Cardiovascular Disease (CVDs)

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Abstract.

This article is written in detail about cardiovascular diseases.

Keywords: coronary artery diseases, stroke, heart failure, hypertensive heart disease.

Introduction:

Cardiovascular disease is any disease involving the heart or blood vessels. CVDs constitute a class of diseases that includes: coronary artery diseases, stroke, heart failure, hypertensive heart disease.

As we all are aware that Heart disease is something which bothers many! Well, Doctors are continuously trying to educate the masses about the ill effects of CVDs. Undoubtedly, we need to change our daily routine so that we are healthy and are safe from all the diseases.

Key facts

Cardiovascular diseases (CVDs) are the leading cause of death globally.

An estimated 17.9 million people died from CVDs in 2019, representing 32% of all global deaths. Of these deaths, 85% were due to heart attack and stroke.

Over three quarters of CVD deaths take place in low- and middle-income countries.

Out of the 17 million premature deaths (under the age of 70) due to noncommunicable diseases in 2019, 38% were caused by CVDs.

Most cardiovascular diseases can be prevented by addressing behavioural risk factors such as tobacco use, unhealthy diet and obesity, physical inactivity and harmful use of alcohol.

It is important to detect cardiovascular disease as early as possible so that management with counselling and medicines can begin.

What are cardiovascular diseases?

Cardiovascular diseases (CVDs) are a group of disorders of the heart and blood vessels. They include:

coronary heart disease – a disease of the blood vessels supplying the heart muscle;

cerebrovascular disease – a disease of the blood vessels supplying the brain;

peripheral arterial disease – a disease of blood vessels supplying the arms and legs;

rheumatic heart disease – damage to the heart muscle and heart valves from rheumatic fever, caused by streptococcal bacteria;

congenital heart disease – birth defects that affect the normal development and functioning of the heart caused by malformations of the heart structure from birth; and

deep vein thrombosis and pulmonary embolism – blood clots in the leg veins, which can dislodge and move to the heart and lungs.

Heart attacks and strokes are usually acute events and are mainly caused by a blockage that prevents blood from flowing to the heart or brain. The most common reason for this is a build-up of fatty deposits on the inner walls of the blood vessels that supply the heart or brain. Strokes can be caused by bleeding from a blood vessel in the brain or from blood clots.

What are the risk factors for cardiovascular disease?

The most important behavioural risk factors of heart disease and stroke are unhealthy diet, physical inactivity, tobacco use and harmful use of alcohol. The effects of behavioural risk factors may show up in individuals as raised blood pressure, raised blood glucose, raised blood lipids, and overweight and obesity. These "intermediate risks factors" can be measured in primary care facilities and indicate an increased risk of heart attack, stroke, heart failure and other complications.

Cessation of tobacco use, reduction of salt in the diet, eating more fruit and vegetables, regular physical activity and avoiding harmful use of alcohol have been shown to reduce the risk of cardiovascular disease. Health policies that create conducive environments for making healthy choices affordable and available are essential for motivating people to adopt and sustain healthy behaviours.

There are also a number of underlying determinants of CVDs. These are a reflection of the major forces driving social, economic and cultural change – globalization, urbanization and population ageing. Other determinants of CVDs include poverty, stress and hereditary factors.

In addition, drug treatment of hypertension, diabetes and high blood lipids are necessary to reduce cardiovascular risk and prevent heart attacks and strokes among people with these conditions.

What are common symptoms of cardiovascular diseases?

Symptoms of heart attacks and strokes

Often, there are no symptoms of the underlying disease of the blood vessels. A heart attack or stroke may be the first sign of underlying disease. Symptoms of a heart attack include:

pain or discomfort in the centre of the chest; and/or

pain or discomfort in the arms, the left shoulder, elbows, jaw, or back.

In addition the person may experience difficulty in breathing or shortness of breath; nausea or vomiting; light-headedness or faintness; a cold sweat; and turning pale. Women are more likely than men to have shortness of breath, nausea, vomiting, and back or jaw pain.

The most common symptom of a stroke is sudden weakness of the face, arm, or leg, most often on one side of the body. Other symptoms include sudden onset of:

numbness of the face, arm, or leg, especially on one side of the body;

confusion, difficulty speaking or understanding speech;

difficulty seeing with one or both eyes;

difficulty walking, dizziness and/or loss of balance or coordination;

severe headache with no known cause; and/or

fainting or unconsciousness.

People experiencing these symptoms should seek medical care immediately.

What is rheumatic heart disease?

Rheumatic heart disease is caused by damage to the heart valves and heart muscle from the inflammation and scarring caused by rheumatic fever. Rheumatic fever is caused by an abnormal response of the body to infection with streptococcal bacteria, which usually begins as a sore throat or tonsillitis in children.

Rheumatic fever mostly affects children in developing countries, especially where poverty is widespread. Globally, about 2% of deaths from cardiovascular diseases are related to rheumatic heart disease.

Symptoms of rheumatic heart disease

Symptoms of rheumatic heart disease include: shortness of breath, fatigue, irregular heartbeats, chest pain and fainting.

Symptoms of rheumatic fever include: fever, pain and swelling of the joints, nausea, stomach cramps and vomiting.

Why are cardiovascular diseases a development issue in low- and middle-income countries?

At least three-quarters of the world's deaths from CVDs occur in low- and middle-income countries. People living in low- and middle-income countries often do

not have the benefit of primary health care programmes for early detection and treatment of people with risk factors for CVDs. People in low- and middle-income countries who suffer from CVDs and other noncommunicable diseases have less access to effective and equitable health care services which respond to their needs. As a result, for many people in these countries detection is often late in the course of the disease and people die at a younger age from CVDs and other noncommunicable diseases, often in their most productive years.

The poorest people in low- and middle-income countries are most affected. At the household level, evidence is emerging that CVDs and other noncommunicable diseases contribute to poverty due to catastrophic health spending and high out-of-pocket expenditure. At the macro-economic level, CVDs place a heavy burden on the economies of low- and middle-income countries.

How can the burden of cardiovascular diseases be reduced?

The key to cardiovascular disease reduction lies in the inclusion of cardiovascular disease management interventions in universal health coverage packages, although in a high number of countries health systems require significant investment and reorientation to effectively manage CVDs.

Evidence from 18 countries has shown that hypertension programmes can be implemented efficiently and cost-effectively at the primary care level which will ultimately result in reduced coronary heart disease and stroke. Patients with cardiovascular disease should have access to appropriate technology and medication. Basic medicines that should be available include:

aspirin;
beta-blockers;
angiotensin-converting enzyme inhibitors; and
statins.

An acute event such as a heart attack or stroke should be promptly managed.

Sometimes, surgical operations are required to treat CVDs. They include:

coronary artery bypass;
balloon angioplasty (where a small balloon-like device is threaded through an artery to open the blockage);
valve repair and replacement;
heart transplantation; and
artificial heart operations.

Medical devices are required to treat some CVDs. Such devices include pacemakers, prosthetic valves, and patches for closing holes in the heart.
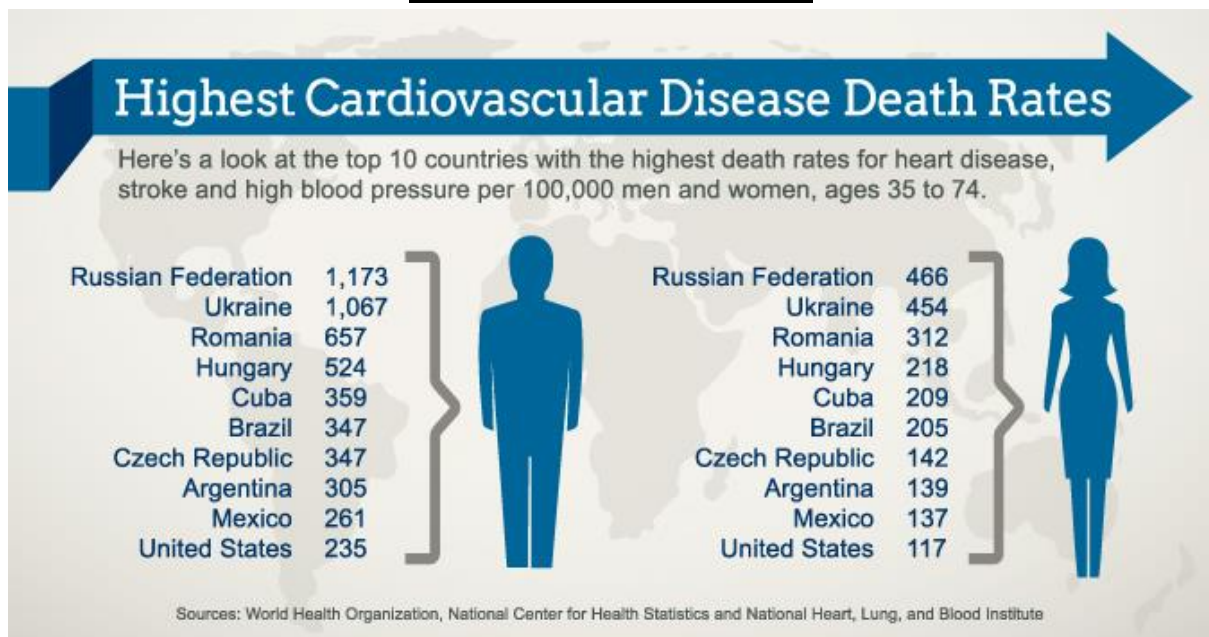
According to Elizabeth G. Nabel, M.D

She mentions, the statistics about the cardiovascular disease

Cardiovascular rdisease, including stroke, is the leading cause of illness and death in the United States. There are an estimated 62 million people with cardiovascular disease and 50 million people with hypertension in this country.[1] In 2000, approximately 946,000 deaths were attributable to cardiovascular disease, accounting for 39 percent of all deaths in the United States.[2] Epidemiologic studies and randomized clinical trials have provided compelling evidence that coronary heart disease is largely preventable.[3] However, there is also reason to believe that there is a heritable component to the disease. In this review, I highlight what we know now about genetic factors in cardiovascular disease. As future genomic discoveries are translated to the care of patients with cardiovascular disease, it is likely that what we can do will change.

Graphical representation

Highest Cardiovascular Disease Death Rates

Here's a look at the top 10 countries with the highest death rates for heart disease, stroke and high blood pressure per 100,000 men and women, ages 35 to 74.

Country	Men	Country	Women
Russian Federation	1,173	Russian Federation	466
Ukraine	1,067	Ukraine	454
Romania	657	Romania	312
Hungary	524	Hungary	218
Cuba	359	Cuba	209
Brazil	347	Brazil	205
Czech Republic	347	Czech Republic	142
Argentina	305	Argentina	139
Mexico	261	Mexico	137
United States	235	United States	117

Sources: World Health Organization, National Center for Health Statistics and National Heart, Lung, and Blood Institute

Conclusion

After all of this we all must understand that Heart is an important organ to the body we must take care of it. Heart disease can easily be avoided, If we really want it to happen. The call is in our Hand how we handle it.

OUR BODY IS NOT MEANT FOR MEDICINE.

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