Hypertrophic Cardiomyopathy

When your heart muscle grows too thick

Hypertrophic Cardiomyopathy (HCM)

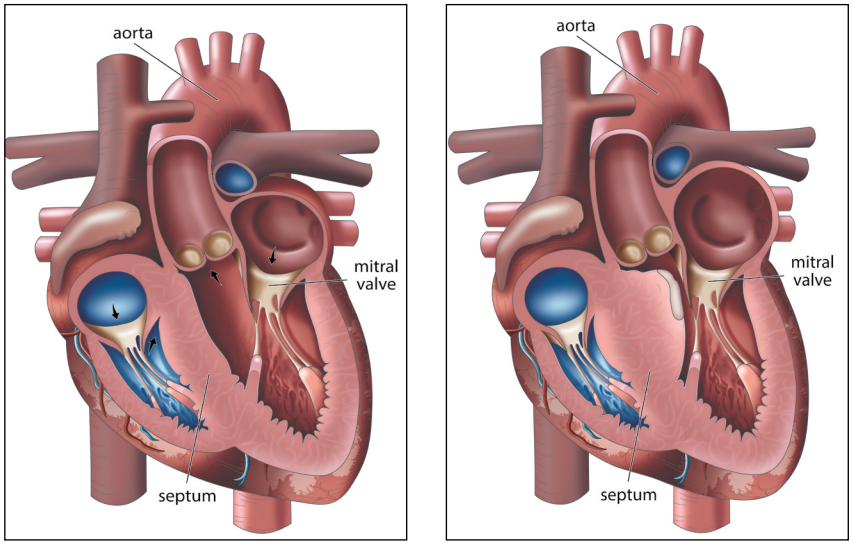
This disease causes your heart muscle to become too thick.

The septum (muscle wall) separates the ventricles (lower chambers) of your heart. When the septum thickens, it affects how well your ventricles take in and pump out blood.

You may also have a mitral valve that is longer than average. This can affect the way it opens and closes, especially with a thickened septum. Because of this, two things can happen:

- Your heart has a higher pressure inside your left ventricle to push out as much blood as it can to your other organs.
- When the longer mitral valve comes in contact with the thickened septum, it might not fully close. This causes blood to leak back into the left atrium (upper chamber) and into your lungs. This can cause you to feel short of breath.

There are different forms of HCM. Your cardiologist will tell you which form you have.



(Left) The septum separates the right ventricle (on the lower left) from the left ventricle (lower right). (Right) A thickened septum reduces the blood flow out of the left ventricle.

Cause

HCM is a genetic disorder. Parents who have it can pass it on to their children.

Symptoms

Symptoms include:

- shortness of breath
- abnormal heart rhythms
- chest pain
- fainting or feeling faint
- fatigue (feeling very tired)
- swelling in your legs or feet
- heart failure.

Some people do not have any symptoms or will have symptoms later in life.

(over)

Tests

Your health care provider may want you to have one or more of these tests to tell if you have HCM.

- ❑ **Echocardiogram**:
  This is an ultrasound study of your heart muscle, heart valves and pericardium (sac that surrounds the heart).

  The test uses sound waves to see how well your heart is working. A wand-like instrument makes the sound waves. As the wand is moved over your chest, pictures of your heart appear on a screen and are recorded.

- ❑ **Stress echocardiogram**:
  This is a two-part test. You will have an echocardiogram and walk on a treadmill. If you can't exercise, you will have a medicine that works your heart like you were exercising.

- ❑ **Electrocardiogram (EKG)**:
  This is an ultrasound that records the electrical activity of your heart.

  Small patches (discs) attached to your chest "pick up" the electrical activity from your heart. This activity goes to the EKG machine where it is recorded on a moving strip of paper.

- ❑ **Holter monitor**:
  A Holter monitor is a small, portable EKG that you wear on a belt or chest harness for 24 or 48 hours. It records your heartbeats during your normal, everyday activities. It helps detect any unusual heart rhythms.

  The technician will put several small electrode patches on your chest. These patches have wires connected to the monitor which records your heartbeats. The monitor is worn under your clothing.

- ❑ **Cardiac MRI (magnetic resonance imaging)**:
  This scan will take still and moving pictures of your heart. These images will show the function and structure of your heart.

- ❑ **Genetic testing**:
  Family members should be tested because HCM is passed along in families.

Treatment

- ■ **Medicines** can help make it easier for blood to be pumped to the rest of your body. The most common medicines slow your heart rate or help treat abnormal heart rhythms.
- ■ **Septal myectomy** is open-heart surgery to remove part of thickened heart muscle.
- ■ **Alcohol septal ablation** is a procedure that uses alcohol to shrink the thickness of the septum. This is often done when medicine doesn't help or if a septal myectomy is too high risk.
- ■ **Implantable cardioverter defibrillator (ICD)** is inserted in your chest during a procedure. An ICD delivers an electrical shock that converts an irregular rhythm into a normal rhythm. It can help prevent sudden death.

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