CONDITION

# Dilated cardiomyopathy

Dilated cardiomyopathy is a condition in which the heart becomes enlarged and pumps blood less effectively.

**WHAT IT IS**
Enlarged, weakened heart muscle with reduced pumping ability

**BODY SYSTEM**
Heart and circulation

**MAIN SYMPTOMS**
Breathlessness, tiredness, swollen ankles, palpitations

**WHAT CAUSES IT**
Inherited changes, inflammation, toxins, pregnancy, or unknown

**HOW IT IS DIAGNOSED**
Echocardiogram, supported by ECG and cardiac MRI

**MAIN TREATMENT**
Heart failure medicines, devices, and lifestyle support

**CAN IT BE CURED?**
Sometimes - heart function can recover

**IS IT AN EMERGENCY?**
Sometimes - severe breathlessness, chest pain, or fainting

**LONG-TERM OUTLOOK**
Many people remain stable with ongoing treatment

## Overview

Dilated cardiomyopathy affects the heart muscle. The heart's main pumping chamber, the left ventricle, becomes enlarged and weak. Other chambers may also be affected.

A weakened heart may not pump enough blood to meet the body's needs. This can lead to heart failure, which means the heart is struggling to pump effectively, not that it has stopped.

The condition can also disrupt the heart's electrical system, causing an abnormal rhythm called an arrhythmia. Slow blood flow within an enlarged heart may allow a blood clot to form.

Dilated cardiomyopathy can develop at any age. Some people have no symptoms when it is found. Others develop breathlessness, swelling, palpitations, or reduced exercise tolerance.

Treatment can relieve symptoms, support the heart, and reduce complications. Heart size and

pumping ability improve greatly in some people, while others need long-term treatment and monitoring.

## Symptoms

Symptoms may develop gradually or appear more quickly, particularly after a viral illness or around pregnancy.

Common symptoms include:

Some people have chest discomfort, although chest pain has many possible causes and should not automatically be attributed to cardiomyopathy.

Symptoms can remain mild even when pumping ability is reduced. Regular follow-up and heart imaging are therefore important, including when you feel well.

- Breathlessness during activity, when lying flat, or at night
- Unusual tiredness or reduced ability to exercise
- Swelling of the feet, ankles, legs, or abdomen
- A rapid, pounding, fluttering, or irregular heartbeat
- Coughing, particularly when lying down
- Dizziness or feeling light-headed
- Unexplained weight gain caused by fluid retention

## Causes and risk factors

Dilated cardiomyopathy has many possible causes. More than one factor may contribute, and sometimes no cause is found.

Inherited changes in certain genes can affect heart muscle cells. Someone may carry one of these changes without symptoms, and relatives with the same change may be affected differently or at different ages.

Inflammation of the heart muscle, called myocarditis, can cause damage. It may follow a viral infection, although the trigger is not always identified.

Other possible causes or contributors include:

Coronary artery disease, high blood pressure, and valve disease can also weaken or enlarge the heart. Doctors assess whether these conditions fully explain the changes or whether

dilated cardiomyopathy is present.

- Heavy or prolonged alcohol use
- Cocaine, amphetamines, and other toxic substances
- Certain cancer treatments, including some chemotherapy medicines
- Immune system conditions that cause inflammation
- Thyroid problems and some nutritional deficiencies
- Long-lasting, very fast heart rhythms
- Pregnancy or the months after birth, known as peripartum cardiomyopathy

## Diagnosis

Diagnosis begins with your symptoms, medical and family history, and a physical examination. Tell your doctor about relatives with cardiomyopathy, heart failure, unexplained fainting, heart transplants, or sudden death at a young age.

An echocardiogram is the main imaging test. It uses sound waves to show the heart's size, movement, valves, and pumping ability. The ejection fraction estimates how much blood the left ventricle pumps out with each beat.

Other tests may include:

Genetic testing may be offered if an inherited cause is suspected. Genetic counselling can explain what the results may mean for you and your relatives. A negative result does not rule out inheritance because not every relevant gene change is known or detectable.

In selected cases, doctors take a small heart muscle sample called a biopsy. This is not routinely needed.

- An electrocardiogram, or ECG, to record electrical activity
- Blood tests to assess heart strain and possible causes
- Cardiac MRI to look for inflammation, scarring, or other heart muscle changes
- A portable monitor to record intermittent rhythm problems
- Exercise testing to assess symptoms and the response to activity
- Coronary imaging when narrowed heart arteries are a possible cause

## Treatment and management

Treatment depends on symptoms, heart function, rhythm problems, the likely cause, and other health conditions. It usually combines medicines, monitoring, and practical changes.

Heart failure medicines can reduce strain and help the heart pump more effectively. They may include medicines affecting blood pressure and heart hormones, beta blockers like metoprolol or propranolol , mineralocorticoid receptor antagonists, and SGLT2 inhibitors. Diuretics, or water tablets like furosemide or hydrochlorothiazide , help remove excess fluid and ease swelling or breathlessness.

Not every medicine is suitable for everyone. Treatment is usually introduced and adjusted gradually, with checks of blood pressure, kidney function, and blood potassium. Do not stop prescribed heart medicines without medical advice.

Abnormal rhythms may need separate treatment. Blood-thinning medicine is used for specific clot risks, such as atrial fibrillation or a known clot inside the heart. It is not automatically needed by everyone.

Some people may benefit from an implanted device. An implantable cardioverter defibrillator, or ICD, can treat certain dangerous rhythms. Cardiac resynchronisation therapy, or CRT, coordinates contractions when the heart's electrical timing is abnormal.

If severe heart failure continues despite treatment, a mechanical heart pump or heart transplant assessment may be considered. Only a minority of people need these options.

Management may also involve:

Pregnancy places extra strain on the heart. Anyone with dilated cardiomyopathy who is considering pregnancy needs specialist advice because individual risks and medicine safety vary.

- Limiting alcohol or avoiding it if it contributed to the condition
- Avoiding cocaine, amphetamines, and other substances that strain the heart
- Choosing an activity level with guidance from the cardiology team
- Discussing salt and fluid intake if fluid retention is a problem
- Taking medicines consistently
- Monitoring weight and reporting a rapid increase with worsening swelling

## Complications

Possible complications include heart failure, abnormal rhythms, blood clots, stroke, and heart valve problems. The mitral valve may leak because enlargement prevents it from closing

properly.

Some arrhythmias cause palpitations or dizziness, while others reduce pumping ability. Rarely, a serious ventricular rhythm can cause collapse or cardiac arrest. Risk is assessed using heart function, symptoms, MRI findings, genetic results, and rhythm monitoring.

Fluid may collect in the lungs, legs, or abdomen. Kidney or liver function can be affected in advanced heart failure.

Treatment and regular monitoring help reduce these risks. Having dilated cardiomyopathy does not mean every complication will occur.

## Prevention

Dilated cardiomyopathy cannot always be prevented. Inherited changes cannot be removed through lifestyle choices, and many people have no identifiable preventable cause.

You can reduce avoidable strain by not using cocaine or amphetamines and avoiding heavy alcohol use. Managing high blood pressure and other heart conditions may also protect heart function.

People receiving treatments that can affect the heart may have checks before, during, or after treatment to support early detection.

If dilated cardiomyopathy runs in your family, screening cannot prevent inheritance but may detect early changes before symptoms develop. It may include an ECG and echocardiogram at intervals based on age, family history, and genetic results.

## Living with it and what to expect

Dilated cardiomyopathy varies between people. Heart function may improve, remain stable, or worsen over time. Improvement may be more likely when a reversible trigger is treated, but recovery cannot be guaranteed.

Some people return to usual work, family activities, and suitable exercise with few symptoms. Others need to pace themselves because of tiredness or breathlessness. Cardiac rehabilitation can provide supervised exercise, education, and emotional support.

Even when an echocardiogram improves, the underlying tendency may remain. Stopping heart medicines can allow the condition to worsen again, so discuss any change with your care team.

Follow-up commonly includes symptom reviews, blood tests, ECGs, heart imaging, and checks of medicines or implanted devices. Contact your team sooner if you develop increasing

breathlessness, swelling, palpitations, reduced exercise ability, or rapid weight gain.

A long-term heart condition can affect mood, sleep, relationships, work, and pregnancy decisions. Cardiac rehabilitation, counselling, patient groups, or genetic counselling may help. Many people remain active and stable for long periods with treatment.

## When to get medical help

Arrange a routine medical review for ongoing breathlessness, ankle swelling, unusual tiredness, or repeated palpitations. These symptoms have many possible causes but need assessment.

If you have dilated cardiomyopathy, contact your usual care team promptly if symptoms become more frequent, swelling increases, or your weight rises quickly over a few days. Also seek advice after new fainting, persistent palpitations, or a clear reduction in your ability to perform normal activities.

Call emergency services for:

If someone is unresponsive and not breathing normally, call emergency services and begin cardiopulmonary resuscitation if you are able.

- Severe breathlessness, especially at rest or with difficulty speaking
- New or severe chest pain
- Fainting or collapse
- Blue or grey lips or skin
- Sudden weakness, facial drooping, speech difficulty, or loss of vision
- A rapid or irregular heartbeat with chest pain, faintness, or severe breathlessness

## Common questions

Is dilated cardiomyopathy the same as heart failure?

No. Dilated cardiomyopathy is a heart muscle condition that can cause heart failure. Heart failure describes an inability to pump or fill well enough and has many possible causes.

Can dilated cardiomyopathy go away?

Heart size and pumping function sometimes return toward normal, particularly when a treatable trigger is controlled. This is often called recovery or remission rather than a guaranteed cure because weakness can return.

Can I exercise with dilated cardiomyopathy?

Many people benefit from suitable activity, but the type and intensity should reflect heart function, symptoms, rhythm risk, and implanted devices. Competitive or very intense exercise may be unsuitable. Ask your cardiology or cardiac rehabilitation team for a safe plan.

Is dilated cardiomyopathy inherited?

It can be. A genetic cause is more likely when relatives have cardiomyopathy, heart failure, rhythm problems, or unexplained sudden death. It may still be inherited when only one relative is known to be affected.

Can I drink alcohol?

Advice depends on the cause and severity. Complete avoidance is particularly important if alcohol may have contributed. Alcohol can also worsen rhythms, blood pressure, and medicine side effects, so discuss it at follow-up.

Can I have a normal life expectancy?

Many people live for years or decades with stable symptoms. Outlook depends on heart function, rhythm problems, the cause, treatment response, and other health conditions. Individual estimates require ongoing assessment.

## Sources

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