

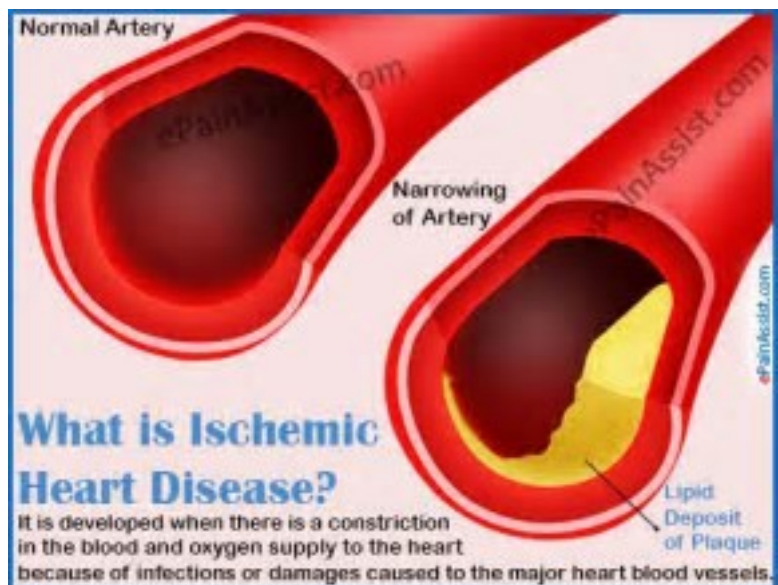
Nov 18, 2019

## 1) Circulatory System Problems

Test Week after next on Circulatory System!!!

# Warm-Up

About [REDACTED] million Canadians aged 20 years and older live with ischemic heart disease.



# Circulatory System Problems

Blood needs to flow properly through our arteries and veins to our heart, lungs and body. Plaque in an artery or vein can restrict the flow of blood causing problems. Diseases of the heart and blood vessels are very common and are called cardiovascular diseases (CVD).

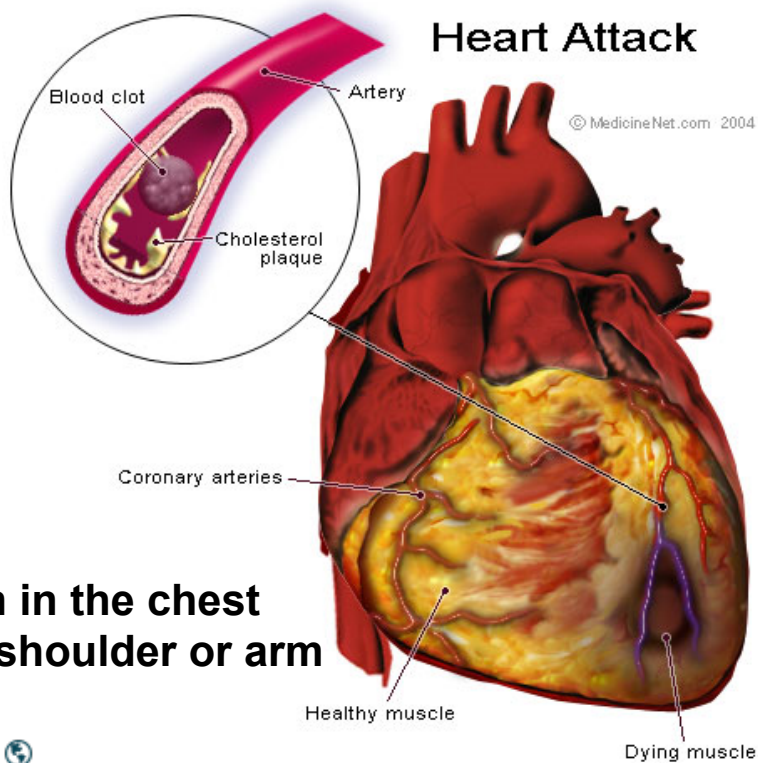
Heart Disease or CVD is the most common cause of death in industrialized countries. It includes inflammatory process, rhythm abnormalities, congenital defects, valve malfunctions, coronary artery disease, and heart failure.

**Heart attack** results when the heart is not supplied with enough oxygen.

If blood vessels in the heart narrow (due to cholesterol build up), oxygen cannot be moved and tissues will die.

**Signs :**

- pressure and pain in the chest which may spread to shoulder or arm
- sweating
- dizziness
- nausea
- shortness of breath



## **Heart Inflammation**

Any of the three layers of the heart can become inflamed or enlarged and have specific names based on which layer is enlarged. The inflammation is often caused by infection. Therefore treatment includes removing the infection and once the infection is removed the inflammation disappears.

## **Abnormalities of Heart Rhythm**



A problem anywhere within the hearts conduction system can cause an abnormal heartbeat known as an arrhythmia. This can be corrected using a defibrillator, which generates a strong electric current to keep the heartbeat normal.

## Congenital Heart Disease

- Heart diseases present at birth usually caused by defects during fetal development.
- There can be a variety of defects with valves, aorta etc not developing properly we won't go into all the possibilities.

Normal heart

Double inlet left ventricle

Right atrium

Aorta

Pulmonary artery

Left atrium

Right ventricle

Left ventricle

Position of great vessels reversed

Both atriums connected to left ventricle

ADAM.

fetal hearts have a small hole to allow blood to flow directly from right atrium to left atrium bypassing the lungs (which aren't used until they exit the birth canal) sometimes this hole doesn't close

very rare the oxygen rich and poor blood mix here because there is no right ventricle, patients often have surgery to have the blood flow via gravity to the lungs