

What is Heart Disease?

Your heart is a muscle that gets energy from blood, which carries oxygen and **nutrients**. Having a **constant** supply of blood keeps your heart working properly. Most people think of heart disease as one condition. But in fact, heart disease is a group of conditions affecting the heart and has many causes. Coronary artery disease (CAD) is the most common of these conditions and happens when blood vessels in your heart become **blocked** or **narrowed**, which **prevents** oxygen-rich blood from reaching your heart. It can cause chest pain – called **angina** – or even a heart attack.

How does your heart work?

A normal heart is a strong muscular **pump**. It weighs between 200 to 425 grams (7 and 15 ounces) and is a little larger than the size of your **fist**. During an average lifetime, the human heart will **beat** more than 2.5 billion times. The average heart beats about 100,000 times each day and **pumps** about 7,200 liters (1,900 gallons) of blood.

Your heart **pumps** blood to your body, delivers oxygen and **nutrients** to every **cell** and removes carbon dioxide and waste products made by those cells. **Oxygen-rich** blood is carried from your heart to the rest of your body through arteries. **Oxygen-poor** blood is carried back to your heart through veins.

What is a heart attack?

When the blood supply to the heart is slowed or stopped because of a **blockage**, a heart attack **occurs**. The arteries can become narrow because a material called **plaque** can build up on the walls of the arteries. This narrowing of arteries is called **Atherosclerosis** and it causes more than 90% of heart attacks.

What are some signs of a heart attack?

Here are some common signs of heart attack:

- Chest pain or **discomfort**.
- A pain in the neck, jaw, shoulder, arm or back.
- Difficulty breathing.
- Nausea, **indigestion** or vomiting.
- Sweating, or having cool, **clammy** skin.

If you are experiencing any of these signals, you should call 9-1-1 immediately.

This information has been adapted from the Heart and Stroke website:
<http://ww2.heartandstroke.ca>

Vocabulary:

In your group, discuss the meaning of the words in ***bold italics*** and put the words from the reading the correct category: (even if you don't know the meaning of the words, are there any clues that might help you decide what kind of words they are?)

| Nouns | Verbs | Adjectives |
|--------------|--------------|-------------------|
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Questions:

1. What is the heart and what is its function? (what does it do?)
2. What is heart disease?
3. What is the medical word for chest pain?
4. How big is the heart?
5. How many times a day does your heart beat?
6. What is "atherosclerosis"?
7. What are some signs of a heart attack?

Information about Stroke

What is a stroke?

A stroke is a sudden loss of brain function. It is caused by the **interruption** of flow of blood to the brain or the **rupture** (breaking) of blood vessels in the brain. The interruption of blood flow or the rupture of blood vessels causes brain cells (neurons) in the affected area to die. The effects of a stroke depend on where the brain was injured, as well as how much **damage** occurred. A stroke can affect any number of areas including your ability to move, see, remember, speak, read and write. The longer the brain goes without the oxygen and **nutrients** supplied by the blood flow, the greater the risk of permanent brain damage.

What is the brain?

Your brain is the most **complex** organ in your body. It is made of over 100 billion nerve cells called **neurons** and it acts as a command centre for everything you do, think, sense and say. These neurons depend on the blood vessels in your brain for oxygen and **nutrients**. Neurons cannot repair themselves. Different parts of the brain control different **functions**. When someone has a stroke, the functions that are affected depend upon which area of the brain was damaged and how much **damage** occurred. Learning what the different parts of the brain do can help you understand why the effects of stroke can be so different among different people.

The five signs of Stroke:

Stroke is a medical emergency. Recognizing and responding immediately to the warning signs of stroke by calling 9-1-1 can improve **survival** and **recovery**. Here are the warning signs of Stroke:

Weakness - Loss of strength or sudden numbness in the face, arm or leg.

Trouble speaking - Difficulty speaking or understanding or sudden **confusion**.

Vision problems - Sudden trouble with **vision**.

Headache - Sudden **severe** and unusual headache.

Dizziness - Sudden loss of balance, especially with any of the above signs.

Risk factors you can do something about:

- High blood pressure (hypertension)
- High blood cholesterol
- Heart Disease
- Diabetes
- Being overweight
- Excessive alcohol **consumption**
- Physical inactivity
- Smoking
- Stress

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Vocabulary:

Fill in the chart with the noun, verb and adjective form of these words where possible:

| Noun | Verb | Adjective |
|--------------|-------------|------------------|
| Survival | | |
| | Damage | |
| | | Weak |
| Interruption | | |
| Confusion | | |
| | | Complex |
| Consumption | | |

Questions:

1. What is Stroke?
2. What does the brain do? (what is its function?)
3. Why can the effects of Stroke be so different among different people?
4. What causes Stroke?
5. What are the five signs of Stroke?
6. What are some risk factors for Stroke that you can control?

Further suggestions for classroom activities:

The preceding readings on Heart Attack and Stroke can easily be converted to jigsaw readings. The questions following the readings can be enlarged to one 11" X 17" sheet and to be completed in groups to make the readings, vocabulary and comprehension questions more interactive.

This information also lends itself well to group presentations if your learners are at a high enough level:

Go to the Heart and Stroke website: <http://ww2.heartandstroke.ca>
For information about Heart Disease: click on Heart Disease on the left navigation bar. You can do group class presentations about different heart conditions, their symptoms, causes and prevention etc.

For information about Stroke: click on Stroke on the left navigation bar. As with Heart Attack, there is a lot of information on the website listed above that can be broken down into different chunks to be used for group research and presentations on Stroke.