

Acute heart failure: diagnosis and management

Information for the public

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About this information

NICE guidelines provide advice on the care and support that should be offered to people who use health and care services.

This information explains the advice about acute heart failure that is set out in the NICE guideline on acute heart failure: diagnosis and management.

Does this information apply to me?

Yes, if you are an adult (18 years or over) with acute heart failure or are having tests for acute heart failure.

Acute heart failure

If you have heart failure, your heart does not pump enough blood to meet all the needs of your body. This is because of damage to the heart muscle, a heart valve not functioning properly, an abnormal heart rhythm or one of the other rarer conditions that could affect heart function. The term 'acute heart failure' is used to describe heart failure that happens suddenly, or the symptoms get so bad that hospital admission is necessary. People who are not known to have heart problems can develop acute heart failure. It can also occur in people with chronic (or long-term) heart failure if their worsening heart condition results in severe symptoms. Heart failure is treatable, and treatment can relieve the symptoms and improve the outcome.

Shortness of breath and swollen lower limbs are the most common symptoms of heart failure. Other symptoms include cough and fatigue. Acute heart failure is a serious condition, and most people diagnosed are admitted to hospital for treatment.

Your care team

A range of professionals who specialise in different areas of treatment or support may be involved in your care. These could include doctors, nurses and pharmacists led by the consultant specialist in heart failure. If you are admitted to hospital with suspected heart failure, a team that specialises in treating heart failure should be involved in your care.

Working with you

Your care team should talk with you about acute heart failure. They should explain any tests, treatments or support you should be offered so that you can decide together what is best for you. Your family or carer can be involved in helping to make decisions, but only if you agree. There is a [list of questions](#) you can use to help you talk with your care team.

You may also like to read [NICE's information for the public on patient experience in adult NHS services](#). This sets out what adults should be able to expect when you use the NHS. We also have more information on the [NICE website about using health and social care services](#).

Some treatments or care described here may not be suitable for you. If you think that your treatment does not match this advice, talk to your care team.

Diagnosis and assessment

If your doctor suspects you might have acute heart failure, they should ask you about your symptoms and your medical history, and examine you. They should also offer you tests – for example, a chest X-ray, blood tests and an ECG (or 'electrocardiogram' – a test that measures the rate, rhythm and other electrical activities of the heart). See [other NICE guidance](#) for more information about tests in our guidance on chronic heart failure.

If your doctor thinks you have heart failure and you have not had it before, they should measure the level of a substance in your blood called a natriuretic peptide (also known as BNP or NT-proBNP). If the level is raised, you should have an echocardiogram, ideally within 48 hours, to help find out if there is something wrong with your heart. An echocardiogram is a test that looks at the pumping action and structure of the heart, including the heart valves. A probe is moved over the surface of the chest and picks up echoes of sound (similar to an ultrasound scan used in pregnancy), which are shown as a picture on a screen. If the serum natriuretic peptide level is not raised, heart failure is very unlikely and your symptoms will probably be due to another cause.

Treatment

Treatment to stabilise your condition

Drug treatment

The first thing your doctor will want to do is to make your condition stable. You should be offered treatment with a diuretic to remove excess water from your body. It is given intravenously (directly into a vein) by injection, or you may be put on a continuous infusion (drip). While you are having diuretic treatment your healthcare team should regularly check your weight and urine output, and how well your kidneys are working. You might pass a lot of urine while you are on the diuretic, and a member of your healthcare team should discuss with you ways to deal with this. If your diuretic treatment is not working well, there

are other medicines and approaches that may be used, and certain people may be offered a procedure called ultrafiltration. This involves removing fluid from your blood using a small portable machine.

In specific circumstances you may be offered drugs called nitrates, inotropes and vasopressors to treat acute heart failure. This should be in a centre with critical care services. You should not normally be offered opiates.

You should not be offered sodium nitroprusside for acute heart failure.

Other treatments used less commonly

Mechanical ventilation is used to help people to breathe when they cannot do this well enough without support.

You should not normally be offered non-invasive mechanical ventilation if you have excess fluid in the lungs caused by heart failure (this is called cardiogenic pulmonary oedema). But if you also have severe problems breathing and high levels of acid in your blood (acidaemia), you may be offered non-invasive mechanical ventilation. This involves placing a mask over the person's face and attaching it via a tube to a machine called a ventilator.

If you are having drug treatment for acute heart failure and you are still having difficulties breathing, are losing consciousness or are physically exhausted, you may be offered invasive mechanical ventilation. This involves putting you to sleep (general anaesthesia) then inserting a tube through the mouth into the lungs. The tube is attached to a ventilator.

Treatment after stabilisation

Your doctor should discuss with you your condition and its treatment, and begin to explore the impact that treatment might have on your health in the future. They should also give you information on this.

Drug treatment

If your heart failure was caused by left ventricular systolic dysfunction (known as LVSD, where the pumping chamber of the heart is not pumping well), you should start or restart

beta-blockers while you are in hospital. You should not be discharged until your condition has been stable for 48 hours after starting or restarting the beta-blockers. You should also be offered a drug called an angiotensin-converting enzyme inhibitor (usually called an ACE inhibitor), or an angiotensin receptor blocker, and an aldosterone antagonist. If you are unable to take the ACE inhibitor or angiotensin receptor blocker because they are causing you problems, you should still be able to have an aldosterone antagonist.

If you were already taking beta-blockers before you developed acute heart failure, you should be able to carry on taking them. Your doctor should talk to you if there's any reason why you can't take them.

During treatment your healthcare team should monitor your condition – for example, your kidney function, heart rate and blood pressure.

Leaving hospital

After your condition has been stable on the recommended treatments for 48 hours, you should be able to leave hospital. You should continue to be cared for by your healthcare team, and be offered a check-up with a member of the specialist heart failure team within 2 weeks of leaving hospital.

Questions to ask about acute heart failure

Finding out what's wrong (diagnosis)

- Can you tell me more about the tests/investigations you've offered me?
- What do these tests involve?
- How long will it take to get the results of these tests?

About your condition

- Can you tell me more about heart failure?
- Is there anything I can do to help my heart get better?

- When should I seek help?
- How can I get help if I need it?
- How often should I have a review or have blood tests?
- Are there any support organisations in my local area?
- Can you provide any information for my family/carers?

Treatments

- Can you tell me why you have decided to offer me this particular type of treatment?
- What are the pros and cons of this treatment?
- What will it involve?
- How will it help me? What effect will it have on my symptoms and everyday life? What sort of improvements might I expect?
- What are my options for taking treatments other than the one you have offered me?
- Is there some other information (like a leaflet, DVD or a website I can go to) about the treatment that I can have?

Medication

- How long will I have to take the drugs?
- Are there any serious side effects associated with these drugs?
- How does a diuretic work?

Side effects

- What should I do if I get any side effects? (For example, should I call my GP, or go to the emergency department at a hospital?)
- Are there any long-term effects of taking these drugs?

Surgery

- Will I need to have an operation?
- What are the risks?
- What is the likelihood of success?
- What will my quality of life be like if the operation is successful? For example, how will it affect my ability to exercise and work?

Lifestyle

- Would it help my condition if I made some changes to my lifestyle, such as becoming more physically active or changing my diet?

For family members, friends or carers

- What can I/we do to help and support the person with acute heart failure?
- Is there any additional support that I/we as carer(s) might benefit from or be entitled to?

Following up on your treatment

- Will I need some help when I get home?
- When should I start to feel better and what should I do if I don't start to feel better by then?

Sources of advice and support

- [British Heart Foundation](#), 0300 330 3311
- [Heart Failure Matters](#), hfmatters@escardio.org
- [Heart UK – the cholesterol charity](#), 0345 450 5988

- [Pumping Marvellous Foundation](#), 0800 978 8133

You can also go to the [NHS website](#) for more information.

NICE is not responsible for the quality or accuracy of any information or advice provided by these organisations.

Other NICE guidance

- [Chronic heart failure in adults: diagnosis and management. NICE guideline NG106 \(2018\)](#)

Update information

November 2021: We replaced our advice about mitral valve surgery and treatment for people with severe aortic stenosis with the [NICE guideline on heart valve disease](#).

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