



Cardiomyopathy

Overview

Cardiomyopathy (kahr-dee-o-my-OP-uh-thee) is a condition where the heart muscle is abnormal. The main types of cardiomyopathy include dilated, hypertrophic and restrictive cardiomyopathy. Cardiomyopathy makes it harder for your heart to pump and deliver blood to the rest of your body. Cardiomyopathy can lead to heart failure.

Cardiomyopathy can be treated. The type of treatment you'll receive depends on which type of cardiomyopathy you have and how serious it is. Your treatment may include medications, surgically implanted devices or, in severe cases, a heart transplant.

Symptoms

In the early stages, people with cardiomyopathy may not have any signs and symptoms. But as the condition advances, signs and symptoms usually appear. Cardiomyopathy signs and symptoms may include:

- Breathlessness with exertion or even at rest
- Swelling of the legs, ankles and feet
- Bloating of the abdomen due to fluid buildup
- Cough while lying down
- Fatigue
- Irregular heartbeats that feel rapid, pounding or fluttering
- Chest pain
- Dizziness, lightheadedness and fainting

No matter what type of cardiomyopathy you have, signs and symptoms tend to get worse unless treated. In certain people, this worsening happens quickly, while in others, cardiomyopathy may not worsen for a long time.

When to see a doctor

See your doctor if you have one or more of the signs and symptoms associated with cardiomyopathy. Call 911 or your local emergency number if you experience severe difficulty

breathing, fainting or chest pain that lasts for more than a few minutes. Because the condition is sometimes hereditary, your doctor may advise that your family members be examined for cardiomyopathy.

Causes

Often, the cause of the cardiomyopathy is unknown. In some people, however, doctors are able to identify some contributing factors. Possible causes of cardiomyopathy include:

- Genetic conditions
- Long-term high blood pressure
- Heart tissue damage from a previous heart attack
- Chronic rapid heart rate
- Heart valve problems
- Metabolic disorders, such as obesity, thyroid disease or diabetes
- Nutritional deficiencies of essential vitamins or minerals, such as thiamin (vitamin B-1)
- Pregnancy complications
- Drinking too much alcohol over many years
- Use of cocaine, amphetamines or anabolic steroids
- Use of some chemotherapy drugs and radiation to treat cancer
- Certain infections, which may injure the heart and trigger cardiomyopathy
- Iron buildup in your heart muscle (hemochromatosis)
- A condition that causes inflammation and can cause lumps of cells to grow in the heart and other organs (sarcoidosis)
- A disorder that causes the buildup of abnormal proteins (amyloidosis)
- Connective tissue disorders

Types of cardiomyopathy include:

- **Dilated cardiomyopathy.** This is the most common type of cardiomyopathy. In this disorder, the pumping ability of your heart's main pumping chamber — the left ventricle — becomes less forceful. The left ventricle becomes enlarged (dilated) and can't effectively pump blood out of the heart.

Although this type can affect people of all ages, it occurs most often in middle-aged people and is more likely to affect men. Some people with dilated cardiomyopathy have a family history of the condition. In others, dilated cardiomyopathy may occur as a result of certain conditions such as coronary heart disease, infection, chemotherapy, or drug or alcohol use. The cause may also be unknown (idiopathic).

- **Hypertrophic cardiomyopathy.** This type involves abnormal thickening of your heart muscle, particularly affecting the muscle of your heart's main pumping chamber (left ventricle). The

thickened heart muscle can make it harder for the heart to pump blood.

Hypertrophic cardiomyopathy can develop at any age, but the condition tends to be more severe if it becomes apparent during childhood. Most affected people have a family history of the disease, and some genetic mutations have been linked to hypertrophic cardiomyopathy.

- **Restrictive cardiomyopathy.** The heart muscle in people with restrictive cardiomyopathy becomes rigid and less elastic, meaning the heart can't properly expand and fill with blood between heartbeats. While restrictive cardiomyopathy can occur at any age, it most often tends to affect older people. It's the least common type of cardiomyopathy and can occur for no known reason (idiopathic).

The condition may also be caused by diseases elsewhere in the body that affect the heart, such as a disease in which iron builds up in the heart muscle (hemochromatosis), a disorder that causes the buildup of abnormal proteins (amyloidosis), a disease that causes inflammation and can cause lumps of cells to grow in the heart and other organs (sarcoidosis), connective tissue disorders, or a disorder that causes abnormal blood cells to damage the heart (eosinophilic heart disease).

- **Arrhythmogenic right ventricular dysplasia.** In this rare type of cardiomyopathy, the muscle in the lower right heart chamber (right ventricle) is replaced by scar tissue. This can lead to heart rhythm problems. This condition is often caused by genetic mutations.
- **Other types of cardiomyopathy.** Other types of cardiomyopathy (unclassified cardiomyopathies) exist, but they don't fit within the other types of cardiomyopathy.

Risk factors

There are a number of risk factors that can increase your risk of cardiomyopathy, including:

- **Family history.** People with a family history of cardiomyopathy, heart failure and sudden cardiac arrest are more likely to develop cardiomyopathy than are those without a family history of heart problems.
- **High blood pressure.** People who have high blood pressure over a long period of time are at higher risk of cardiomyopathy.
- **Conditions that affect the heart.** People who have had a heart attack, coronary artery disease or viral infections that affected the heart are at higher risk of cardiomyopathy.
- **Obesity.** Excess weight makes the heart work harder, which may increase the risk of cardiomyopathy and heart failure.
- **Alcoholism.** People who abuse alcohol can damage their hearts, and cardiomyopathy can be a consequence. The risk increases significantly after more than five years of drinking seven to eight drinks daily.
- **Illicit drug use.** Drugs, such as cocaine, amphetamines and anabolic steroids, may increase the risk of cardiomyopathy.
- **Cancer treatments.** While necessary to treat cancer, many cancer treatments can damage some healthy cells too. Certain chemotherapy drugs and radiation therapy can increase the risk

of cardiomyopathy.

- **Diabetes.** Having diabetes ups the risk of cardiomyopathy, heart failure and other heart problems.
- **Thyroid disorders.** Having an under- or overactive thyroid gland can increase your risk of cardiomyopathy.
- **Hemochromatosis.** This disorder causes the body to store excess iron, and it has been linked to an increased risk of dilated cardiomyopathy.
- **Diseases that affect the heart.** Other diseases, such as a disorder that causes the buildup of abnormal proteins (amyloidosis), a disease that causes inflammation and can cause lumps of cells to grow in the heart and other organs (sarcoidosis), or connective tissue disorders can increase your risk of cardiomyopathy.

Complications

Having cardiomyopathy may lead to other heart conditions, including:

- **Heart failure.** Heart failure means your heart can't pump enough blood to meet your body's needs. The thickened, stiffened or weakened heart muscle due to cardiomyopathy can become unable to pump or can stop blood from flowing out of the heart. Left untreated, heart failure can be life-threatening.
- **Blood clots.** Because your heart can't pump effectively, you're more likely to have blood clots form in your heart if you have cardiomyopathy. If clots are pumped out of the heart and enter your bloodstream, they can block the blood flow to other organs, including your heart and brain.

To reduce your risk, your doctor may prescribe a blood thinner (anticoagulant medication), such as aspirin, clopidogrel (Plavix), apixaban (Eliquis), dabigatran (Pradaxa), rivaroxaban (Xarelto) or warfarin (Coumadin, Jantoven).

- **Valve problems.** Because people with cardiomyopathy have an enlarged heart, the heart valves may not close properly, leading to a backward flow of blood.
- **Cardiac arrest and sudden death.** Cardiomyopathy can lead to abnormal heart rhythms. Some of these heart rhythms are too slow to keep blood flowing through your heart effectively, and some are too fast to allow the heart to beat properly. In either case, these abnormal heart rhythms can result in fainting or, in some cases, sudden death if your heart stops beating effectively.

Prevention

In many cases, you can't prevent cardiomyopathy. Let your doctor know if you have a family history of the condition.

You can help reduce your chance of cardiomyopathy and other types of heart disease by living a heart-healthy lifestyle and making lifestyle choices such as:

- Avoiding the use of alcohol or cocaine

- Controlling high blood pressure, high cholesterol and diabetes
- Eating a healthy diet
- Getting regular exercise
- Getting enough sleep
- Reducing your stress

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