the WHO-defined BMI cutoff (BMI  $\geq 27.5$ ) for Asian people, obesity prevalence in Asian American people has been found to be similar to, or higher than, that of their White counterparts (7).

Multiple studies have shown that the obesity rates in Samoan, Native Hawaiian, and Filipino are higher compared to white and Asian patients:

- A 2013 study of children aged 5–8 years old found that Samoan, Native Hawaiian, Filipino, and multiethnic children were more likely than their white and Asian counterparts to be overweight or obese (13).
- A study from 2020 on patients aged 2–18 in Hawai'i found that compared to Other Pacific Islander (11%), white (8%), and Asian (5%) patients, obesity rates were higher in Samoan (45%), Native Hawaiian (21%), and Filipino (14%) patients (14).
- Native Hawaiian or Other Pacific Islander (NHOPI) adolescents in Hawai'i were found to be overweight or obese at a rate 10% higher than other ethnic groups (15).

Two studies on the relationship between geographic location and children's rate of overweight or obesity (OWOB) in Hawai'i found higher prevalence of OWOB in communities not only with lower socioeconomic status, but also with higher proportions of ethnic groups who have been found to be at increased risk of OWOB (16, 17).

A 2021 examination of data from the 2014 NHPI National Health Interview Survey found high neighborhood social cohesion was associated with lower odds of obesity and increased odds of sufficient physical activity in NHPI adults (18).

Access to health care can vary across the ethnic subgroups within the AA and NHOPI umbrellas. One study of adults in Hawai'i found that Samoans, Koreans, and Filipinos had the lowest self-reported access to care, while Native Hawaiians and Puerto Ricans had the highest (21). This underscores the need for data disaggregation to ensure that gaps in care for different populations can be accurately identified and addressed.

Obesity and overweight are associated with a broad range of health impacts for both AAs and NHOPIs, including:

- Physical: comorbidities such as diabetes, hypertension, and heart disease (8, 29)
- Mental/Emotional: feelings of worthlessness, low self-esteem, body dysmorphia
- Social: feeling cultural incongruence; being at odds with the expectations of thinness set by and upon Asians in both Asian and Western culture (8).

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## Acculturation

AA and NHOPI subgroups have unique socio-cultural histories (i.e. cultural norms, migrational patterns, etc.) that may influence their rates of obesity.

A 2020 study found that AA children whose mothers were U.S.-born or had been in the country longer were actually not more likely to engage in obesogenic behaviors (such as low fruit and vegetable intake, high sugar and fast food intake, and high sitting activity), while children of recent immigrants (<5 years in the U.S.) were more likely to have low fruit intake than those whose mothers were U.S.-born or have been in the U.S. for 25 years or more (9).

There are a number of socioeconomic and cultural factors that may explain this discrepancy. From a cultural standpoint, recent immigrants may consider fruit something to be eaten for special occasions and consumed sparingly, and culturally preferred fruits may also be more expensive or difficult to obtain (9, 10).

Beliefs about weight normalcy can also vary across cultures. One example is the association of thinness with illness in Micronesian culture. A study on the sociocultural and familial factors of obesity in the Commonwealth of the Mariana Islands (CNMI) among caregivers showcased how sociocultural values such as offering food as an expression of love, negative perception of thinness, and traditional beliefs about diet conflicted with their knowledge about food and disease (19).

The average BMI for the populations of Nauru and the Cook Islands increased at 5 times the rate that the average BMI increased globally per decade between 1980–2008. One study suggests that traditional culinary practices and eating habits were forcibly changed due to colonialism, creating a dependency on imported processed foods (20).

Lower income is consistently associated with a higher odds of obesity. Adjusting for income weakens the initially significant difference in the odds between children of immigrants versus U.S.-born mothers, reinforcing the connection between low income and elevated BMI (9).

This research challenges the prevailing notion that lower acculturation (assimilation into American culture) is protective against prevalence of obesity and highlights the vulnerability of children of recent immigrants in the prevention of obesity.

### Risk of obesity in is not homogenous.

It cannot be overstated how the AA population's risk for obesity is not homogeneous. Some AA and NHOPI ethnic subgroups have a higher prevalence of overweight/obesity than others; for example, Filipino, Pacific Islander, and South Asian people have been identified as high risk for obesity and diabetes (6).

## RECOMMENDATIONS FOR OBESITY PREVENTION AND RESEARCH

### Improved Obesity Screenings and Measurements

While BMI should be updated to properly identify overweight and obesity in Asian American people, screening parameters for Asian American groups should also be modified. Despite having a higher risk of type 2 diabetes (T2D), Asian Americans are much less likely than other groups to be screened for T2D because the criteria of age is  $\geq 45$  years of age with a BMI of  $\geq 25.0$  kg/m<sup>2</sup> (5).

### Culturally-Appropriate Health Literacy & Education

Literature supports the use of culturally-tailored and community-based interventions in both preventing and addressing obesity in Asian American populations. The use of in-language reading materials, nutrition plans that incorporate culturally-relevant content, and interactive sessions on physical activity and dieting advice were shown to be very effective in improving outcomes in prevention programs targeting hypertension (22), Type 2 Diabetes, (23) and atherosclerotic cardiovascular disease (24). Program retention and positive health outcomes were greatly influenced by culturally appropriate engagement, language access, and family participation.

### Efforts to Reduce Financial and Food Insecurity

Addressing barriers to financial resources like cash assistance or SNAP participation in Asian American families can help reduce the likelihood of obesity in children and adolescents. Food insecurity is associated with obesity (25) and overall generally worse health (26) which reinforces the finding that lower socioeconomic status is positively associated with obesity.

### Increase Access to Equitable Healthcare

Lack of language access, healthcare coverage, and discrimination experienced while navigating the healthcare system are all examples of major barriers for the AA and NHPI populations. Policy and systemic efforts to reduce obstacles to attaining health insurance and culturally-sensitive care may be conducive to early obesity prevention and effective treatment.

### Data Disaggregation

Because Asian Americans, Native Hawaiians, and Pacific Islanders are not a monolith, obesity and metabolic syndrome research must be localized to specific subgroups for the most accurate reflection of health outcomes and disparities. The higher obesity and diabetes rate estimates in South Asian (27), Native Hawaiian, Pacific Islander, and Filipino (6,20) Americans illustrate the need to disaggregate data across AA and NHPI subgroups.

### Consideration of Globalization & Immigration Patterns

It is imperative for the study of obesity to be placed in the larger context of immigration and globalization. To illustrate this point, the rise in caloric processed foods in Asian countries makes it possible that immigrants already have obesogenic behaviors prior to arriving to the U.S. (9). Similarly in the Pacific Island countries, obesity and other health problems have been partly attributed to imported foods being preferred and made more easily accessible than traditional foods (28).

### Additional Research in Underrepresented Communities

Much of the disaggregated data that is available is difficult to analyze and apply due to the specific nature of studied demographics. There is much variation in and across the ethnic subgroups within AANHPIs, so it is crucial to expand research into underrepresented populations to ensure accuracy of findings.

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