The growing prevalence of the cardiometabolic syndrome (CMS) has been related to obesity, which has increased among many age groups. It is currently accepted that CMS predicts cardiovascular mortality and/or the development of type 2 diabetes mellitus. CMS is further complicated by modifications in body composition and fat redistribution and is often associated with altered insulin sensitivity. The primary goal of clinical management of the metabolic syndrome is to reduce the risk for type 2 diabetes and cardiovascular disease. A better understanding of the mechanisms of obesity may help to elucidate the complex relationship between CMS and mortality/morbidity.

According to the Centers for Disease Control and Prevention, individuals with type 2 diabetes have high rates of cholesterol and triglyceride abnormalities, obesity, and high blood pressure, all of which are major contributors to higher rates of cardiovascular disease. Many people with diabetes have several of these conditions at the same time. This combination of problems is often called metabolic syndrome (formerly known as Syndrome X). The metabolic syndrome is often defined as the presence of any three of the following conditions: 1) excess weight around the waist; 2) high levels of triglycerides; 3) low levels of HDL, or “good,” cholesterol; 4) high blood pressure; and 5) high fasting blood glucose levels.

According to the National Heart Lung and Blood Institute (NHLBI), about 47 million adults in the United States (almost 25 percent) have metabolic syndrome. Some racial and ethnic groups in the United States are more at risk for metabolic syndrome than others. Mexican Americans have the highest rate of metabolic syndrome (32 percent). Caucasians (24 percent) and African Americans (22 percent) have lower rates.