

Obesity implies an excess storage of fat, and this can most easily be detected by looking at the undressed patient. Most patients suffer from simple obesity, but certain conditions have obesity as an associated feature, such as hypothyroidism and Cushing's syndrome.

The rapid spread of urbanization and industrialization and the dramatic lifestyle changes that accompany these trends have led to a pandemic of obesity, even in developing countries. The World Health Organization has predicted that, by 2020, two-thirds of the global diseases will be attributable to chronic diseases associated with obesity.

The increasing industrialization of agriculture has resulted in more processed foods, which in turn, has led to an increase in energy-dense foods that are high in carbohydrates and fat. Although there is some debate about the relative contributions of fat and carbohydrate in the diet to the increase in obesity, there is a general consensus that dietary changes are needed to both treat obesity and reduce the risk factors for obesity. How to achieve these goals is also subject to much discussion.

Recently, more research has focused on the balance between carbohydrate and fat as energy sources in the etiology and treatment of obesity. Such research will help answer the growing debate over the potential benefits and risks of restricting carbohydrate or fat as energy sources in the battle to reduce obesity.

The level of energy storage, or fatness, at which the risk of morbidity increases is set at a level agreed upon by researchers. The body-mass index (the weight in kilograms divided by the square of the height in meters) is easy to calculate and is sufficiently correlated with direct measures of body fatness (e.g., as measured by hydro densitometry) to be useful in defining obesity clinically. A body-mass index greater than 28 is associated with a risk of morbidity, such as stroke, ischemic heart disease, or diabetes mellitus, which is three to four times the risk in the general population. A central distribution of body fat (ratio of waist circumference to hip circumference,  $>0.90$  in women and  $>1.0$  in men) is associated with a higher risk of morbidity and mortality than a more peripheral distribution of body fat (waist: hip ratio,  $<0.75$  in women and  $<0.85$  in men) and may be a better indicator of the risk of morbidity than absolute fat mass.