

# Living well with *Heart Failure*

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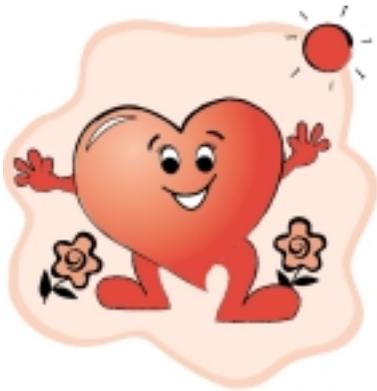
## Introduction

Your doctor will have told you that you have a condition called heart failure. At this stage you, your family and friends may find the name of this condition both frightening and dramatic. However, remember the following important points:

- 1 Your heart is not about to stop!
- 2 Your symptoms will improve with suitable treatment.
- 3 Most people with this condition live active and comfortable lives.
- 4 Heart failure is a very common condition, so you are not alone in fighting this problem. Important developments and improvements have been made in controlling heart failure in recent years. Continued research into this condition will help to make treatment even more effective.

We have written this booklet to explain to you, your family and friends, what is meant by heart failure. It includes information on:

- the causes of heart failure
- it's symptoms
- tests your doctor may carry out
- treatments that may be prescribed
- how this condition affects your day-to-day life
- what you can do to help



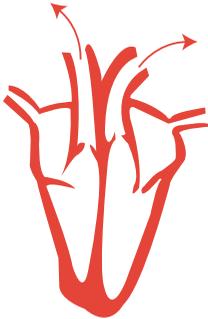
In this book you will find advice on how to manage your symptoms. When you have finished reading the book you will not be as frightened by your condition.

**YOU CAN LIVE WELL WITH HEART FAILURE**

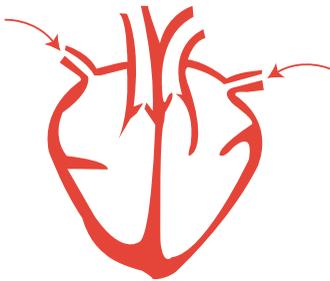
## What is the heart?

The heart is a muscular pump that provides blood for all the other organs in the body to work properly, for example, your brain, kidneys and muscles.

### The heart has two major functions



- 1 It squeezes or pumps blood (the pumping function - produces the heartbeat). This is called systole.



- 2 Between each beat the heart must relax properly so it can fill with blood for the next squeeze (the filling function). This is called diastole.

If something goes wrong with either the pumping or filling part of your heart's work you may get heart failure.

## What is heart failure?

Heart failure happens when your heart doesn't provide as much blood as the body normally needs.

## **What can cause heart failure**

Many different diseases that affect the pumping or filling work of your heart can cause heart failure. Your doctor will try to find out what has caused your heart failure, as this will influence the type of treatment or therapy he or she prescribes.

### **a) Reduced pump function may be caused by the following**

- 1 A weakened heart muscle caused by a heart attack. A heart attack will damage some of the heart muscle. This happens when one of the vessels supplying blood to the heart becomes completely blocked. Coronary artery disease causes the blockage to develop. You may not have been aware of having a heart attack in the past.
- 2 A weakened heart muscle from leaking or narrowed heart valves. Heart valves make sure that the blood flows in the correct direction through the heart. If valves stop working properly (as a result of narrowing or leakage), extra strain will be put on the heart muscle, which will eventually weaken the pump function.
- 3 Long-term high blood pressure that has not been controlled. This can also weaken the heart muscle and reduce pump function.
- 4 No obvious cause. This is the case for as many as 20% to 30% of people with heart failure. In these cases, the cause of heart failure is said to be unknown (idiopathic). A viral infection of the heart or alcohol-related damage to the heart muscle may explain some of these cases.
- 5 Rare causes of heart muscle damage. Sometimes your doctor may investigate some rare causes of heart failure if your general medical condition suggests that these investigations may be useful.

Do not be worried if your doctor cannot find a cause for your heart failure. This does not mean that there will be any change in outlook. Your doctor will also have ruled out the causes mentioned above, which may need specific therapy.

## **b) Reduced filling function may be caused by the following**

- Thickening of the heart muscle, which will affect the way the heart fills-in between heartbeats.
- Narrowing of the blood vessels supplying blood to the heart (coronary artery disease) may also affect how the heart fills.
- A heart getting older. The filling function can become less efficient when the heart muscle stiffens with age.
- Problems with the heart valves. This can cause the heart muscle to thicken and affect the filling function of the heart
- Diabetes mellitus. This is closely associated with heart disease through high blood pressure and the increased likelihood of the blood vessels around the heart narrowing (coronary artery disease). Independent of these effects, diabetes mellitus may also affect the way the heart fills.
- More rare conditions, which affect the way your heart fills with blood. Your doctor will investigate these possibilities if your history suggests that these investigations will be useful.

As with heart failure caused by reduced pump function, it is quite possible that your doctor will not find a specific cause for your heart failure. This should not worry you as therapy is the same once the causes listed above have been considered.

## **Hereditary heart failure**

People with heart failure have concerns that their condition may be hereditary (passed on from generation to generation). As far as we know, only a small number of causes of heart failure are based on genetics

## ***The two main problems associated with heart failure are:***

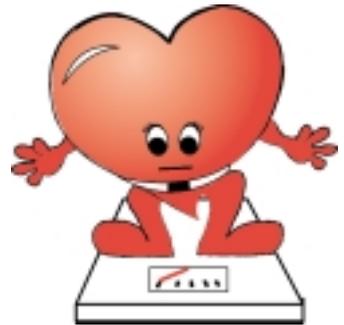
- **fluid retention; and**
- **irregular heart rhythm.**

**It is important that you recognise early signs of fluid retention. To keep well you must learn to detect signs of fluid retention early and contact your heart failure unit or your GP.**

### **Features of fluid retention**

- **Sudden weight gain**

It is important to record your weight every day. A weight gain of two kilograms or four pounds over two days is an indication that your body is retaining fluid. Keeping a record of your weight makes it easier to compare to previous recordings.



- **Shortness of breath**

Fluid building up in your lungs can lead to shortness of breath. Two ways to measure this easily are:

- **Exercising**

A good way to measure your breathing is climbing the stairs. If you can usually walk to the top without stopping, this is your baseline. If you find that you have to stop before you reach the top because you are 'gasping', your breathing is now worse.

– **At rest**

An easy way to measure your breathing at rest is while you are lying in bed at night. If you have to add an extra pillow to the number you usually use it could mean that you have some fluid building up in the base of your lungs. In more severe forms you may wake suddenly from your sleep 'gasping for air' because you felt you were 'slowly drowning'. You should tell your heart failure unit or GP about this as early as possible.

• **Swollen ankles**

Your ankles may swell if fluid builds up because we are on our feet most of the day. If you press your legs with your thumb and it leaves an imprint or a hole, this is usually a sign of fluid retention.

• **Loss of appetite**

Fluid can also build up around your tummy and liver and make you 'feel full all of the time'. When this happens you do not absorb your medication properly and then this can mean you retain more fluid, starting a vicious circle. Some people can experience a tummy upset and feel too ill to eat.

• **Extreme tiredness and loss of energy**

When you retain fluid your heart has to work harder and this causes you to feel extremely tired.

**If your symptoms get worse you should contact your heart failure unit or GP as soon as possible. Drinking water will not cause you to retain more fluid.**



## Symptoms of an irregular heart rhythm

People with heart failure are more likely to have rhythm disturbances in their heart. There are a number of different types of irregular heart rhythms and some are more serious than others. If you are aware of rhythm disturbances, it is important to report it so that it can be investigated.

### Detecting a rhythm disturbance - Palpitations, dizziness and blackouts

Palpitations are when you feel your heart beating fast in your chest, and sometimes in your neck. Sometimes you may also feel short of breath at the same time. Dizziness happens because irregular heart rhythms can cause your blood pressure to drop and can even result in blackouts.

**As with all of your symptoms, the earlier you report them the easier they are to treat and cause you less discomfort.**

## Symptoms related to the cause of heart failure

Sometimes the specific cause of your heart failure can produce heart symptoms that are independent of those symptoms listed previously. The best example of this is angina, which is described as tightness in the chest or throat, discomfort, uneasiness or pain that happens most often when you are doing any activity. This symptom is caused by reduced blood flow to the heart as a result of the blood vessels around the heart narrowing (coronary artery disease).

## Coping with heart failure

While adjusting to this new information, you may say 'How will I cope with all of this?' There are many ways of coping and there is no one correct way. However, some people have difficulty coping and this can start to interfere with your quality of life.

The normal reactions are feelings of anger, sadness, frustration and worries about the future. Many people manage with the help of staff and family to adjust back to normal living. However, a number of people have difficulty adjusting and coping with the changes they have to make in their lives. Look at the following examples and see if they can help you.

## Example 1

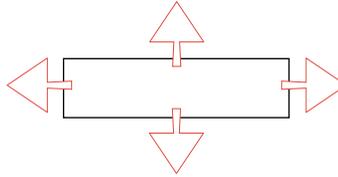
### Tom

#### **Mood**

He feels anxious

#### **Thoughts**

Tom thinks he will never be able to cope



#### **Behaviour**

He has stopped doing certain things

#### **Physically**

He has a pounding heart and sweats even though he's not doing anything

Tom's thoughts are interfering with the way he copes. When Tom stops to examine what's upsetting him he may find that what he's thinking about is causing his stress. These thoughts are affecting his mood and behaviour and giving him bodily sensations that make him feel worse. However, when Tom starts to think in a different way he will get the following response.

## Example 2

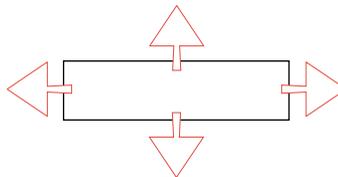
### Tom

#### **Mood**

He feels calm

#### **Thoughts**

Tom thinks he is doing well and learning about his condition



#### **Behaviour**

He is doing what he feels able to do

#### **Physically**

He has no unusual physical sensations

Tom has found what is causing his problems and now finds he can cope and learn to live with his heart failure. He gets on with doing lots of pleasurable and

enjoyable things. He has stopped reminding himself of what he cannot do and realises there are lots of things he can do.

For a smaller number of people things may feel out of control and they feel anxious or depressed a lot of the time. If this happens to you please tell your family, friends, doctors or nurses. Help is available.

## ***What will my doctor do to investigate heart failure?***

The diagnosis of heart failure is based on the information the doctor gets from asking you questions and from what he or she finds when they examine you. Then your doctor will order several tests to confirm the diagnosis and to search for a cause of heart failure.

### **Questions**

The questions your doctor will ask you will focus on your symptoms to try and assess how serious these complaints are.

For example, if you report feeling breathless, your doctor will ask questions to see how this symptom is interfering with your day-to-day activities. Does the breathlessness prevent you from doing your job, managing your home or going to the shops? Are you breathless even when you don't do strenuous activity such as walking up the stairs? These questions will assess how serious the symptom is as well as acting as a starting point against which the effectiveness of your therapy can be assessed.

Your doctor will also ask you questions to find a cause for your heart failure. These will include a thorough review of your health in the past and the health of your family as well as questions on your personal habits, particularly cigarette smoking and drinking alcohol.

## Examination

The physical examination will start with a check of your blood pressure and pulse rate. The doctor will also closely examine your neck as there are blood vessels in the neck, which will show any signs of congestion. He or she will also listen closely to your heart and lungs to check for valve problems, and again look for signs of congestion.

## Tests

When the questions and physical examination are complete, your doctor will do several tests to confirm the diagnosis and search for a cause of the heart failure.



### Blood tests

Basic tests will be done to make sure that your blood is normal (called a normal blood count) and to check that your kidneys are working properly. If your kidneys are not working properly, this may be a sign that you have more severe heart failure and can restrict the use of certain medication. Blood tests to look at liver function will also be carried out, as these can be abnormal if liver congestion is present. Occasionally a blood test called BNP will be checked. This can help the doctor or nurse decide how your condition is progressing.



### Chest x-ray

This is a very important test as it provides information on the size of the heart (remember it can be enlarged in heart failure) and whether there is any lung congestion. It is also useful to check your lungs for some other problem, which could be causing some of your symptoms, especially breathlessness.



### ECG

This is a recording of the electrical pattern of your heart. It can provide important information about the rhythm of your heart (some people with heart failure develop an irregular heart rhythm called 'atrial fibrillation'). It can also give hints about any previous history of heart attacks (interestingly, not all people are aware of having a heart attack in the past).

## Echocardiogram

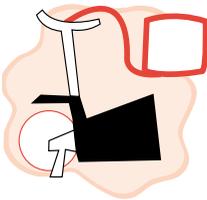


This is a heart scan, which allows your doctor to look at how your heart pumps and fills. It is an important assessment of someone with heart failure for several reasons. This scan is performed by simply placing a probe on your chest (it is a similar

test to one used to scan babies before they are born). You may feel pressure on your chest as the technician tries to get the best possible picture.

- It will differentiate between people with an abnormal pumping function of their heart and those with a normal pumping function and reduced filling function.
- An echocardiogram is also the best way of looking at the heart valves and may provide important information on valve problems that have been missed or underestimated during an examination.
- Like the ECG it can also provide information on previous heart attacks by showing areas of dead heart muscle.

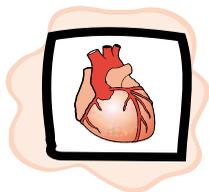
## Exercise test



This is a treadmill or stationary bike test designed to assess your ability to do exercise. It is also used to check for coronary artery disease, one of the causes of heart failure. During this test your heart rhythm will be monitored by an ECG (see above) and a technician or doctor will ask you how you are feeling as you exercise. Occasionally, a more elaborate test will be performed which will look at how your lungs are working

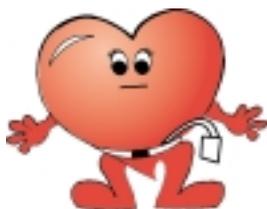
during the exercise test. The only difference from the normal exercise test is that you will need to wear a mouthpiece so the doctor can measure how much oxygen you need when you exercise.

## Heart scan



Two types of heart scan are used for people with heart failure. A 'MUGA' scan looks at the pumping and filling functions of your heart and involves injecting a small amount of radioactive material into your bloodstream. A thallium scan, done with or without exercise tests, is more accurate in tracing the blood flow around your heart. This test involves an injection of a small amount of radioactive material, which, like the 'MUGA' scan is not a risky test.

## Holter monitor

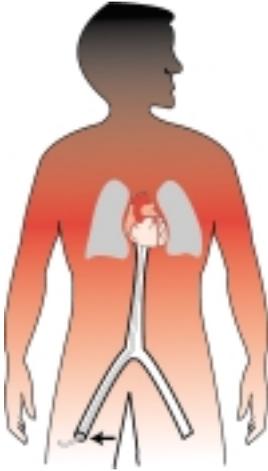


This is a recording of your heart rhythm over a period of 24 or 48 hours. It is done by attaching a monitor around your waist that is hooked up to leads placed on your chest. This test can provide important information on rhythm control in your heart. It is often ordered for people with heart failure who have complained about dizzy spells or blackouts where rhythm disturbances are suspected.

## Blood pressure monitor

This is often called ABPM (ambulatory blood pressure monitor) and is a recording of your blood pressure over a period of 24 hours. It is done by placing a blood pressure cuff on one arm, which is attached to a monitor placed on a belt at your waist. The blood pressure cuff inflates every half-hour for 24 hours. The information is stored in the monitor and transferred to a computer when the monitor is removed. This test is ordered to make sure your blood pressure is properly controlled with your medication.

## Heart catheterization and angiography



This is a test where fine tubes are inserted into the groin area or arm following a local anaesthetic. These tubes are guided, using x-rays, to your heart where the blood vessels supplying blood to your heart can be seen to assess whether any blockages or coronary artery disease could be causing heart failure. The pumping function of your heart can also be assessed during this test, and a small tube placed in the blood vessels in your lungs to assess the congestion. This test is only done in larger heart centres, and you may need to stay in hospital for at least one night.

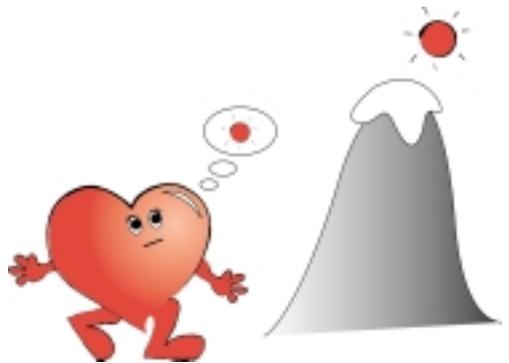
Remember, you will need some or perhaps all of the tests above at some stage to help you manage your condition.

The tests can all be performed with little or no risk to you. They provide important information for the people looking after you about how serious your heart failure is and clues to the cause of the condition.

## **Treating heart failure**

Treating heart failure is directed at:

- reducing your symptoms and maintaining that improvement;
- preventing the heart function from getting worse; and
- helping you live longer



To achieve these aims, effective therapy needs a good partnership between you, your family or friends and the heart failure team.

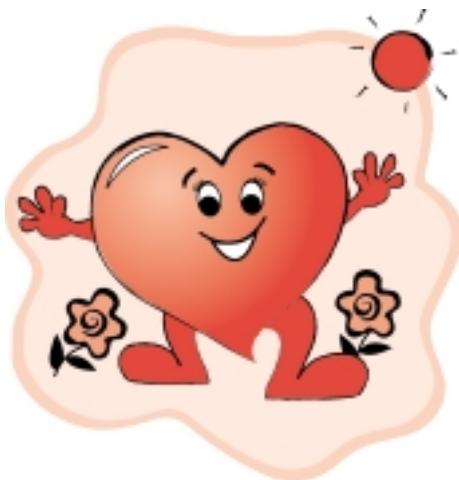
**Therapy can be divided into the following three categories.**

- 1 Lifestyle factors**
- 2 Medication**
- 3 The need for an operation**

## **1 Lifestyle Factors**

### ***Exercise and heart failure***

Heart failure not only affects your heart, it also affects your muscles and how the blood is pumped around your body. You may be getting cramp or feeling tired. Exercise will reduce these feelings and help your body work more efficiently.



If you are exercising, you need to take it slowly at the beginning and then work up your time and speed as you feel better. These are some guidelines for you to follow.

### ***Frequency***

You should aim to exercise five days of the week. Try not to take your two days off together, as it will be harder to return to exercise on day 3.

### ***Intensity***

It is important that you are able to talk at the same time as you are exercising or doing any activity. This means your body is able to cope with the activity. If you

are not able to talk it means your body is not working efficiently and your heart has to work a lot harder. Of course if you are out for a stroll you will be able to talk at the same time but you won't get all of the benefits. The correct level is that you are able to talk but not able to sing. Remember that the exercise will be harder if it is hot, cold or windy. You will need to slow down your activity to cope with this.

### *Type*

A combination of aerobic exercise and gentle weight training is best. This includes walking, swimming and cycling. It is important that you speak to your doctor about weight training, he or she will tell you what is best for you.

### *Time*

Ideally you should exercise for 30 minutes continuously. Start with just 5 or 10 minutes and gradually increase up to 30 minutes in about six to eight weeks. Start off slowly to allow your body to adapt to the new activity and gradually increase the pace. You should start to slow down gradually for the last 10 minutes. Avoid exercising after heavy meals when your heart has to use energy to help your body digest food.

### *Points to remember*

People with heart failure will benefit from regular physical activity and regular rest. You should remember the following.

- You should avoid sudden bursts of activity.
- Try to find something physical activity you enjoy, as it will be much easier for you to do regularly. If you are not sure about exercise, you should talk to your doctor or nurse who will advise you what level is good for you.
- Do not feel that you have to exercise when you are tired.
- Avoid exercise for 1½ hours after a meal. This allows your body time to digest your food and you will gain more benefit from the exercise.
- Combine rest periods during the day with periods of activity. To make sure you get a good night's rest, do not take diuretics (water tablets) at night, do not use

pillows to prop yourself up if you tend to have breathing difficulties at night and do not eat a heavy meal just before bedtime.

- Your doctor and nurse specialist will give you advice about the activities that are suitable for you to do.

## ***Sexual activity***

Heart failure may alter some aspects of your sex life. Your desire for sexual activity may be reduced, especially during periods when you are not feeling well. Also, some of the medication prescribed for people with heart failure may reduce sexual drive and cause impotence. If you experience any of these symptoms, you should discuss them with your doctor or nurse specialist.

## ***Healthy eating***

A balanced healthy eating plan is one of the important lifestyle factors for people with heart failure.

It is important to eat a wide variety of foods and to reduce the salt in your diet. You need to follow a low-salt eating plan because the more salt you eat, the more likely it is that fluid will build up in your body. Any build-up of fluid in your body will make your condition worse and make you feel unwell.

You should get dietary advice specific to your needs from a dietitian or a nurse specialist.

## ***Helpful tips for a healthy low-salt eating plan***

- Choose a wide variety of foods.
- Try to follow any specific advice that you have been given.
- Reduce the amount of salt you use in cooking and at the table.
- Flavour your food with pepper, herbs, spices, garlic or lemon juice instead of adding salt.
- Include plenty of fruit and vegetables - aim for five or more servings everyday.

- Try not to eat too many ready-meals, canned, tinned and processed foods.
- Eat oily fish (such as salmon, mackerel, trout or herrings) once or twice a week.
- Avoid foods that are high in salt – salty meats, tinned or packet soups, salted snacks such as crisps, ketchups and processed sauces.
- Use low-fat foods as much as possible.
- Always check before using ‘salt substitutes’ as they can have side effects. Try to use other flavourings instead.
- Check labels on foods to see how much salt or sodium they contain and choose food that has less salt in it.
- Try to eat as much fresh food as possible.

***Heart failure can sometimes cause a reduction in appetite. If you lose weight without meaning to, or if you notice that your appetite is not as good as usual, it is important that you ask the nurse specialist at the clinic to arrange an appointment with the dietitian for you. You will then get specific dietary advice.***

## ***Monitoring your symptoms***

It is important that you monitor your heart failure symptoms every day and take action when you notice any deterioration.

Your nurse will teach you the important symptoms to look out for and they are described in this book to help remind you. You can monitor your condition easily by taking note of everyday activities.

### ***Here are some helpful tips to do this.***

- Recording your weight  
Keep your weight book next to the weighing scales in the bathroom. When you wake up each morning, after going to the toilet stand on your scales and write your weight in your booklet. You should weigh yourself at the same time of day with the same amount of clothing. Take a look back at the previous recordings

to check if you have put on weight. Sudden weight gain (two kilograms or four pounds over two days) are an early sign of congestion and should be reported to your nurse or doctor. Treating early congestion is usually quick and easy and prevents more serious symptoms developing.

- **Checking for Swollen Ankles**

As you are putting on your socks or tights in the morning, check your ankles as your nurse has shown you (press your legs with your thumb – if it leaves an imprint or a hole there may be fluid). Swollen ankles may mean that fluid has built up.

- **Measuring your breathing**

An easy way to measure your breathing is taking note while climbing the stairs. If you can normally get to the top of the stairs without having to stop to catch your breath, use this as your measurement. If you find that you have to stop because you are 'gasping' this may mean that there is some congestion.

Remember, treating early congestion is usually quick and easy and prevents more serious symptoms developing.

Alternatively, if you are not able to climb the stairs, you can measure your breathing while you are dressing. If you notice you have to stop and rest while you are getting dressed in the morning, this may mean that fluid is building up.

You can also measure your breathing in bed. If you find that you have to place an extra pillow behind you at night to make your breathing easier it may be a sign that fluid is building up in your lungs.

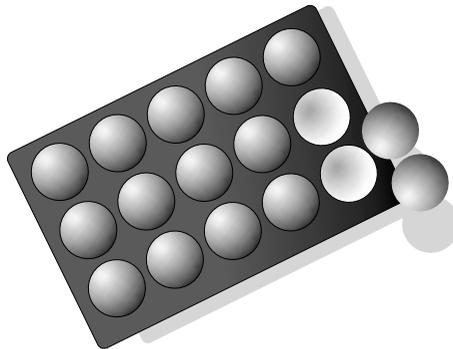
It is more serious if your breathing causes you to wake during the night 'gasping'. You should always contact your nurse or doctor the next morning if this happens.

## 2 Taking your medication

Taking your medication regularly is very important. You will be given some useful advice on how to remember to take your medication. For example, you can:



- make an easy-to-follow schedule
- keep a copy of this schedule with you at all times, for example, in your wallet or handbag
- take your medication when you do other daily activities such as having breakfast – make sure you know whether to take medication with food, on an empty stomach or at any specific time
- know what each pill is, what it does, what it looks like and what you should do if you accidentally miss a dose
- make sure you do not take other non-prescribed medication without your doctor being aware. Some medication can make your heart failure worse.



**If you miss a tablet for some reason, you should not automatically take extra tablets the next day.** Remember that if you are not sure about your medication or have any questions, ask your pharmacist, nurse or doctor.

## **Most common medication or tablets used**

*(Most medicines have two names)*

### **Diuretics (water tablets):**

*Common forms used: lasix (frusemide), burinex (bumetamide), metolazone (zaroxolin), spironolactone (aldactone), frumil, buram, inspira (eplerenone)*

#### **Why are they used?**

Congestion is the basis for many of the symptoms of heart failure, whether it involves your lungs making you feel breathless, your abdomen making you feel bloated or your legs causing swollen ankles.

Diuretics reduce congestion in all these areas by increasing the amount of water and salt the kidneys produce. These pills work very quickly and can make your symptoms better in a few hours or days. Sometimes diuretics can also be given as an injection. Diuretics will make you pass more urine so you should take them at a time of day when you get to the bathroom easily. Avoid taking diuretics too late at night because the need to go to the toilet will disturb your sleep.

#### **Are there any problems to watch out for?**

The most commonly described diuretics cause potassium loss, (but spironolactone, frumil, buram and inspira can cause your potassium level to rise), which can be a particular concern in heart failure because low potassium levels can cause the rhythm of your heart to change. For this reason, a potassium check will be done soon after you start taking diuretics (two or three days) and you will be told to change your diet to one that is high in potassium (bananas and potatoes). Or, potassium tablets may be prescribed or diuretics may be combined with medication known to preserve potassium. Occasionally diuretics can cause gout, and if you pass urine very often, low blood pressure and dizziness may develop as a result of fluid loss. Spironolactone can cause painful enlargement of the breasts in up to 10% of patients.

## Angiotensin converting enzyme inhibitors (ACEI)

*Common forms used: coversyl (perindopril), tritace (ramipril), zestril (lisinopril), capoten (captopril), innovace (enalapril), accupro (quinapril), odrik (trandolapril), vasace (cilazapril), cibacen (benazepril).*

### **Why are they used?**

This class of medication, most easily referred to as ACEI therapy, has produced a significant development in managing heart failure associated with the poor pumping function in the heart. Patients with heart failure live longer as a result of this medication. Symptoms may not improve for several weeks after starting the medication.

ACEI therapy is also used to manage high blood pressure and may be particularly useful in reducing thickened heart muscle associated with this condition. For this reason, ACEI therapy may also be effective in heart failure due to poor filling as a result of high blood pressure.

### **Are there any problems to watch out for?**

In general the ACEI medication is very effective. Some people experience dizziness during the early phase of therapy as a result of a drop in blood pressure. But this problem becomes less of an issue with extended therapy as a result of your body adapting to the therapy. About 5% to 10% of people on this therapy develop a dry cough. If this becomes a problem, your doctor can switch to a different form of ACEI therapy or try a completely different form of medication.

## Digoxin

*Common form used: lanoxin (digoxin)*

### **Why is this medication used?**

This medication has been used to treat heart failure for over 200 years and is known to increase the strength of contraction of weakened heart muscle. Recent information has shown that it definitely improves wellbeing in people with heart

failure and reduced pump function but is not suitable for people with heart failure due to the heart not filling properly. The other role of digoxin in heart failure is when the condition is complicated by problems of heart rhythm. Digoxin can prevent the heart from beating too quickly.

### ***Are there any problems to watch out for?***

Too much digoxin in your body can make you feel sick. Occasionally your doctor may take a blood sample to monitor how much digoxin is in your blood.

## **Beta blockers**

*Commonly used forms: eucardic (carvedilol), cardicor/emcor (bisoprolol), betaloc (metoprolol), nebilet (nebivolol)*

### ***Why are they used?***

This medication had been widely used to treat many heart problems including high blood pressure, angina and abnormal heart rhythms. For many years it was thought that they should not be used in people with heart failure and poor pump function as one of their actions is to reduce the function of the heart pump. However, new studies strongly suggest that when started in very small doses and gradually increased, these agents can improve symptoms of heart failure and make the heart stronger in the long term. Recent well-designed trials have shown that people who are given beta blockers live longer. At the moment it is not clear whether this applies to all beta blockers (of which there are many) or whether it applies only to specific beta blockers such as carvedilol, bisoprolol and metoprolol.

### ***Are there any problems to watch out for?***

Sometimes people may complain of dizziness, extreme tiredness, increased breathlessness and reduced energy. However, these effects can often be prevented by reducing the dose of other medication such as diuretics. These difficulties will normally pass as you continue your therapy. If not, your doctor may decide not to give you this form of treatment.

## Nitrates and hydralazine:

*Common forms used - Nitrates: imdur (isosorbide mononitrate), elantan (isosorbide mononitrate), transiderm nitro (glyceryl trinitrate – GTN)*

### **Why is this used?**

This medication is known to be effective in improving symptoms. Nitrates are effective in treating angina. Angina can be an accompanying symptom in heart failure if caused by coronary artery disease so nitrates may be used to treat it. Nitrates can be given in tablet form or as a patch applied to the skin.

### **Are there any problems to watch out for?**

Nitrates can cause a headache and flushing which often goes after a few days.

## Angiotensin II receptor blockers

*Common forms used: atacand (candesartan), cozaar (losartan), diovan (valsartan), approvel (irbesartan), teveten (eprosartan), micardis (telmisartan)*

### **Why are they used?**

These are fairly new agents, which have recently been used to manage heart failure. However, we do not have as much information on their effectiveness in this condition with ACEI therapy. They are similar to ACEI therapy, and it is likely that they will prove to be a useful therapy for people with heart failure. At this stage they are used in people who cannot have ACEI therapy or who remain unwell on ACEI therapy.

### **Are there any problems to watch out for?**

One of the strengths of these tablets is that they do not have many side effects.

You may also be taking medication that is not listed above and, as always, you should ask your doctor or pharmacist for information on these and all other medication. Remember, never hesitate to ask questions.

### **3 Will I need to have an operation?**

Sometimes your doctor will decide that an operation can improve your symptoms and help treat the cause of your heart failure. Some of the most common types of operations are listed below.

- **Coronary artery bypass surgery and angioplasty**

Both of these operations are used to manage narrowed or blocked vessels around the heart caused by coronary artery disease. This disease is the most common cause of heart failure, and when tests such as exercise testing and angiography suggest that you will benefit from having your blood supply restored, your doctor will recommend either of the above operations.

- **Valve replacement**

If one of the heart valves has been shown to be either significantly narrowed or leaking (or both), heart failure may improve with surgical replacement of the damaged valve.

- **Heart transplant**

If you are not responding to medication or the operations described previously, your doctor may consider that you need a heart transplant.

- **Pacemaker implant**

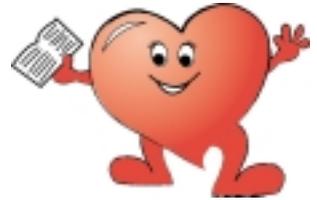
There are two types of pacemaker that help manage heart failure. One form, called 'bi-ventricular pacing', can improve heart failure in some people. Another form, called an implantable cardioverter defibrillator (ICD), helps manage abnormal heart rhythms.

### **Research development**

There are promising developments on the horizon for managing this condition. Your doctor may ask you to consider enrolling in a research study. Do not feel that you have to take part, but it is through these necessary steps that effective treatment strategies are developed, such as the ones you are now receiving.

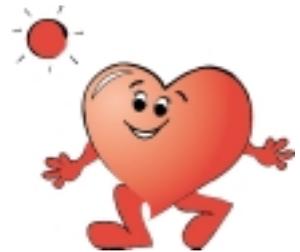
## Important things for you to do

- Take control of your condition and how it is managed. Learn about heart failure and understand your particular treatment.



- Keep a list of your medication and understand what each one does and when you should take them.

- Stick closely to advice about exercise and diet.
- Keep in close contact with your doctor, nurse specialist, pharmacist and dietician, and do not hesitate to ask questions.



- Monitor your symptoms every day. Let your doctor or nurse specialist (or both) know about any changes.
- Report worsening symptoms early to make sure you get quick treatment and prevent more severe deterioration.

## Summary Points

- Heart failure is a common condition with many different causes.
- Common symptoms include feeling breathless and extremely tired.
- Tests can show the cause of your heart failure and how severe it is.
- In some cases there may not be a specific reason for your heart failure and this is not a cause for concern.
- Treatment will try and correct the main cause (if there is one). Treatment will also involve standard medication and advice about your lifestyle, including diet, physical activity and so on. Occasionally operations will be needed.
- You and your family should take an active role in dealing with your heart failure as this has been shown to improve responses to treatment.
- Treatment will almost always result in a significant improvement in your wellbeing, which is most easily maintained if you continue to follow the lifestyle advice and take your medication as discussed with your doctor, nurse specialist, pharmacist and dietician.
- Weighing yourself every day is a crucial part of dealing with heart failure, as minor weight gain can be an early warning that congestion is developing. If you and your doctor can spot this early enough, it can be easily treated so you do not have to go into hospital unnecessarily.

Living well with heart failure is an Irish Heart Foundation patient information publication. Other titles in this series are

- Stroke, a guide for patients and carers
- Things you should know about blood pressure
- Things you should know about heart surgery
- Heart attack
- Step by step through cardiac catheterization and angioplasty
- Step by step through angina
- Inheriting heart disease

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