Cultural Considerations

Who Is Most Affected by Diabetes? It has been estimated that 15.7 million individuals in the United States have diabetes. However, only two thirds of them know that they have it. Each year, approximately 798,000 new cases of diabetes are diagnosed. Among individuals 20 years and older, approximately 11.3 million non-Latino whites (7.8 percent) have diabetes, compared with 2.3 million African Americans (10.8 percent) and 1.2 million Latinos (10.6 percent). These figures suggest that African Americans and Latinos are disproportionately affected by diabetes compared with non-Latino whites.

Diabetes is a particularly serious health problem among certain Latino groups. Type II diabetes is twice as prevalent among Latinos as among non-Latino whites. Approximately 24 percent of Mexican Americans in the United States and 26 percent of Puerto Ricans between 45 and 74 years of age have diabetes. In this same age group, about 16 percent of Cuban Americans have diabetes.

Additionally, diabetes-related complications affect Latinos at disproportionate rates. Lower-leg amputations, kidney disease, blindness, heart disease, and strokes resulting from diabetes occur at least twice as frequently among Latinos as among non-Latino whites. The disproportionate burden that this disease places on Latinos has been attributed to genetics and socioeconomic and environmental factors, among others. While some researchers suggest that genetic factors play a prominent role in diabetes, other important factors must also be taken into account, including diet, sedentary lifestyles, cultural concepts of obesity or robustness, and access to care, information, and educational programs.

Paramedics who work in areas with large Latino populations may encounter more diabetic emergencies and more diabetic-related complications and should prepare accordingly.

DISORDERS OF THE PANCREAS

Diabetes Mellitus

The disease diabetes mellitus is marked by inadequate insulin activity in the body. As noted earlier, insulin is critical to maintaining normal blood glucose levels. Glucose is important for all cells, but it is especially important for brain cells. In fact, glucose is the only substance that brain cells can readily and efficiently use as an energy source. In addition, insulin enables the body to store energy as glycogen, protein, and fat.

Diabetes mellitus, or sugar diabetes, is not only a serious disease but also a common and ancient one. Over 8 million Americans have been diagnosed with diabetes, and U.S. health experts believe nearly the same number of Americans may be living with undiagnosed diabetes. The disease was named in ancient times by Greek physicians who noted that affected persons produced large volumes of urine that attracted bees and other insects, hence diabetes (meaning “to syphon,” or “to pass through”) for excessive urine production and mellitus (meaning “honey sweet”) for the presence of sugar in the urine. If you remember that mellitus means “sweet” and insipidus means “neutral,” you will remember the common trait and the major distinctions in the presentations of untreated diabetes insipidus and diabetes mellitus.

Before presenting pathophysiology, we will examine in detail the normal body handling of glucose. The discussion of glucose metabolism will focus on events at the molecular and cellular level, whereas the discussion on regulation of blood glucose will focus on events in the blood and in major target tissues such as liver, fat cells, and kidneys.