

2023

Hypertrophic Cardiomyopathy (HCM)

The Jordan Boyd
Inherited Heart
Disease Clinic

How does the heart work?

The heart is a hollow organ made of muscle. It has 4 chambers: 2 at the top (**atria**) and 2 at the bottom (**ventricles**).

Blood flows from the body into the top chambers. The blood is pumped to the bottom chambers, and is then pumped back out to the body.

Electric signals that pass through the heart muscle control the pumping of the chambers. This electrical activity is called the heart rhythm.

What is hypertrophic cardiomyopathy?

Hypertrophic cardiomyopathy thickens the heart muscle. This usually affects the wall between the 2 bottom chambers (called the septum).

When the muscle thickens, it gets stiff. This makes it hard for the bottom chambers to relax and fill with blood before each heartbeat.

Thick heart muscle can make it harder for blood to leave the heart. This lowers the amount of blood the heart pumps out to the rest of the body, causing low pressure.

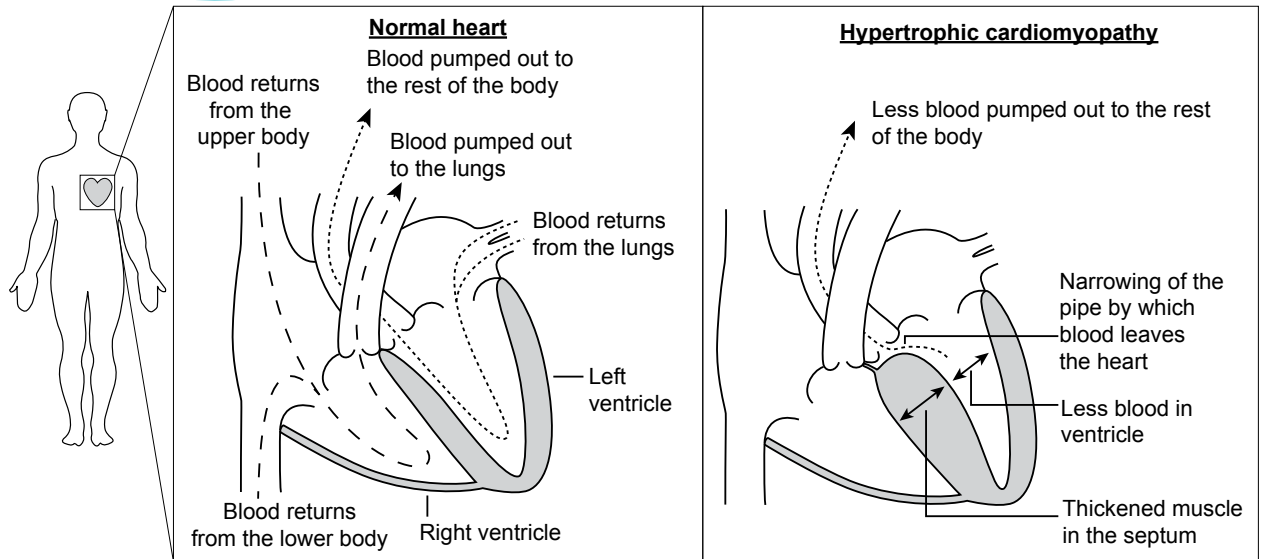
Thick heart muscle can cause scar tissue. Scar tissue can put you at a higher risk of dangerous, fast heart rhythms.

What causes HCM?

HCM can be caused by:

- › changes in your genes. HCM can be hereditary (passed from parents to their children).

Sometimes the cause is not known.



It is important to tell your health care provider if you had a relative who died suddenly at a young age. This could have been caused by HCM.

What are the symptoms of HCM?

Symptoms may include:

- › Shortness of breath
- › Chest pain
- › Palpitations (feeling like your heart is jumping, racing, or fluttering)
- › Lightheadedness
- › Blackouts (passing out or not being able to remember a certain amount of time)

These symptoms can be caused by abnormal heart rhythms or low blood pressure from HCM.

How is HCM diagnosed?

Health care providers use different tests to diagnose HCM.

You may have some of these tests:

Electrocardiogram (ECG/EKG): A recording of your heart rhythm for 10 to 20 seconds.

Holter monitor: A recording of your heart rhythm for 24 hours (1 day).

Exercise stress test: A recording of your heart rhythm and blood pressure while you run on a treadmill.

Echocardiogram (Echo): An ultrasound that measures the size of your heart chambers and how well your heart is pumping.

Cardiac MRI: A scan using magnets and radio waves. It measures the size of your heart chambers and how well your heart is pumping.

Your cardiologist (heart doctor) may want you to have other tests when they are diagnosing you. They will talk with you about this, if needed.

Genetic testing and family screening

If your cardiologist thinks changes in your genes caused your HCM, they may ask if you would like to talk with a genetic counsellor about genetic testing.

Your cardiologist may also want to ask other members of your family to test for HCM. They may ask you to help by giving letters to your family members.

How is HCM treated?

There is no cure for HCM, but there are treatments that can control fast heart rhythms and help with your symptoms.

Treatments may include:

- › medications.
- › a pacemaker called an **internal cardioverter defibrillator** (ICD). The ICD identifies fast heart rhythms and slows your heart rhythm down to a safer speed.
- › heart surgery to make it easier for the blood to leave your heart.
- › a heart transplant (this is rare).

More information about HCM:

The Canadian Sudden Arrhythmia Death Syndromes (SADS) Foundation

- › www.sads.ca
- › Includes information about inherited heart diseases and a booklet on HCM that you can download.

Heart & Stroke Foundation of Canada

- › www.heartandstroke.ca/heart/conditions/cardiomyopathy

HealthLink BC

- › www.healthlinkbc.ca/health-topics/hypertrophic-cardiomyopathy

This pamphlet is for educational purposes only. It is not intended to replace the advice or professional judgment of a health care provider. The information may not apply to all situations. If you have any questions, please ask your health care provider.

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