

## ASIAN AMERICANS AND PACIFIC ISLANDERS AND DIABETES

### DIABETES

**Diabetes mellitus** is a group of diseases in which the body is unable to produce insulin or to use insulin properly. Insulin is a hormone which helps “unlock” cells and allows glucose (sugar) to enter and fuel them. Some warning signs for diabetes include excessive thirst and urination, weight loss, and difficulty healing cuts. However, many people do not notice symptoms for several years.

- Diabetes is usually detected by the high blood glucose levels which are found in individuals who are unable to produce or absorb insulin properly.<sup>1</sup>
- Diabetes contributes to many long-term health complications, including damage to the eyes, kidneys, nervous system and the cardiovascular system.
- Diabetes is a major cause of blindness, kidney failure and non-traumatic amputation in industrialized countries, and is a major risk factor for heart disease and stroke.<sup>2</sup>

In some parts of Asia, people under 25 years of age have recently been diagnosed with a previously unknown form of diabetes which combines features of both Type 1 and 2 diabetes.

There are two main types of diabetes. Type 1 diabetes usually affects children and young adults and is caused by the destruction of insulin-secreting cells by the body's own immune system. In Type 2 diabetes, the insulin-secreting cells are not destroyed, but they produce less insulin and the body becomes less sensitive to its effects. Type 2 diabetes is usually seen in older adults, but increasing numbers of children and adolescents are now also being affected.<sup>3</sup>

Gestational diabetes is a temporary form of diabetes which occurs in some pregnant women but which usually goes away after delivery. However, these women are at increased risk of developing diabetes in the future.<sup>4</sup> In some parts of Asia, people under 25 years of age have recently been diagnosed with a previously unknown form of diabetes which combines features of both Type 1 and 2 diabetes.<sup>5</sup> A very small percentage of diabetes cases result from specific genetic syndromes, or may be caused by drugs, chemicals, infections or other illnesses.<sup>5</sup>

### PREVALENCE

Type 1 diabetes affects approximately 1 million people in the United States but it affects Asian Americans and Pacific Islanders (AAPIs) less frequently.<sup>6</sup> Type 2 diabetes is much more common, and affects up to 15 million people in America. Diabetes is often called the “silent killer” because nearly one-third of people with Type 2 diabetes do not know they have it until they develop serious diabetes related complications.

According to the Center for Disease Control and Prevention (CDC), the total prevalence of diabetes in the United States for all ages is 20.8 million people (approximately 7.0% of the population). Globally, the number of individuals with diabetes is growing at an alarming rate:

Diabetes rates in Chinese Americans have been reported as 5 to 7 times the rate seen in China.

- At least 171 million people worldwide have diabetes. The World Health Organization (WHO) projects that this figure is likely to more than double by 2030, reaching 366 million.
- The dramatic rise in diabetes in this part of the world may in part be a result of industrialization, urbanization, and westernization.<sup>7</sup>

Approximately half of all people worldwide with diabetes in 2025 will be Asians and Pacific Islanders.

- In Guam, over 73 percent of diabetics were Chamorros, although they represent only 43 percent of the population.<sup>8</sup>
- Present day Palau, like many other countries, has started to adopt more westernized food habits. Researchers note higher rates of purchasing canned food, and eating food high in salts and fat may be increasing the threat of diabetes and other chronic diseases.
- The top three countries estimated to have the highest numbers of people with diabetes in 2030 are India, China, and the U.S.<sup>9</sup>

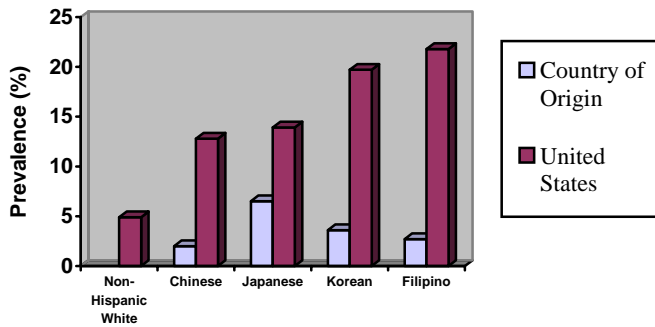
The Asian American population is more likely to have type 2 diabetes compared to non-Hispanic Whites despite having lower body weight.<sup>10</sup> The age-, sex-, and BMI-adjusted prevalence of diabetes in Asian Americans was ~60% higher than in non-Hispanic Whites and ~20% - 30% lower than in African American, Hispanic, or American Indian.<sup>11</sup> Various studies have found Chinese American, Japanese American, Filipino American, Asian Indian, Native Hawaiian, and Samoan communities in the United States that are affected with diabetes much more than the White population.<sup>6,10</sup> Diabetes have reached alarming proportions among indigenous peoples, especially Pacific Island populations during the past 40 to 50 years. Numerous studies have shown that indigenous peoples such as Samoans, Native Hawaiians, Chamorros, and the Marshallese have high rates of obesity<sup>12</sup>

In addition, many immigrant communities have significantly higher rates of diabetes in the U.S. than are seen in their native countries.

- Studies on Japanese Americans in Seattle<sup>13</sup> and Hawai'i<sup>14</sup> show that the prevalence of diabetes is two to three times higher than that seen in Japan.

- Diabetes rates in Chinese Americans have also been reported as 5 to 7 times the rate seen in China.<sup>6</sup>
- Studies of Asian immigrants in other countries have produced similar results; British researchers found a five-fold increase in the prevalence of diabetes among South Asians living in West London compared to an age-matched European population.<sup>15</sup>

**Diabetes rates in U.S. ethnic groups compared to their country of origin.** <sup>6,7,9,13,14</sup>



**RISK FACTORS**

There are many factors that may contribute to the higher incidence of diabetes among certain Asian Americans and Pacific Islanders. Some AAPI groups may be genetically predisposed to diabetes. Having a family history of the disease is also thought to increase the chances of developing diabetes.<sup>17</sup> However, research in these areas is limited and requires further study. Low birth weight, which is more prevalent among some Asian American and Pacific Islander populations, is also associated with the onset of diabetes in adulthood.<sup>18</sup>

Obesity is recognized as a serious risk factor for diabetes.<sup>17</sup> Immigrants in the U.S. often eat foods that are higher in animal fat and exercise less than is typical in their native country.<sup>19</sup> Researchers point to the negative health effects of westernization and urbanization, particularly in relation to unhealthy habits that promote the development of diabetes. However, some Asian populations have lower rates of obesity, yet they have rates of diabetes that are twice the rate of the white population<sup>15,20</sup>. To address this discrepancy, the World Health Organization has proposed new criteria to define obesity for Asians and Pacific Islanders which takes into account distinct body mass issues in these populations.<sup>21</sup>

**RESOURCES**

For more information on diabetes and AAPIs:  
 Joslin Diabetes Center – Asian Clinic  
[http://aadi.joslin.harvard.edu/asianclinic/asianclinic\\_index.asp](http://aadi.joslin.harvard.edu/asianclinic/asianclinic_index.asp)

Joslin Diabetes Center – Asian American Diabetes Initiative  
<http://aadi.joslin.harvard.edu/index.asp>

American Diabetes Association – Asian Americans, Pacific Islanders and Diabetes  
<http://www.diabetes.org/communityprograms-and-localevents/asianamericans.jsp>

National Diabetes Information Clearinghouse (NDIC) – Asian Americans, Pacific Islanders, and Diabetes  
<http://diabetes.niddk.nih.gov/dm/pubs/asianamerican/index.htm>

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