

Coronary Heart Disease (CHD)

Coronary heart disease (CHD) is a condition in which the arteries that supply the heart muscle with oxygen and nutrients are narrowed by fatty deposits such as cholesterol and triglycerides. Narrowing of the coronary arteries diminishes blood supply to the heart muscle, which can lead to a heart attack. In the United States, CHD accounts for approximately 21% of all deaths and about 50% of all cardiovascular deaths. Over half of the people who die experience no previous symptoms. The following are leading contributors to the development of CHD:

1. Physical inactivity

- Aerobic exercise has potentially the greatest impact in reducing overall risk for cardiovascular disease.

2. High blood pressure

- Blood pressure should be checked regularly regardless of whether its elevated or not.
- Ideal blood pressure is 120/80 or below.
- Chronically elevated blood pressure is anything above 140/90.
- Those who have elevated blood pressures are advised to engage in regular aerobic exercise, weight control, a low-salt/low-fat and high potassium /high-calcium diet, decreased intake of caffeine and alcohol, steps towards smoking cessation, and stress management.

3. Excessive body fat

- In the United States, 63% of men and 55% of women are overweight and 21% of men and 27% of women are obese, which

yields 97 million people who are overweight and over 30 million who suffer from obesity.

4. Low HDL-cholesterol

- High-density lipoprotein (HDL), also known as “good cholesterol”, offers some protection against heart disease.
- HDL-cholesterol is determined genetically. Women have higher levels than men do with the female sex hormone estrogen tending to raise HDL.
- Habitual aerobic exercise, weight loss, niacin, and smoking cessation all help raise HDL-cholesterol.

5. Elevated LDL-cholesterol

- Low-density lipoprotein (LDL), also known as “bad cholesterol”, tends to release cholesterol whereas HDL tends to take in cholesterol when coming in contact with cholesterol-filled cells.
- A desirable LDL-cholesterol level is below 130. Between 130 and 159 mg/dl is considered borderline-high and 160 and above presents a high risk for cardiovascular disease.
- LDL-cholesterol can be lowered by losing body fat, taking medication, participating in regular aerobic exercise program, and having a diet low in fat, saturated fat, and cholesterol, and fiber intake between 25 to 30 grams a day.

6. Elevated triglycerides

- Triglycerides, which are fats formed by glycerol and fatty acids, speed up the formation of plaque. These fatty acids are found in poultry skin, lunch meats, and shellfish, but are manufactured primarily in the liver, from refined sugars, starches, and alcohol.
- A high intake of alcohol and sugars raises triglyceride levels significantly.
- The level of triglycerides can be lowered by cutting down on some of the foods mentioned along with engaging in aerobic activity.

7. Diabetes

- Diabetes is a condition in which blood glucose is unable to enter the cells either because the pancreas totally stops producing insulin or does not produce enough to meet the body's needs.
- More than 80% of people with diabetes die from cardiovascular disease.

8. Abnormal electrocardiograms (ECG)

- Electrocardiograms (ECG) are a recording of the electrical activity of the heart. A stress ECG is used frequently to diagnose CHD, which reveals the heart's tolerance to high-intensity exercise.

9. Tobacco use

- Cigarette smoking is the single largest preventable cause of illness and premature death in the United States, responsible for 400,000 deaths a year, with about 53,000 being non-smokers who were exposed to secondhand smoke. Secondhand smoke is ranked as

the third-leading preventable cause of the death in the United States.

- Pipe and cigar smoking and chewing tobacco also increase the risk for heart disease.

10. Stress

- Those who are not able to relax place a constant low-level strain on the cardiovascular system that could manifest itself in heart disease.
- When a person is placed in a stressful situation, the coronary arteries that feed the heart muscle constrict, reducing the oxygen supply to the heart.

11. Personal and family history of cardiovascular disease

12. Age and gender

- Age become a risk factor for men over the age of 45 and women over the age of 55.
- The greater incidence of heart disease may stem in part from lifestyle changes as one ages.