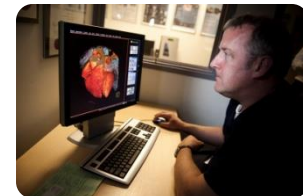


Heart failure

An overview

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What is Heart failure?

Heart failure is a condition where the heart does not pump blood around the body as efficiently as it used to.

**This can occur suddenly such as after a heart attack,
or develop more slowly**

Severity of symptoms vary from person to person

It is a lifelong condition

- **it is generally not curable and can shorten life**



Common symptoms



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Symptoms of Heart Failure:

- **Breathlessness, particularly on exertion**
- **Fatigue (unusual tiredness)**
- **Swelling of feet, ankles, legs and abdomen**
- Trouble breathing when lying down
- Waking up breathless at night
- Feeling less mentally alert
- Cough
- Weight gain
- Reduced mobility



Causes:

- Previous heart attacks
- High blood pressure
- Narrow or leaking heart valves
- Excessive alcohol intake
- Infection
- Diseases affecting the heart muscle (cardiomyopathies)
- Abnormal heart rhythms
- Some types of chemotherapy
- Anaemia
- Thyroid problems
- Lung disease
- An ageing heart



Some figures


Heart disease is the biggest killer in the UK

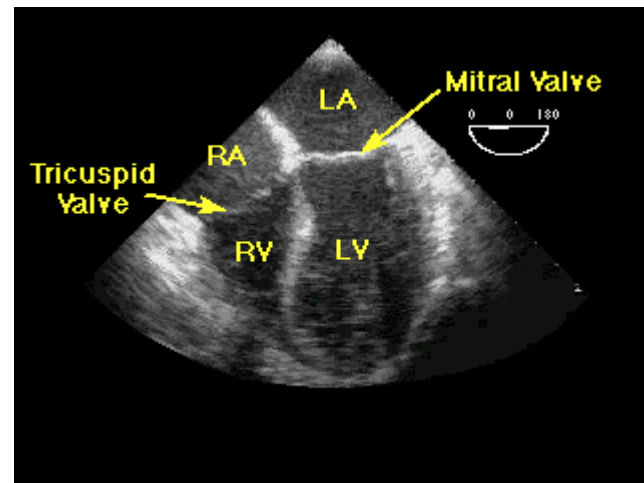
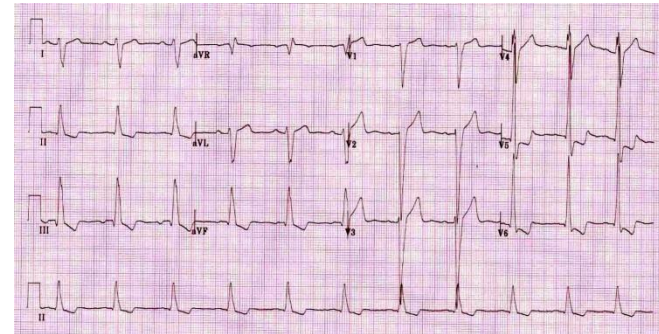
“900,000 people in the UK have heart failure, almost as many again have damaged hearts but no symptoms of heart failure”. NICE (2010)

Leading cause of hospitalisation for those people age 65 or over
(NICE, 2014)

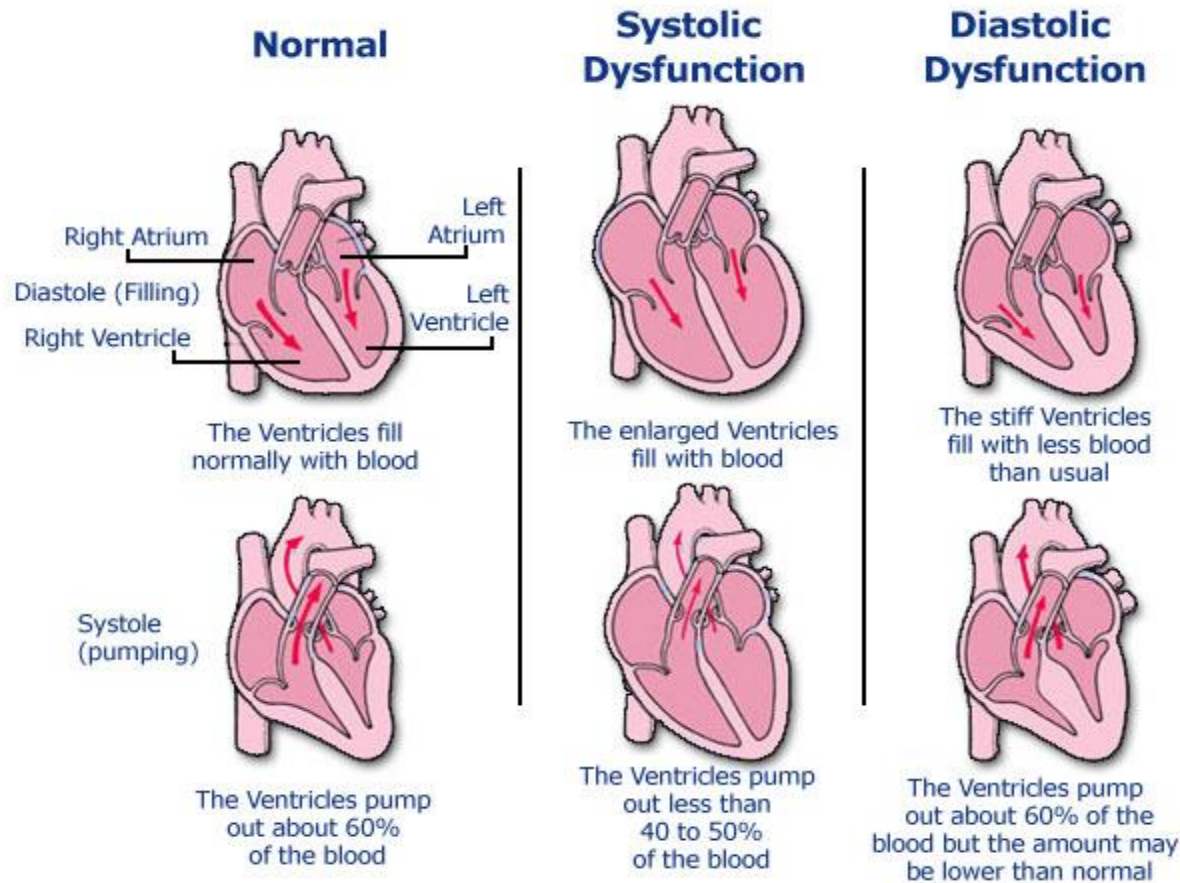
5% of 75 yr olds are affected increasing steeply with age.
(NHS improvement quality 2014)

Investigations

- Blood tests
- ECG
- Chest X-Ray 
- Echocardiogram
(ultrasound scan of heart)



Types of heart failure



Types of heart failure

- **Heart failure** with left ventricular systolic dysfunction or **reduced ejection fraction**

Where the main pump of the heart (left ventricle) is weak
= **pumping problem**

- **Heart failure** with diastolic dysfunction or **preserved ejection fraction**

the left ventricle becomes stiff which makes it difficult for the heart chamber to fill with blood

= **filling problem**

- **Heart failure due to diseased or damaged heart valves**

Main aims of treatment

- Reduce symptoms
- Improve exercise tolerance
- Reduce need for hospital stay
- Improve quality of life
- Help people live longer



Medication

- **ACE inhibitors**

- Reduce workload of the heart

- Reduce symptoms of breathlessness

- Reduce hospitalisation

- Improve quality of life

- Slow down progression of heart failure

Side effects – cough, dizziness, renal impairment

Examples- Ramipril, Lisinopril, Enalapril, Trandolapril

- **Alternative- Angiotensin II antagonist**

Examples – Losartan, Candesartan, Valsartan

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Medications

- **Beta blockers**

- Slow heart rate

- Reduce workload of the heart

- Help to prevent heart rhythm problems

- Reduces mortality

Side effects - dizziness, headaches, GI complaints,
numbness of extremities

Not to be given to Asthmatics

Examples - bisoprolol, carvedilol

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Medications

- **Diuretics (water tablets)**

Help kidneys get rid of excess fluid by increasing production of urine

Help reduce ankle swelling

Help reduce breathlessness

Loop diuretics

- Furosemide
- Bumetanide

Thiazide diuretics

- Bendroflumethiazide
- Metolazone

Each dose lasts about 4-6 hours

Side effects- renal impairment, reduced potassium

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Medications

- **Aldosterone antagonists**

- Help in prevention of fluid retention

- Help retain potassium

- Slow down progression of heart failure

- Improve survival

- Reduce hospitalisation

Side effects – high blood potassium, renal impairment, GI disturbances
swelling of breast tissue

Examples – Spironolactone, Eplerenone

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Other medications

- **Ivabradine** (relatively new medication)
 - Slows heart rate (not for those with atrial fibrillation)
 - Reduces mortality

Side effects - visual disturbances

- **Digoxin**
 - Indicated in atrial fibrillation
 - Slows down and strengthens heart rate
 - No improvement in mortality



Upcoming medications

- Entresto



Sick Day Rules

Medicine Sick day rules

IMPORTANT: When you are unwell with any of the following:

Vomiting or diarrhoea (lasting for 12 hours), fevers, sweats, shaking

Then **STOP** taking the medicines listed here. Restart when you are well (after 24-48 hours of eating and drinking normally).

If you are in any doubt, please contact your pharmacist.

ACE Inhibitors: Medicine names ending in 'pril' eg **lisinopril, perindopril, ramipril,trandolapril**

ARBs: Medicine names ending in 'sartan' eg **losartan, candesartan, valsartan**

Diuretics: Sometimes called 'water pills' eg **furosemide, bumetanide, spironolactone, indapamide, bendroflumethiazide, eplerenone**

NSAIDs: Anti-inflammatory pain killers eg **ibuprofen, diclofenac, naproxen**

Other treatments

- ICD's
- Cardiac Resynchronisation Therapy (CRT)
(or Biventricular pacemaker)
 - paces both left and right sides of heart to synchronize or coordinate the contractions of the heart muscle during each heart beat and improve cardiac function

Important to note that this treatment only benefits those patients with severe left ventricular systolic function

Preventing heart failure

Lifestyle

- **Stop smoking**
- **Keep blood pressure at a healthy level**
- **Enjoy an active lifestyle – regular exercise**
- **Maintain a healthy weight**
- **Eat a healthy diet**
 - avoid adding extra salt
 - reduce dietary fat
 - eat at least 5 portions of fruit and veg per day
 - 2 or more portions of oily fish per week
 - think about portion size
- **Limit alcohol consumption**

Living with heart failure..

- **Important to take medication regularly**
- **Restrict fluid intake to 2L daily (1.5L fluid overload)**
- **Record daily weights, and compare them!**
- **Look out for signs of fluid overload and do something about it**
- Reduce salt intake/ don't add salt
- Prevent chest infections (annual flu vaccination & one-off pneumonia vaccination)
- Regular exercise
- Stop smoking
- Reduce alcohol consumption

Heart Function Checklist

**EVERY
DAY**

- Weigh yourself in the morning before breakfast, write it down and compare to yesterday's weight.
- Take your medicine as prescribed.
- Check for swelling in your feet, ankles, legs and stomach.
- Eat low salt food.
- Balance activity and rest periods.

Which Zone are you today? **Green, Yellow or Red?**

**Symptoms well
controlled**

- **Your usual symptoms are under control and you have:**
- No increased shortness of breath.
- No extra swelling in your feet, ankles, legs or stomach.
- No more than 3 lb weight gain.

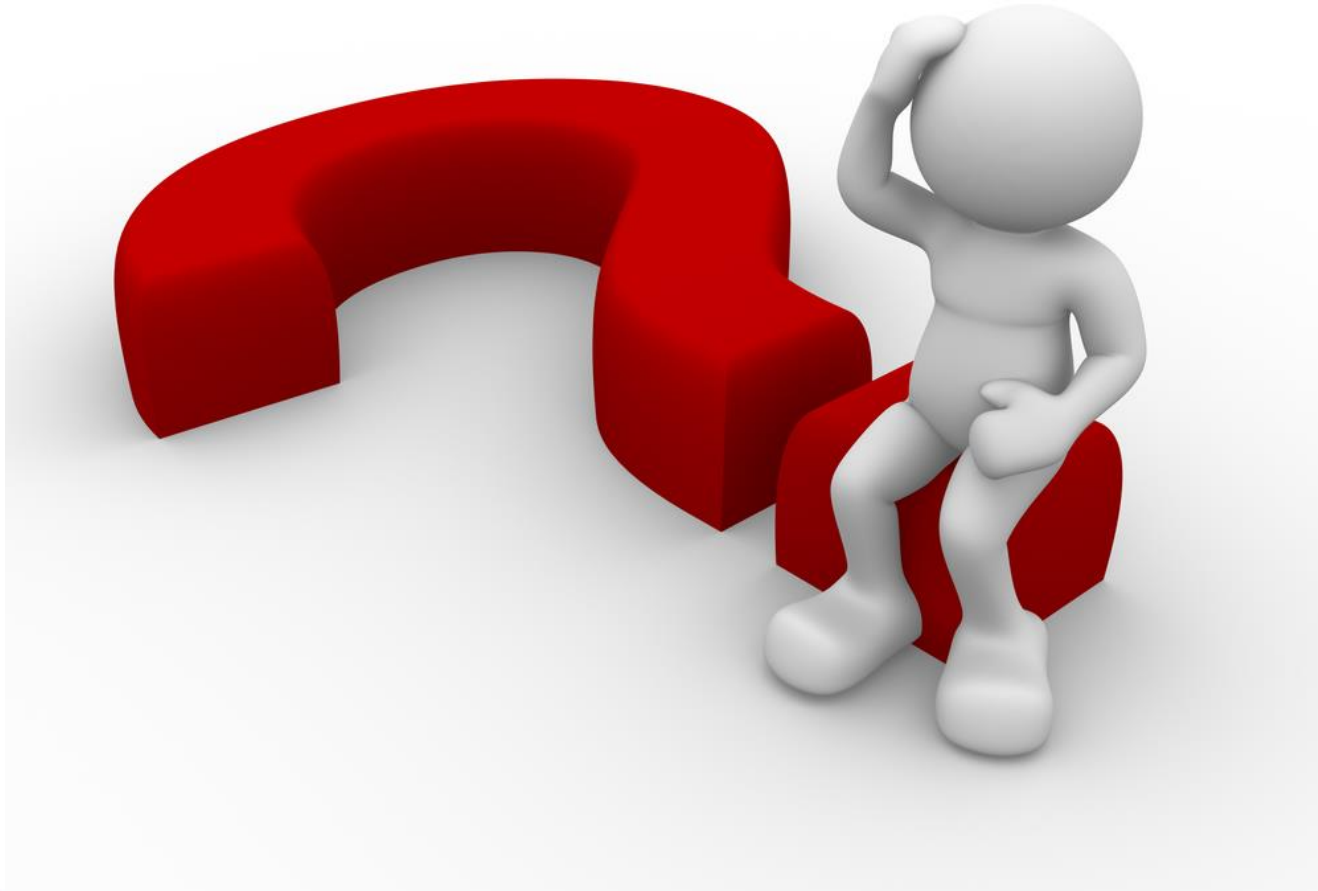
**Get in touch
with your GP
or HF Nurse as
soon as
possible, if you
experience**

- Weight gain of more than 3 -4 lbs over 2 consecutive days or a week.
- Increased shortness of breath and tolerating less activity.
- Swelling of feet, ankles, legs or stomach.
- Loss of appetite or nausea.
- New or worsening productive cough.
- Dizziness or lightheadedness worse than usual.
- It is harder for you to breathe when lying down.
- You need to sleep sitting in a chair.

**Call for help
immediately, if
you experience**

- **Call 999 if you have any of the following:**
- Struggling to breathe.
- Unrelieved shortness of breath while sitting still.
- Fainting.
- Chest pain

Any Questions?



Resources

British Heart Foundation

<https://www.bhf.org.uk/>

Cardiomyopathy UK

<http://www.cardiomyopathy.org/index.php>

Arrhythmia Alliance

<http://www.heartrhythmcharity.org.uk/www/index.php>

Pumping marvellous

<http://pumpingmarvellous.org/>

Keep it pumping

<http://www.keepitpumping.com/en/what-is-heart-failure/>

Great Western Hospitals 
NHS Foundation Trust



Cardiomyopathy^{UK}
the heart muscle charity



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