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**Hypertrophic Cardiomyopathy**

**Other names:**

idiopathic hypertrophic subaortic stenosis (IHSS)  
asymmetric septal hypertrophy (ASH)  
hypertensive hypertrophic cardiomyopathy

**What is hypertrophic cardiomyopathy?**

Hypertrophic cardiomyopathy (HCM) is a disease in which the muscle of the heart thickens and enlarges, which can interfere with the heart's ability to pump blood. HCM often affects only one side of the heart. The left ventricle (lower left chamber of the heart) is often affected. An enlarged septum (the wall separating the left and right heart chambers) can push on a heart valve and affect the valve's proper function.

HCM is a relatively uncommon disease, affecting an estimated 1 out of every 500 - 1000 births.

**What causes HCM?**

The muscle of the heart thickens without an obvious cause in HCM. The cells of the heart muscle aren't aligned as they normally should be. This is known as myocardial disarray. Myocardial disarray can occur in a specific place in the heart, or throughout it. A localized thickening of the muscle just below the aortic valve may cause an obstruction to the flow of blood out of the heart and into the aorta.

HCM appears to run in families, and is believed to be linked to genes that control the growth of heart muscle.

**What are the symptoms of HCM?**

Many people with HCM experience no symptoms at all. There is no single symptom that is unique to HCM.

Symptoms can include shortness of breath, chest pain, palpitation (the sensation of feeling your heart beat), lightheadedness, and blackout spells (syncope).

Arrhythmias (irregular heartbeat) can occur with HCM. This has been a cause of death during exercise for several athletes.

**How is HCM diagnosed?**

Around 50% of adults who have HCM will have symptoms that cause them to go to the doctor. The remainder are detected during screening, after the detection of a heart murmur (an irregular sound made by your heart) or from an ECG (electrocardiogram) exam.

The doctor will listen to your heart with a stethoscope, and may touch or tap your chest.

The doctor may request certain tests, including echocardiogram, ECG (electrocardiogram), ultrasound, angiography, and chest X-ray. The echocardiogram is the most commonly requested test. It uses sound waves to make a picture of your heart.

### **What are the risks of HCM?**

Most patients with mild HCM live a very normal life, with a normal life expectancy. However, it is difficult to tell how HCM might affect an individual. Patients can develop congestive heart failure (CHF), and some can die suddenly. It is important to follow your doctor's advice carefully, and to report any changes in your condition.

Obstructions can be worsened by stress or medications that increase heart contraction, or by dehydration or excessive diuretic use.

If the doctor finds no blockage and no irregularities in your heart rhythm, risk of complications is low. If HCM is found for the first time in persons older than 40, the prognosis is usually very good.

### **How is HCM treated?**

There is no known cure for HCM. Treatment focuses on controlling the symptoms of the disease and preventing complications.

Treatment for HCM symptoms can include the following medications: beta blockers to reduce heart contractions, calcium channel blockers to assist the relaxation phase of the heartbeat, and anti-arrhythmic drugs to help control abnormal heart rhythms. It is very important to identify HCM patients who experience heart rhythm problems and potential sudden death. Occasionally, an implantable defibrillator may be necessary to prevent sudden death.

A recent effective treatment has been the insertion of a permanent pacemaker which can alter how the heart contracts thus improving the obstruction to blood flow. An earlier therapy involved a surgical procedure called myomectomy (muscle removal), where a strip of the thickened heart muscle was surgically removed to help relieve the obstruction. This procedure is still occasionally performed. At times one of the heart valves, the mitral valve, is replaced surgically in conjunction with the myomectomy.

There are experimental procedures being conducted to treat HCM. One such procedure is Alcohol Septal Ablation, which uses alcohol injected into the septum to create a "controlled mini heart attack". This procedure is still experimental and more data is required.

Heart transplantation has been performed in rare occasions for severe cases of HCM where the heart's ability to pump has been significantly impaired.

Please ask the doctor any questions you might have.