

eFit eLearning Course Handout



Heart Disease

- What is heart disease?
- What are the symptoms of heart disease?
- How can heart disease be prevented, reduced or treated?

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The Heart

- Heart walls are a muscle that pumps blood out every time the heart “beats”.
- The heart circulates blood, delivering oxygen and nutrients throughout the body and carrying away unwanted carbon dioxide and waste.
- Click on the link to watch to a 50 second video called [How the Heart Works](#)

[American College of Cardiology, 2008; Children's Hospital of Philadelphia, 2014](#)

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The Heart and Aging

- With aging, the heart compensates for clogged vessels by working harder and raising blood pressure.
 - These clogged arteries are also called coronary heart disease.
- Arteries become stiffer and less flexible and causes the blood pressure to increase.
 - The heart must adjust to the increase in blood pressure by pumping harder.
 - As a result, an older person's heart enlarges.
- Over time there is a 50% decrease in the body's capacity for vigorous exercise.

[Stibich, 2020](#)

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What is Heart Disease?

- Heart disease is a range of conditions that affect the heart and include:
 - diseases of the blood vessels
 - heart rhythm problems
 - heart defects
- The term “cardiovascular disease” is also used instead of heart disease.
 - Cardiovascular disease refers to conditions that involve narrowed or blocked blood vessels that can lead to a heart attack, chest pain (angina) or stroke. A separate eLearning is available on stroke!

[Heart and Stroke Foundation of Canada, 2018a](#)

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Contributing Factors

There are some factors that may lead to or contribute to heart disease. Those factors are:

- sex and age:
 - men over 45 years old
 - women 55 and older
 - women who have gone through menopause
- race - those of Indigenous, African, Hispanic or South Asian descent
- history - a family history of heart disease, especially if a parent developed heart disease at an early age
- exposure to chemotherapy and radiation therapy used for cancer
- eating a diet that's high in fat, salt, sugar and cholesterol

[Mayo Clinic, 2018a](#)

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Contributing Factors

Additional factors that may lead to heart disease are:

- high blood pressure that is not treated
- high levels of cholesterol in blood
- having diabetes
- being overweight
- being physically inactive
- unmanaged stress
- by developing viral or bacterial infections that can lead to heart infections, especially if an underlying heart condition is present
- having poor dental health
- using alcohol more than recommended, smoking or using illicit drugs

[Mayo Clinic, 2018a](#)

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Heart Disease in Men and Women

- More men than women suffer a heart attack before age 55.
- Women have more heart disease and high blood pressure after menopause.
- In men, the large heart vessels on the surface of the heart clog more often, yet it is easier to perform bypass surgery and insert stents.
- In women, the smaller vessels that feed the muscle of the heart can clog. These small vessels are hard to see in x-rays and are too small to repair.

[Barouch, L., n.d.](#)

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Stress in Men and Women

- Stress leads to high blood pressure.
- Men and women respond to stress differently.
 - More women are affected by stress.
 - Women may suffer more from emotional stress that can be easily ignored.
 - Men usually suffer stress from physical events.
 - Stress tests pick up physical stress and not emotional stress.

[Barouch, L., n.d.](#)

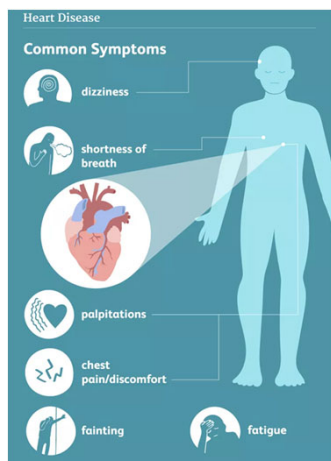
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Symptoms of Heart Disease



- Symptoms include:
 - dizziness
 - fatigue is often experienced as tiredness, exhaustion, or loss of enthusiasm that makes it difficult to function at your normal level.
 - shortness of breath
 - fainting - a sudden and temporary loss of consciousness
- Many of these symptoms can also be caused by other diseases.
- Heart disease can have no symptoms at all, especially in the early stages.

Mayo Clinic, 2018a; Marine, J., n.d.; Heart Failure Matters. n.d

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Chest Pain and Palpitations

- Two common symptoms of heart disease are chest pain and palpitations.
- Chest pain or discomfort may last from a second to days or weeks and symptoms might be:
 - pain, pressure, squeezing, or other discomforts in the chest, neck, or upper abdomen
 - pain in the jaw, head, or arms
 - it may occur frequently or rarely
 - it may occur randomly or during expected situations such as when exercising
- Palpitations might be:
 - obvious differences in heartbeat
 - rapid, stronger than normal, or irregular heart rate
 - described as “skips” in the heartbeat

Mayo Clinic, 2018a; Marine, J., n.d.

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Types of Heart Disease

- Common types of heart disease include:
 - heart attack
 - abnormal heartbeat
 - weak heart muscle
 - heart disease from infection
 - damaged heart valves
- Each condition has specific symptoms associated with it.

[Heart and Stroke Foundation of Canada, 2018a](#)

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Heart Attack

- A heart attack is also known as a myocardial infarction or MI.
- A heart attack happens when there is damage to the heart muscle due to lack of blood flow and oxygen.
- Signs of a heart attack may include:
 - chest discomfort
 - sweating
 - upper body discomfort
 - nausea
 - shortness of breath
 - light-headedness
- A heart attack can cause the heart to stop beating; this is called a cardiac arrest.

[Heart and Stroke Foundation of Canada, 2018b](#)

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Abnormal Heartbeat

- An abnormal heartbeat is called a heart arrhythmia.
- Symptoms include:
 - fluttering in the chest
 - racing or slow heartbeat
 - chest pain or discomfort
 - shortness of breath
 - lightheadedness or dizziness
 - fainting also called syncope or near fainting

[Mayo Clinic, 2018a](#)

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Weak Heart Muscle

- Heart disease caused by weak heart muscle is also called cardiomyopathy.
- It can be caused by reduced blood flow to the heart after a heart attack, infections or poisons. In early stages there may be no symptoms.
- In later stages symptoms include:
 - breathlessness during physical activity or when at rest
 - swelling of the legs, ankles and feet
 - fatigue
 - irregular heartbeats that feel rapid, pounding or fluttering
 - dizziness, lightheadedness or fainting

[Story, C., 2017](#)

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Heart Disease from Infection

- Heart disease caused from infection is called endocarditis.
 - An infection of the heart can be caused by bacteria, viruses or parasites.
- Heart infection symptoms can include:
 - fever
 - shortness of breath
 - weakness or fatigue
 - swelling in legs or abdomen
 - changes in heart rhythm
 - dry or persistent cough
 - skin rashes or unusual spots

[Donovan, R. \(2018\)](#)

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Damaged Heart Valves

- The heart has four valves that open and close to direct blood flow through the heart.
- Valves may be damaged by a variety of conditions such as rheumatic fever, infections or diseases leading to narrowing, leaking or improper closing.
- Depending on which valve isn't working properly, the symptoms generally include:
 - fatigue
 - shortness of breath
 - irregular heartbeat
 - swollen feet or ankles
 - chest pain
 - fainting

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Heart Disease Testing

- A health care provider may order one or more tests to detect the amount of heart disease or damage a person has.
 - **Electrocardiogram or ECG** helps detect irregularities in the heart's rhythm and structure either while at rest or while exercising (stress electrocardiogram).
 - **Holter monitor** detects heart rhythm irregularities using a portable device that records a continuous ECG when worn for 24 to 72 hours.
 - **Echocardiogram** shows detailed images of the heart's structure and function using an ultrasound of the chest.
 - **Stress test** monitors how the heart responds when the heart rate is raised with exercise or medicine.

[Mayo Clinic, 2018b](#)

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Heart Disease Testing

- **Cardiac catheterization** measures heart pressure, shows blood flow and checks for abnormalities using a catheter inserted in the groin artery until it reaches the heart.
- **Cardiac computerized tomography (CT) scan** collects images of the heart and chest using an X-ray.
- **Cardiac magnetic resonance imaging (MRI)** evaluates the heart's condition using images produced by a magnetic field.

[Mayo Clinic, 2018b](#)

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Reducing and Preventing Heart Disease

Heart disease can be reduced or prevented by making lifestyle changes:

- lower blood pressure, cholesterol and blood sugars by eating a healthy diet rich in whole grains, fruits, vegetables and low-fat dairy products and reduced saturated fat and cholesterol
- reduce salt intake
- use drugs safely as prescribed
- maintain a healthy weight

Reducing and Preventing Heart Disease

- increase physical activity by aiming for 150 minutes of activity a week, or about 30 minutes most week days
- limit alcohol consumption
- stop smoking
- reduce stress by focusing on things that can be controlled and by taking time to do enjoyable activities

Other Treatments for Heart Disease

- When lifestyle changes are not enough, a health care provider may recommend any of the following treatment options:
 - medications
 - Your health care provider will explain why these are ordered and what results should be expected.
 - cardiac surgery
 - procedures range from insertion of stents to heart valve replacement and others.
 - cardiac rehabilitation – a tailored exercise program
- Review additional documents provided as learning resources for more information on treatment options.



Think About...Heart Health

What can you do to improve your heart health?

Consider how you can eat healthier, exercise more, reduce stress and reduce or omit harmful nicotine, drugs and alcohol from your lifestyle.

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You Have Completed the Heart Disease eLearning Course!

For more information on this and other topics, please visit our [eFit Resources for Individuals & Caregivers on www.sagelink.ca](http://www.sagelink.ca).

We appreciate your feedback. Please contact info@sagelink.ca if you have suggestions, comments or have any questions.

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