

Types of cardiovascular disease

"All the knowledge I possess everyone else can acquire, but my heart is all my own."
Johann Wolfgang von Goethe
The Sorrows of Young Werther 1774

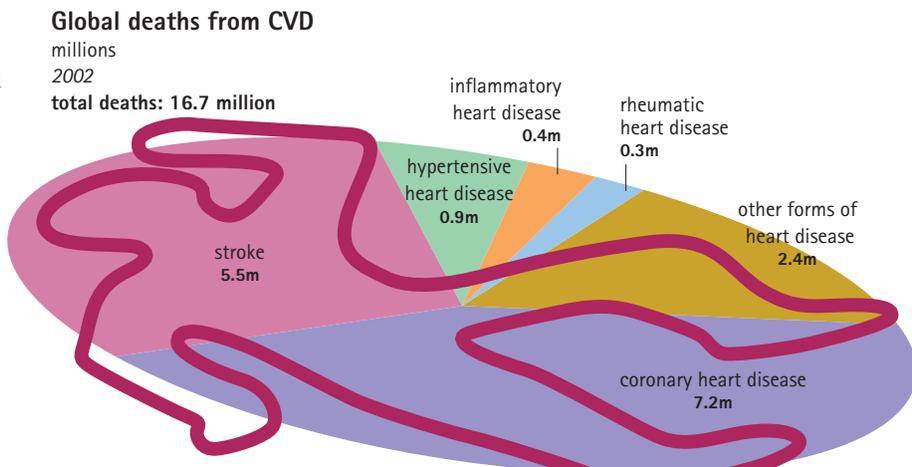
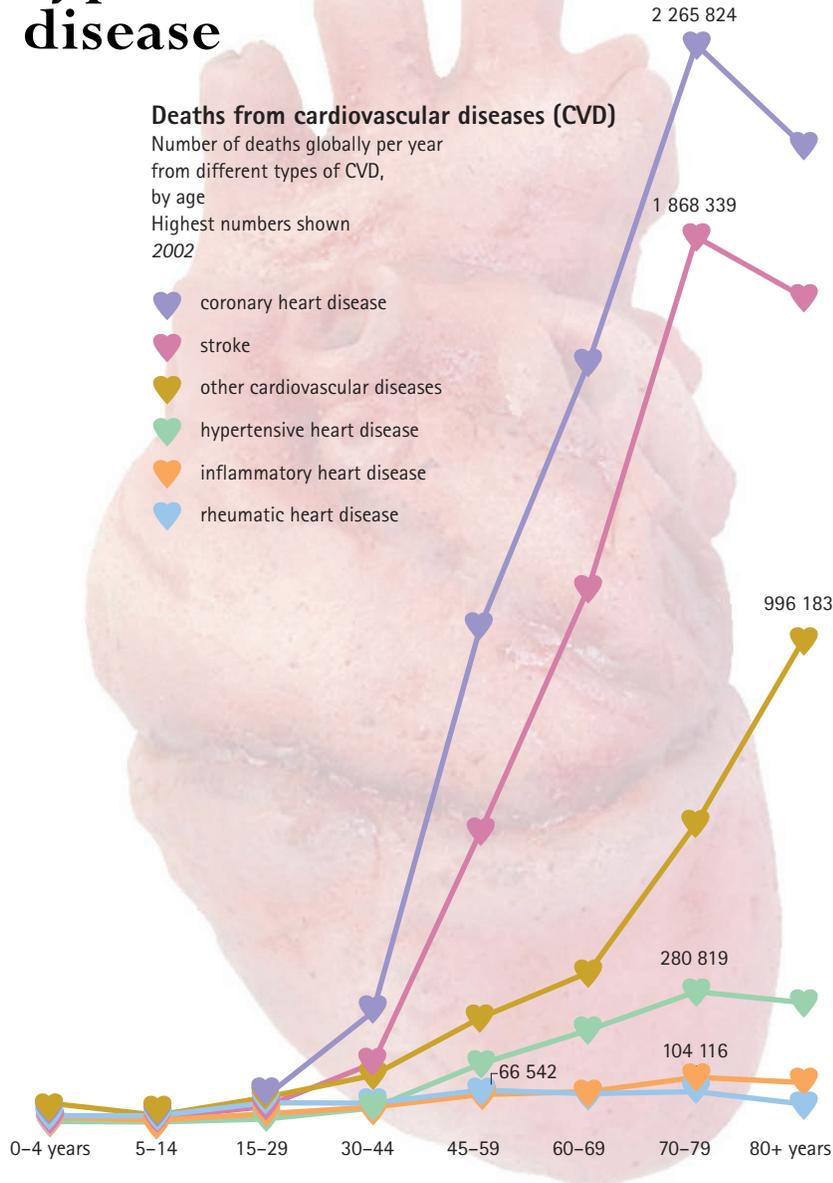
The human heart is only the size of a fist, but it is the strongest muscle in the human body.

The heart starts to beat in the uterus long before birth, usually by 21 to 28 days after conception. The average heart beats about 100 000 times daily or about two and a half billion times over a 70 year lifetime.

With every heartbeat, the heart pumps blood around the body. It beats approximately 70 times a minute, although this rate can double during exercise or at times of extreme emotion.

Blood is pumped out from the left chambers of the heart. It is transported through arteries of ever-decreasing size, finally reaching the capillaries in all the tissues, such as the skin and other body organs. Having delivered its oxygen and nutrients and having collected waste products, blood is brought back to the right chambers of the heart through a system of ever-enlarging veins. During the circulation through the liver, waste products are removed.

This remarkable system is vulnerable to breakdown and assault from a variety of factors, many of which can be prevented and treated. Risk factors will be explored on pages 24–43.



Stroke

Strokes are caused by disruption of the blood supply to the brain. This may result from either blockage (ischaemic stroke) or rupture of a blood vessel (haemorrhagic stroke).
Risk factors High blood pressure, atrial fibrillation (a heart rhythm disorder), high blood cholesterol, tobacco use, unhealthy diet, physical inactivity, diabetes, and advancing age.

Coronary heart disease kills more than 7 million people each year, and strokes kill nearly 6 million. Most of these deaths are in developing countries.

Coronary heart disease

Disease of the blood vessels supplying the heart muscle.

Major risk factors High blood pressure, high blood cholesterol, tobacco use, unhealthy diet, physical inactivity, diabetes, advancing age, inherited (genetic) disposition.

Other risk factors Poverty, low educational status, poor mental health (depression), inflammation and blood clotting disorders.

Rheumatic heart disease

Damage to the heart muscle and heart valves from rheumatic fever, caused by streptococcal bacteria.

Congenital heart disease

Malformations of heart structures existing at birth may be caused by genetic factors or by adverse exposures during gestation. Examples are holes in the heart, abnormal valves, and abnormal heart chambers.

Risk factors Maternal alcohol use, medicines (for example thalidomide, warfarin) used by the expectant mother, maternal infections such as rubella, poor maternal nutrition (low intake of folate), close blood relationship between parents (consanguinity).

Other cardiovascular diseases

Tumours of the heart; vascular tumours of the brain; disorders of heart muscle (cardiomyopathy); heart valve diseases; disorders of the lining of the heart.

Other factors that can damage the heart and blood vessel system

Inflammation, drugs, high blood pressure, unhealthy diet, trauma, toxins and alcohol.

