



Epidemiology of Cardiovascular Disease

An estimated 16.7 million – or 29.2% of total global deaths – result from the various forms of cardiovascular disease (CVD) [1].

The major types of CVD include:

- Coronary (or ischaemic) heart disease (heart attack)
- Cerebrovascular disease (stroke)
- Artherosclerosis
- Hypertension (high blood pressure)
- Heart failure
- Rheumatic heart disease

CVD – the leading cause of death in 2010

Within the last 20 years, rapidly rising rates of obesity have led to major increases in the prevalence of hypertension, type 2 diabetes and metabolic syndrome. As these conditions markedly increase the risk of cardiovascular disease, death and disability from CVD may start to increase again in developed countries. But this phenomenon is not restricted to the developed world; many developing countries are developing these health problems due to increasing life expectancy and the widespread westernization of lifestyles [2].

Some 80% of all CVD deaths worldwide take place in developing, low and middle-income countries, while these countries also accounting for 86% of the global CVD disease burden. It is estimated that by 2010, CVD will be the leading cause of death in developing countries.

Risk Factors of Cardiovascular Disease

At least 20 million people survive heart attacks and strokes every year. Many require continuing costly clinical care, creating a high financial burden on long-term medical care [2].

The main factors responsible for CVD are:

- High blood pressure (hypertension)
- High cholesterol
- Obesity
- Tobacco consumption
- Sedentary lifestyle
- Imbalanced nutrition

In combination or individually, these factors influence the development of arteriosclerosis and impaired endothelial function. This can further lead to thrombosis and end-organ-damage, e.g. left ventricular hypertrophy (LVH), resulting in congestive heart failure, damage to the glomeruli, microalbuminuria and macroproteinuria (an abnormally amount of protein in the urine) which leads to progressive nephrosis and the development of renal failure [1-4].

About 60 million people in the U.S. have hypertension, or high blood pressure, making it the most common heart disease risk factor.

References:

[1] www.who.int

[2] www.who.int *Diabetes Voice*. Special Issue May 2006 (51).

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[4] Taylor AA. Pathophysiology of hypertension and endothelial dysfunction in patients with diabetes mellitus. *Endocrinol Metabol Clin North Am* 2001; 30: 983–997

