

# 4 Risk factors start in childhood and youth

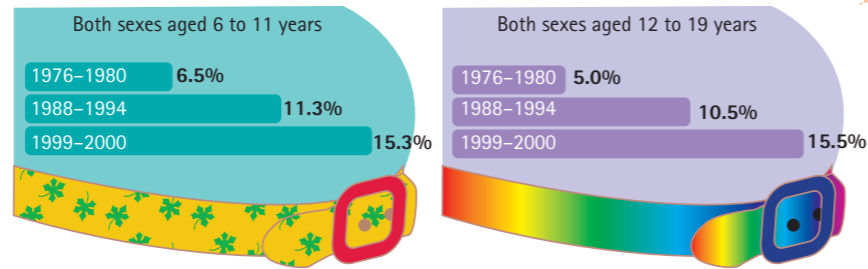
"Encased in fat in youth, encased in a coffin in middle age."  
Ancient Chinese proverb

Although cardiovascular diseases typically occur in middle age or later, risk factors are determined to a great extent by behaviours learned in childhood and continued into adulthood, such as dietary habits and smoking.

Throughout the world, these risks are starting to appear earlier. Physical activity decreases markedly in adolescence, particularly in girls. Obesity has increased substantially, not only in Europe and North America, but also in traditionally slender populations such as the Chinese and Japanese. Type 2 diabetes was previously rare in children, but is increasing in adolescents in, for example, North America, Japan and Thailand.

Markers of CVD can be seen in young children. Post-mortems of children who died in accidents have found fatty streaks and fibrous plaques in the coronary arteries. These early lesions of atherosclerosis were most frequently found in children whose risk factors included smoking, elevated plasma lipids, high blood pressure and obesity.

Programmes to address childhood and youth risk factors are mostly confined to developed countries, but urgent action is required worldwide. Families, schools, communities, health professionals, public health officials and policy-makers all need to promote healthy lifestyles in children and young people. Unless the spread of risk factors is stemmed, the world faces an epidemic of CVD.



### Overweight trends in the USA

Percentage of young people who are overweight 1976-2000

The risks for cardiovascular disease start in youth: worldwide, 18 million children under five years old are overweight, and 14% of 13 to 15-year-old students around the world currently smoke cigarettes.



### Overweight youth

Percentage of 15-year-olds who are overweight 1997-1998 selected countries

