

Diabetes and AAPIs

Diabetes mellitus poses a significant public health challenge for the US. Some 800,000 cases are diagnosed each year, and changing demographic patterns in the US are expected to increase the number of people at risk for diabetes and who eventually develop the disease. Diabetes is a chronic disease that usually manifests as one of two major types. In type 1, which occurs mainly in children and adolescents, the body does not produce insulin, and insulin administration is required to sustain life. In type 2, which usually occurs in adults over 30 years of age, the body's tissues become unable to use its own limited supply of insulin effectively. (US DHHS, 2000).

Adult-onset diabetes also has **strong physiologic ties to cardiovascular disease (CVD)**. The majority of patients with diabetes mellitus die of CVD complications rather than of causes associated directly with glucose control. (US DHHS, 2003).

Diabetes is a major clinical and public health challenge among certain racial and ethnic groups in which both new cases of diabetes and the risk of associated complications are great. Vulnerable and high-risk populations include Asian Americans and Pacific Islanders, elderly persons, and economically disadvantaged persons. Factors that account for this chronic disease epidemic include behavioral elements (e.g., increased fat consumption, decreased physical activity, obesity), demographic changes (aging, increased growth of at-risk populations), genetics, cultural and community traditions, and socioeconomic status. The level of patient knowledge and empowerment has a great impact on the disease burden associated with diabetes. (US DHHS, 2000).

Diabetes and obesity have been established as major health problems among AAPIs. Whether residing on their home islands or the US mainland, Samoans, native Hawaiians, and Micronesians are frequently affected by obesity and type 2 diabetes. (Crews, 1988; Crews et al., 1991; Pawson and Janes, 1981; Zimmet, 1979). AAPIs appear to be at increased risk for both obesity and type 2 diabetes whether they migrate to or are born in the US or adopt Western lifestyles in their homelands. Their risk of diabetes is significantly greater than that of Europeans or European Americans. (Crews, 1994).

Overweight and Obesity

Overweight and obesity are major contributors to many preventable causes of death. On average, higher body weights are associated with higher death rates. Those who are overweight or obese have a substantially higher risk of developing high blood pressure, high cholesterol, type 2 diabetes, heart disease and stroke, gallbladder disease, arthritis, sleep disturbances and breathing problems, and certain types of cancer. (US DHHS, 2000).

Incidence and Prevalence

AAPIs in General

- **Half of the increase in type 2 diabetes worldwide by 2025 is predicted to be in Asians and Pacific Islanders.** The incidence of type 2 diabetes in Asians is growing at an alarming rate. The World Health Organization estimated that the number of individuals worldwide affected by diabetes in 1995 was 135 million, up from the 1985 estimate of 30 million; it is projected that 300 million people will be affected by 2025. Approximately half of this population will be Asians and Pacific Islanders. China is predicted to have the greatest rise in prevalence rate (68%), followed by India (59%) and other Asian countries and Pacific Islands (41%). (Focus on Asian Americans, 2003).
- **Factors in this dramatic increase in diabetes may be industrialization, urbanization, and Westernization.** Studies of Japanese Americans in Seattle and Hawaii showed that the prevalence of diabetes is two to three times higher than that in Japan. The prevalence of diabetes in Chinese Americans is reportedly five to seven times higher than that in China. (Focus on Asian Americans, 2003).
- Although the prevalence of type 2 diabetes in several AAPI groups is higher than in the white population, **AAPIs have the lowest rate of death from type 2 diabetes** among all population groups in the US. (Kaiser Permanente, 1999).
- Although type 1 diabetes in AAPI youths is relatively rare, recent reports highlight an **increasing incidence of type 2 diabetes in children and adolescents.** (Diabetes in Asian and Pacific Islander Americans, 2002).

Filipinos

- **Filipino women are at high risk for diabetes.** A study in San Diego County showed that more than 1 in 3 Filipino women had diabetes, compared with 1 in 11 white women. More than half (60%) of the Filipino women with diabetes did not know they had the disease. Diabetes is often associated with being overweight or obese, yet 90% of the Filipino women with diabetes were not obese. Although the Filipino and white participants in the study had similar body size, education, and physical activity, the risk of diabetes was significantly higher among the Filipino women. (Filipino women at high risk for diabetes, 2002).

Asian Indians

- **Asian Indian vegetarians have high rates of impaired glucose tolerance (IGT).** In a study that compared Asian Indian and American vegetarians and their susceptibility to developing IGT, results indicated that Asian Indians may have a genetic predisposition to IGT. (Kaiser Permanente, 1999).

- **Every migrant Asian Indian population has diabetes rates that exceed those of the native populations alongside whom they reside.** (Crews, 1994).

Pacific Islanders

- Among the Pacific Islander population, **obesity and urbanization are factors that increase the risk of diabetes.** (Kaiser Permanente, 1999).
- **Native Hawaiians are more than twice as likely as non-Hispanic whites to have diabetes.** A study conducted from 1996 to 2000 in Hawaii showed that native Hawaiians were 2.5 times more likely to have diabetes than non-Hispanic white residents of similar age. (NIDDK, 2000).
- **In Western Samoa, diabetes prevalence in a rural community (3.4%) was less than half the rate in an urban setting (7.8%),** even after adjusting for body weight. Rural residents were much more physically active than their urban counterparts. (Diabetes in Asian and Pacific Islander Americans, 2002).
- **Prevalence rates of type 2 diabetes in American Samoans aged 30 or older have been estimated at 9% to 18.8%,** although the actual rate may be higher. (Crews et al., 1991).

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