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## **HEART FAILURE - a patient's guide**

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### **What is heart failure?**

Other names: Congestive heart failure

Normal

Your heart is a muscle pump that delivers blood to the body each time it beats.

Abnormal

If your heart fails to pump properly, fluid may back up in your lungs and ankles. This causes breathing difficulty and ankle swelling.

There are two forms of heart failure. The most commonly recognised form is caused by the heart filling normally but being unable to adequately pump blood around the body (systolic heart failure).

In 'diastolic' heart failure the heart is too stiff to fill sufficiently with blood.

### **Causes**

Many conditions may damage heart muscle and cause heart failure. In many countries the commonest cause is damage due to heart attacks (myocardial infarctions). Other causes include damage by high blood pressure, heart valve problems, viruses (dilated cardiomyopathy) or in South America, trypanosome infection (Chagas disease).

### **Risk factors**

Genetics: Occasionally heart failure runs in families and the reasons for this are not well understood.

Gender differences

### **What symptoms may I expect?**

You may experience difficulty breathing (especially when lying down). Other symptoms may include ankle swelling, tiredness and faintness.

### **What will the doctor look for?**

The doctor will ask about your symptoms and examine your heart and lungs.

### **What tests will the doctor consider?**

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The doctor will order a chest X-ray to look at your heart size and any excess fluid on the lungs, and an electrocardiogram to examine your heart rhythm. Possibly you will also have an echocardiogram, an ultrasound examination that shows how well your heart is pumping. In some cases cardiac catheterisation will be performed to further investigate the pump function of the heart (right heart catheterisation) and to see if you have coronary artery blockages (coronary angiography).

Sometimes it is difficult for the doctor to tell if your shortness of breath is due to a heart or a lung problem. Therefore lung function tests may also be required.

### **What treatment options are available?**

#### Natural history

Years ago, the outlook for patients with heart failure was not very good. However, we now have excellent treatments available that improve life expectancy. We also now recognise and treat milder and earlier forms of heart failure, which have a better outlook.

#### Lifestyle

A low salt diet will help reduce water retention, improving breathing and leg swelling.

A healthy diet low in fat will help weight loss which is very beneficial if you are overweight.

### **Drug treatment**

#### Diuretics

Diuretics help your kidneys excrete the excess water that builds up. The correct dose is judged by regular measurement of body weight and by improvement in breathlessness and ankle swelling.

#### Angiotensin converting (ACE) inhibitors

These medicines have been proven to improve symptoms and life expectancy. They are started at a low dose and gradually increased, because they may drop blood pressure and cause dizziness. Some patients experience a dry cough as a side effect.

A related medicine has recently become available in some countries; the angiotensin II receptor blockers. These are likely to have similar beneficial effects to ACE inhibitors but long term studies have not yet been completed.

#### Digoxin

This age-old medicine is derived from the foxglove plant. It is very useful when abnormal rhythm (atrial fibrillation) is associated with heart failure. It slows the heart and improves the pumping ability. Even when the heart rhythm is normal it may make you feel better and

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thus be worth taking. Side effects of nausea and loss of appetite are uncommon when the correct dose is taken.

Beta blockers

Beta blockers have recently been shown to improve life expectancy in some cases of heart failure only. However, these medicines are difficult to use, and should only be commenced cautiously and under close supervision.

### **Surgery or other intervention**

Some patients with heart failure will feel better and live longer if they undergo coronary artery bypass grafting or even heart transplantation. Other new procedures are being evaluated, such as ventricular reduction surgery ('Batista' procedure) and inserting a permanent pacemaker.