

## **Metabolic Syndrome not a disease but a warning**

The metabolic syndrome is a sign of danger rather than a specific disease. People with this syndrome may have abdominal obesity, raised blood pressure, raised blood glucose and abnormal blood lipids (raised triglycerides and low HDL-cholesterol). A person is considered to have the metabolic syndrome when three or more of the above are present. If so, there is an increase in risk of heart attacks and strokes. While the metabolic syndrome is commonly found in the elderly, studies conducted by the HKU Li Ka Shing Faculty of Medicine showed that an increasing number of younger people have this syndrome.

In a study of Hong Kong adults conducted by the Department of Medicine, 26% of men and 34% of women had a waist circumference over 90 cm or 80 cm respectively. The study also revealed that there is a connection between the waistline and the incidence of hypertension and diabetes (type 2). In Hong Kong, it is estimated that 14% of adults has the metabolic syndrome. The proportion of people older than 75 who has the syndrome is as high as 22-39%.

Excess calories are stored as fat, particularly in the abdomen. The excess fat is turned into fatty acids in the blood, and also causes local and widespread inflammation. This inflammation is harmful to blood vessels and leads to raised blood pressure and narrowing and blockage of arteries. It also leads to resistance to the action of insulin, so that it is more difficult for glucose to move from the blood into cells.

Lifestyle modification is the key to the prevention and reversal of the metabolic syndrome. This involves a balanced diet with the right amount of calories, together with