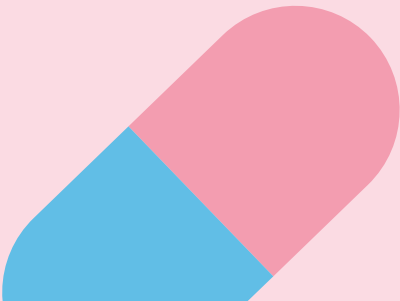


Heart failure

Management of symptoms and treatment





HeartBeat Trust
3 Crofton Terrace
Dun Laoghaire
Co Dublin
A96 K2R5

Telephone: 01 284 5735
Email: hello@heartbeattrust.ie
www.heartbeattrust.ie



Please support HeartBeat Trust

How to support HeartBeat Trust

You can donate today:

- **online:** www.heartbeattrust.ie
- **by post:**
HeartBeat Trust,
3 Crofton Terrace, Dun Laoghaire
Co Dublin
- **by text:**
Text HEARTBEAT
to 50300 to donate €4.
 - 100% of your donation goes to HeartBeat Trust across most network operators. Some operators charge VAT which means that a minimum of €3.25 will go to HeartBeat Trust.
 - Service Provider: LIKECHARITY.
Helpline: 076 680 5278.
 - Please note that donations through text can only be made once every 24 hours.

You can also donate by:

- joining us at our fundraising events or organising your own event in aid of HeartBeat Trust. See our website for more details.

HeartBeat Trust is committed to best practice fundraising. It adheres to the 'Statement of Guiding Principles for Fundraising' which promotes transparency, honesty and accountability.

We promise to hold any personal information you provide us with in line with the Data Protection Acts 1988, 2003 and 2018.

Interested in hearing more?

If you would like to hear about other HeartBeat Trust events, activities, awareness campaigns and appeals, please sign up to our mailing list at www.heartbeattrust.ie



More information

Useful websites:

www.heartbeattrust.ie
www.croi.ie
www.irishheart.ie
www.bhf.org.uk
www.heartfailurematters.org



HeartBeat Trust is Ireland's national heart failure charity (CHY 15938). It supports specialist clinical and research services in heart failure and heart failure prevention.

More information

To access online educational resources for heart failure, please log on to www.heartbeattrust.ie or www.croi.ie. You will find helpful tips and advice from people living with heart failure, their families, doctors, nurses, physiotherapists and dieticians.

If you found this booklet useful, please help HeartBeat Trust to continue to provide heart failure information by donating today.

Heart failure educational resource for patients and carers.

This booklet is based on the guidelines developed by European Society of Cardiology (ESC) and HeartBeat Trust.

Supported by:



Managing heart failure

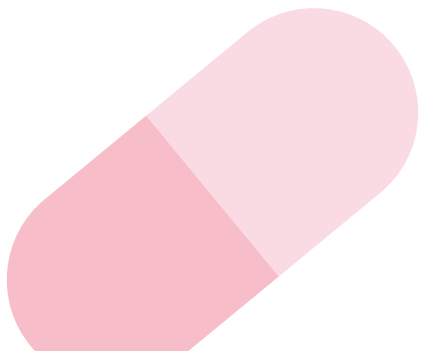
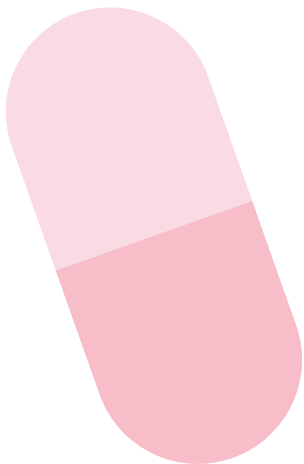
Contents

About this booklet	2
How can I manage my heart failure symptoms?	5
What medicines are used to manage heart failure?	16
Are there other treatments for heart failure?	36
What happens where there is advanced heart failure?	42

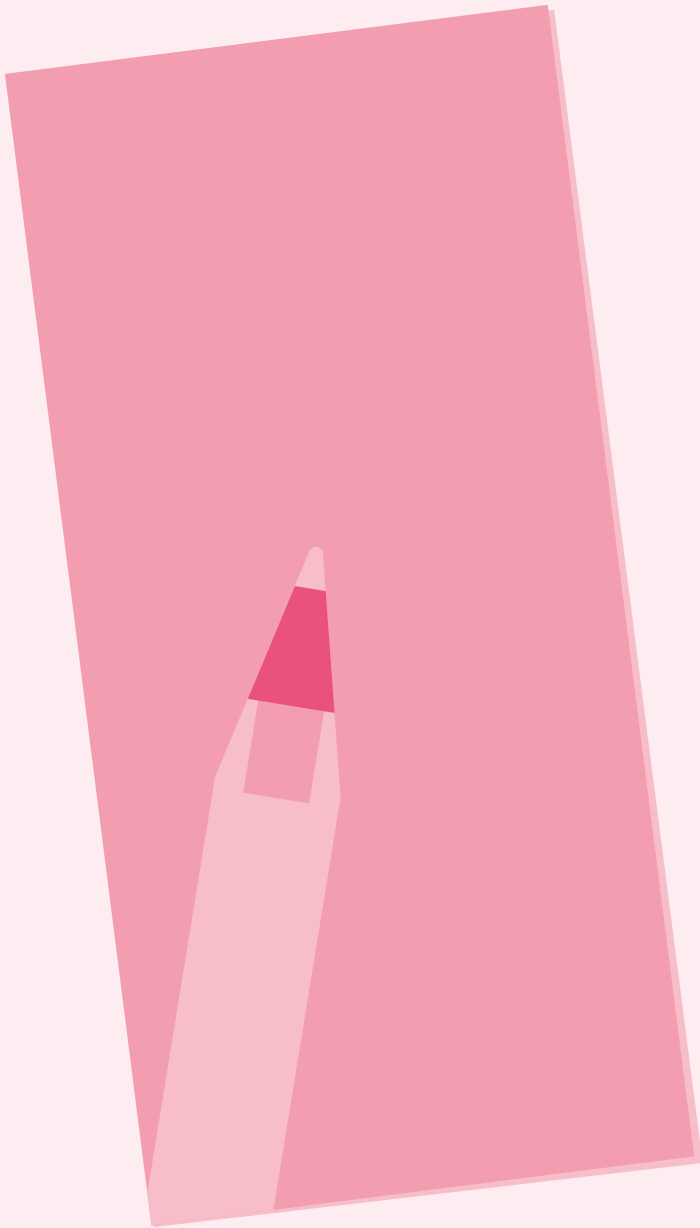
Managing heart failure

About this booklet

Booklet one describes many of the common symptoms of heart failure. These include sudden weight gain, shortness of breath, cough, swollen ankles, loss of appetite and tiredness. This booklet will help you to manage your symptoms and understand your heart medication.







How can I manage my heart failure symptoms?

There is a lot you can do to manage your symptoms. It is a good idea to track your symptoms to see if anything has changed. Each day, ask yourself the following questions:

- Has my weight gone up by 2kg (4lbs) over two days? (Remember to weigh yourself each morning when you get up.)
- Did I use any extra pillows or have any breathing difficulties last night?
- When I put on my socks and shoes this morning, were my ankles swollen?
- Am I looking forward to breakfast? Am I hungry?
- When I did my usual daily activities, was I more breathless than usual?
- Do I feel dizzy or have palpitations (palpitations is a feeling that your heart is beating too hard or is 'fluttering')? If yes, is it worse than normal?

The following tables explain some of the more common symptoms of heart failure, what causes them, what you can do if you experience them, and when you should call your doctor.





My weight has gone up by 2kg (4lbs) or more over 2 days

Usual cause

- Retaining fluid
- Too much salt in your diet
- Infection
- Forgetting to take your medicines
- No obvious reason

Recommendations

If your weight goes up but there are no changes in your other heart symptoms, make sure you are taking your medicines properly.

If you have been told by your heart failure clinic or GP, you can take one extra water pill for two days. Your GP or heart failure nurse will have told you the exact dose to take during your initial heart failure education session. Record that you needed the extra dose in your weight notebook or diary.

If your weight returns to normal after the two days, you need to:

- go back to your usual dose of water pill;
- tell the heart failure clinic or your GP that you needed an extra dose at your next visit;
- reduce your salt intake;
- contact your GP if you think you have an infection.

If your weight does not return to normal after two days:

- contact your heart failure clinic or GP immediately.

If your weight goes up and your heart failure symptoms worsen:

- contact your heart failure clinic or GP before making any changes to your medicines.



I am getting more breathless doing my normal activities

Usual cause

- Retaining fluid
- Irregular heart rhythm
- Infection
- Too much salt in your diet
- Forgetting to take your medicines
- Anaemia (low blood count)

Recommendations

If you are more breathless than usual doing your normal activities:

- contact the heart failure clinic or your GP without delay.



I am getting breathless at rest or waking up breathless during the night

Usual cause

- Retaining fluid
- Irregular heart rhythm
- Infection
- Too much salt in your diet
- Forgetting to take your medicines
- Anaemia (low blood count)

Recommendations

If you wake in the night feeling breathless or gasping for breath:

- take your usual morning diuretic early;
- use an extra pillow or two to prop yourself up.

If these measures work, contact your heart failure clinic or GP in the morning. You will probably have to go to the clinic or see your GP that day.

If your symptoms don't go away or you are very worried, go to your nearest Emergency Department and bring:

- the notebook or diary where you have recorded your weight, and
- your most recent medication list.



My appetite is poor and I feel 'bloated'

Usual cause

- Retaining fluid in the gut

Recommendations

- Contact the heart failure clinic or your GP as you may not absorb your tablets properly if there is fluid building up in your gut.



I have developed a cough

Usual cause

- Side effect of your medicine
- Infection
- Retaining fluid

Recommendations

- Dry cough – tell your heart failure clinic or GP as this may be a side effect of your medication or an early sign of retaining fluid.
- Cough with green or yellow sputum – see your GP as this may be a chest infection.
- Cough at night or coughing up frothy sputum – tell your heart failure clinic or GP as this may be because you are retaining fluid.



The swelling in my ankles has got worse

Usual cause

- Retaining fluid
- Side effect of your medication
- Heat or warm weather
- Recent travel

Recommendations

Check your ankles every morning for increased swelling. Know what is 'normal' for you.

If the swelling gets worse over two days:

- try and keep your legs raised above hip height when lying or sitting.

If the swelling stays or you have gained weight and your ankles are swelling:

- contact the heart failure clinic or your GP.



I'm very tired all the time

Usual cause

- Retaining fluid
- Part of your heart condition
- Other illnesses

Recommendations

- Know what your normal energy levels are like.
- Plan a rest every day.
- Exercise within your limits.
- If you are more tired than normal, review your activities.
- Be aware that tiredness can be related to many other conditions.



I get dizzy a lot

Usual cause

- Low blood pressure
- Irregular heart rhythm including a heart rate that is too fast or too slow
- Side effect of your medicines

Recommendations

- Always stand up slowly especially if you have been sitting or lying for a long time. You might feel a little dizzy after changes to some of your medicines.
- Do not stop taking your medicines unless your doctor tells you to stop.
- If you feel dizzy, stop and rest until you feel better.
- If the dizziness is new or worse than usual, contact your heart failure clinic or GP.
- If you feel faint or very dizzy, contact your heart failure clinic or GP.



**I have palpitations.
My heart feels that it is
beating too hard or too
fast, skipping a beat,
or fluttering**

Usual cause

- Increased heart rate
- Irregular heart rhythm

Recommendations

- If you feel dizzy, stop and rest until you feel better.
- If your palpitations are new, get worse or don't go away, contact your heart failure clinic or GP.



I have pain in my chest

Usual cause

- Angina
- Muscle pain

Recommendations

- If you experience chest pain, stop and rest.
- If you are with someone, tell them you are having chest pain.
- If you have medicine prescribed for your chest pain, take it as directed.
- If the medicine does not work or the pain becomes worse, call the ambulance
- If you get chest pain more often than normal or it is worse than normal, contact your GP or the emergency department.





What medicines are used to manage heart failure?

You will probably need to take several medicines to manage your heart failure. It is important to know and understand your medicines. It is also very important that you take your medicines as directed by your doctor, nurse or pharmacist so that you get the most benefit from them.

The following is a list of the most common heart failure medicines, how they work and some possible side-effects although not everyone gets side-effects. The medicines listed below are also used in other heart conditions.

The first thing to know is that medicines often have two names: a **brand name** (which is the commercial name given by the pharmaceutical company that sells the medicine) and a **generic name** (which is the chemical name of the medicine). In the examples below, we give the generic name.



Diuretics

Examples: Furosemide, bumetanide, (which are called ‘loop’ diuretics) and metolazone hydrochlorothiazide, bendroflumethiazide (which are called ‘thiazide’ diuretics).

What they do: These are often called ‘**water pills**’ because they make you pass urine more frequently and stop fluid from collecting in your body. Diuretics work very quickly and can improve symptoms in a few hours or days.

Side-effects: Low blood pressure causing dizziness, gout, rash and muscle cramps. Cramps may be due to changes in your blood chemistry. You will have routine blood tests to check for changes.

My Medicine

.....

.....

.....

.....

.....

.....

.....





Angiotensin converting enzyme (ACE) inhibitors

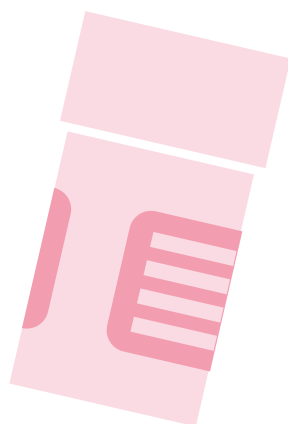
Examples: Enalapril, lisinopril, captopril, perindopril, ramipril

What they do: ACE inhibitors relax or widen blood vessels, lower blood pressure and make it easier for a damaged heart to work. They may improve your symptoms, reduce the need for hospitalisation and help you live longer.

Side-effects: Dizziness as a result of low blood pressure, dry cough, rash.

There may also be changes in kidney function and blood chemistry. These generally do not produce symptoms. You will have routine blood tests to check for changes.

My Medicine





Angiotensin II receptor blockers (ARBs)

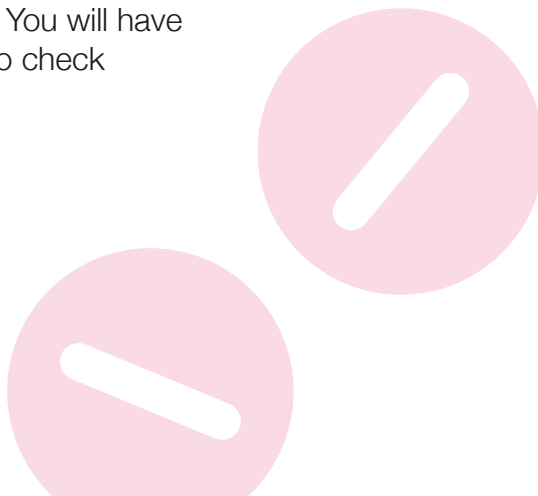
Examples: Candesartan, losartan, telmisartan, irbesartan, valsartan

What they do: ARBs are 'cousins' of the ACE inhibitors discussed above. ARBs have many of the same actions as ACE inhibitors. They may be an alternative for people who can't tolerate ACE inhibitors as they are less likely to cause dry cough.

Side-effects: Dizziness due to low blood pressure, rash.

There may also be changes in kidney function and blood chemistry. These generally do not produce symptoms. You will have routine blood tests to check for changes.

My Medicine





Beta-blockers

Examples: Carvedilol, metoprolol, bisoprolol, nebivolol

What they do: Beta-blockers slow your heart rate and reduce your blood pressure, both of which are important in managing your heart failure.

They may also help to improve heart function and reduce the risk of abnormal heart rhythms. As a result, beta-blockers

may improve the quality of your life, reduce the need for hospitalisation, improve your heart function and help you live longer.

Side-effects: Dizziness, slow heartbeat, tiredness, headache, cold hands and feet, diarrhoea, upset stomach.

My Medicine





Aldosterone receptor antagonists

Examples: Eplerenone and spironolactone

What they do: These medicines block the effects of a hormone produced naturally by your adrenal glands which can cause your heart failure to get worse. They help lower blood pressure and fluid retention.

Side-effects: Dizziness as a result of low blood pressure, upset stomach, diarrhoea, headache, tiredness, enlargement of breasts in men.

There may also be changes in kidney function and blood chemistry. These generally do not produce symptoms. You will have routine blood tests to check for changes.

My Medicine



Ivabradine

What it does: Ivabradine slows your heart rate and lets your heart work more effectively. It reduces the risk of hospitalisation and may improve your quality of life.

Side-effects: Dizziness, slow or irregular heartbeat, headache, temporary changes to your vision with flashing lights.

My Medicine

.....

.....

.....

.....

.....

.....

.....





Angiotensin-receptor neprilysin inhibitors (ARNIs)

Examples: Sacubitril and valsartan in a single tablet is the only form available at present.

What it does: This is a medicine that combines an ARB (see page 19) with a medicine that stops the breakdown of proteins that protect your body. This approach may improve your quality of life, reduce your risk of hospitalisation, and help you live longer.

Side-effects: Dizziness as a result of low blood pressure and headache. There may also be changes in kidney function and blood chemistry. These generally do not produce symptoms. You will have routine blood tests to check for changes.

My Medicine





Sodium-glucose transport protein 2 inhibitors (SGLT2 inhibitors)

Examples: Canagliflozin, dapagliflozin, empagliflozin and ertugliflozin.

What they do: SGLT2 inhibitors allows the kidneys to lower blood glucose (sugar) levels. SGLT2 inhibitors also reduce blood pressure and cause weight loss. They can reduce this risk of death and reduce the risk of hospitalization for heart failure in people with type 2 diabetes.

Side-effects: Low blood sugar, genital yeast infections, pee more often, constipation, kidney problems, low blood pressure.

My Medicine



Glycosides

Examples: Digoxin

What it does: Digoxin is an old drug which is no longer used much. It increases the strength of heart muscle contractions and helps to slow the heartbeat. It is more likely to be given to patients with a heart rhythm problem such as atrial fibrillation.

Side-effects: Upset stomach and bowel disturbance, visual disturbances.

My Medicine



Vasodilators

Examples: Glyceryl trinitrate/ nitroglycerin (patch), isosorbide mononitrate, isosorbide dinitrate, hydralazine.

What they do: Nitrates relax and widen the blood vessels in the body. This reduces the work the heart and makes it less likely that congestion will develop.

Side-effects: Dizziness as a result of low blood pressure, headache and flushing ('hot flushes').

My Medicine

.....

.....

.....

.....

.....

.....







The following is a list of medicines that you may be taking for other heart conditions (such as high blood cholesterol, high blood pressure or angina – chest pain).





Statins

Examples: Atorvastatin, rosuvastatin, pravastatin, simvastatin.

What they do: Statins help lower cholesterol levels in the blood which helps prevent heart attacks and stroke.

Side-effects: Liver problems, diarrhoea, upset stomach. Tell your doctor if you get muscle pain or weakness, or joint pain or weakness.

My Medicine

.....

.....

.....

.....

.....

.....



Anticoagulants

Examples: Warfarin, rivaroxaban, dabigatran, apixaban

What they do: Anticoagulants help prevent blood clots. They are sometimes called 'blood-thinners' although they don't actually make the **blood thinner**. By preventing blood clots, they help to prevent heart attacks and stroke.

Side-effects: Increased risk of bleeding. Tell your doctor if you have a history of bleeding as this may influence the decision to prescribe this medicine for you.

My Medicine

.....

.....

.....

.....

.....

.....





Anti-platelets

Examples: Aspirin, clopidogrel, dipyridamole, prasugrel.

What they do: They prevent the blood clotting cells (platelets) from sticking together. They reduce the chance of a blood clot forming in the blood vessels of the heart and help prevent heart attacks and stroke.

Side-effects: Upset stomach, heartburn, stomach ulcer, bleeding, stroke caused by a burst blood vessel, allergic reaction.

My Medicine

.....

.....

.....

.....

.....

.....



Do these medicines have side-effects?

All medicines can cause side-effects, including those used to manage heart failure. In many cases, these side-effects are mild and only happen when you start taking the medicine or when the dose is increased.

The following section gives the more common side-effects of heart failure medicines and some **tips on how to manage them**. Check with your doctor, nurse or pharmacist if any side-effects continue or worry you, or if you have questions about them.





Dizziness (especially when standing up quickly)

Most heart failure medicines will reduce your blood pressure and may make you feel dizzy especially when you stand up after sitting or lying down.

- If you get dizzy, sit or lie down.
- Stand up slowly. Take your time and allow your body to adjust.
- Your doctor, nurse or pharmacist may advise you to take your medicine before going to bed rather than earlier in the day to prevent dizziness.



Needing to go to the toilet

Diuretics will make you pass more urine.

- Take them at a time of day when you can get to the bathroom easily.
- Try not to take diuretics too late at night because the need to go to the toilet will disturb your sleep.



Dry cough

ACE inhibitors may cause a dry, irritable cough, especially when you first start taking them or when the dose is increased.

If the cough doesn't go away or is bothering you, talk to your doctor, who may decide to stop the ACE inhibitor and prescribe a different medicine (an ARB) instead.



Irregular heartbeat

Many people with heart failure have an irregular heartbeat, but some medicines also cause an irregular heartbeat.

If you notice that your heartbeat is irregular or slower or faster than usual, talk to your doctor or nurse. They may need to check the potassium level in your blood.

How should I manage my medicines?

It is very important to take your medicines at the right time and in the way your doctor has told you. Never stop taking your heart medicines without talking to your doctor first. If you don't take your medicine as directed, it may not work or it may cause harmful side-effects.

There are some medicines that you should not take because they may interact with your heart failure medicines or make your heart failure worse. They include medicines you can buy 'over-the-counter' such as anti-inflammatory pain killers (for example, ibuprofen). Always tell your doctor before you take any over-the-counter medicines.

If you miss a dose of any medicine, take it as soon as possible. However, if it is almost time for your next dose, skip the dose you missed and go back to your regular schedule. **Do not take a double dose.**

If you have trouble remembering to take your tablets, try the following tips:

- Take your medicines at the same time every day (for example, with breakfast).
- Use special pill boxes that help you keep track of your medicines, such as the ones divided into sections for each day of the week. Ask your pharmacist about these.
- Ask your pharmacist to put medicines into daily or weekly packs ('blister packs').
- Ask people close to you to remind you.
- Keep a 'medicine calendar' and make a note every time you take your dose.
- Put a sticker or reminder note on your medicine cabinet or fridge.

Are there any other treatments for heart failure?

There are other treatments for heart failure depending on the type of heart failure. Your doctor will discuss whether any of these are suitable for you.

Coronary artery stents or bypass surgery

If the cause of your heart failure is a significant narrowing of blood vessels (coronary artery disease), your doctor may recommend an angioplasty and stents. An **angioplasty** is a procedure to widen arteries. **Stents** is a procedure where a stainless steel mesh or coil is put into the narrowed artery to keep it open. If this is not possible, **bypass** surgery may be done to help improve the blood supply to your heart muscle.

During a heart bypass surgery, the surgeon uses a piece of blood vessel from somewhere else in your body to bypass around the narrowings or blockages in the heart blood vessels. This means that the blood supply to your heart is restored to normal.

Valve repair

If the valves in your heart are the cause of your heart problems, your doctor may recommend an operation to fix or replace them.

Device therapies

If you have an abnormal heart rhythm, your medical team may decide to put in a **pacemaker** to support your heart. A pacemaker is a device that uses painless electrical signals to keep your heart beating regularly and to improve its function. There are different types.

1. Basic pacemaker

This device consists of one or more leads (thin wires) placed inside the heart muscle and attached to a generator (small box) underneath the skin and muscle usually just under the left collar bone. It works by producing small electrical pulses that cause the heart to beat at a normal rate.

A pacemaker may be recommended if you have a slow heart rate (bradycardia) or irregular heartbeats.

2. Implantable Cardiac Defibrillator (ICD)

This may be recommended if you have a more serious disturbance in your heart rhythm. Like the basic pacemaker, it consists of one or more leads placed in the heart muscle and attached to a generator that is placed underneath the skin and muscle below the left collar bone.

The ICD monitors the heartbeat and if it detects an abnormal rhythm, it sends an electrical signal or 'shock' to the heart to 'reset' the heart rhythm. You would notice a quick 'thump' sensation in the chest.

3. Cardiac resynchronisation therapy (CRT)

This device also consists of a generator (small box) placed underneath the skin and muscle below the left collar bone and attached by one or more leads to the heart muscle. It sends continuous small electrical signals to one or more of the heart chambers to make sure they beat at the same time. A CRT makes the heart pump more efficiently and reduces the pressure inside the heart.

It is also possible to get a CRT and ICD combination device called a **CRT-D**.

Pacemakers are checked often to monitor battery life. Some of them come with a home monitoring system which is usually plugged in at the bedside and the information from the device sent automatically to the clinic.

Left ventricular assist device (LVAD)

This is used for patients with more severe heart failure. The LVAD is a mechanical pump that is placed inside the chest to help the heart pump blood throughout the body. Getting an LVAD involves open heart surgery.

In some patients, the LVAD will be left in permanently. Other patients may have a temporary LVAD while they are waiting for a heart transplant.

Heart transplant

If you are not responding to medication or other treatments, your doctor may consider you for a heart transplant. However, transplants are quite rare. There are only about 15 to 20 done each year in Ireland.

What happens when there is advanced heart failure?

Treatment for heart failure has improved greatly in recent years. However, heart failure is a serious illness and there may come a time when you are no longer able to get better. Your symptoms such as breathlessness may become more difficult to manage. If this happens, your comfort will become the focus of care.

We may ask our colleagues in palliative care – specialised staff who care for patients with serious illnesses – to help us look after you. We aim to relieve your symptoms and provide emotional support for you and your loved ones. We will help you to make decisions about your medical care and make sure your medical team and loved ones understand and respect your wishes. This may include decisions about turning off medical devices and about hospice care.



