

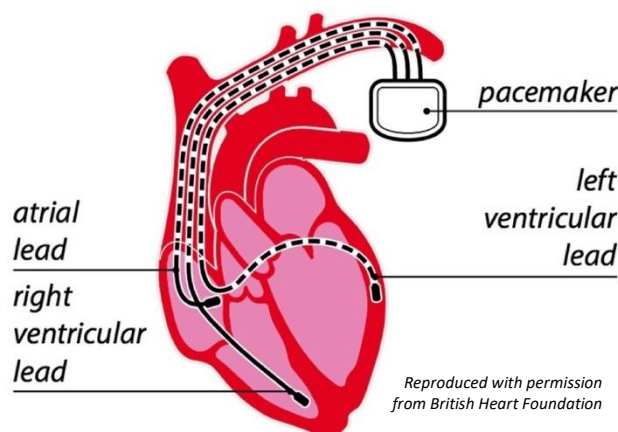
Cardiac resynchronisation therapy with or without a defibrillator

Procedure information for patients

Your doctor has recommended a procedure called **cardiac resynchronisation therapy (CRT)**. Please take some time to read this information sheet and discuss any questions or concerns you may have with a medical professional.

What is CRT?

CRT is a type of implantable device designed to improve the efficiency of your heart and improve your symptoms. It is made up of two parts, the pacemaker (pulse generator) and the wires (leads).



In the healthy heart, the main heart chambers (left and right) pump at the same time. However, in some people, one chamber may pump before the other, leading to a less efficient heart beat. With CRT, two or three leads are placed in contact with the inside of your heart and connected to the pacemaker. The pacemaker is programmed to “pace” the left and right heart chambers with small electrical impulses. This “resynchronizes” these chambers to pump more in time with each other. Previous studies have shown that about 2 in 3 patients who receive a CRT device will feel significantly better (less tired and/or breathless).

What is a defibrillator?

If you have already had, or are at increased risk, of dangerous heart rhythms, your doctor may recommend a special type of CRT with an inbuilt defibrillator (CRT-D). If a CRT-D device is planned you will also be given our defibrillator information sheet (*Implantable Cardiac Defibrillator*).

How is a CRT device inserted?

Before the procedure, a small plastic tube (cannula) will be placed into one of your veins. You will be given antibiotics to reduce the risk of an infection occurring. The procedure is usually performed under local anaesthetic and a mild sedative. A cut is made under your right or left collarbone and the pacing lead(s) are threaded down the vein into your heart. An X-ray camera is used so the doctor can see the leads. Once positioned in your heart, the leads are tested to make sure they are working properly. The pacemaker is then placed under the skin, connected to the leads and the skin sewn back together.

What are the risks of the procedure?

In recommending this procedure, your doctor has balanced the benefits and risks of the procedure against the benefits and risks of not proceeding.

Common risks and complications (more than 5 in 100) include:

- Bruising around the area where the device is

Uncommon risks or complications (between 1 and 5 in 100) include:

- A lead can move out of position. This would need to be put back into place by having a further, usually shorter procedure
- Significant bruising – this is more common if you are taking blood thinning medications
- Unexpected device failure. Either the battery or the lead may fail and would need to be replaced

Rare risks or complications (less than 1 in 100) include:

- Infection. This will need treatment with antibiotics and/or removal of the device
- A punctured lung. This may require a tube to be inserted into the chest to re-inflate the lung
- Blood clot in the vein in the shoulder
- Internal bleeding including bleeding into the space around the heart. This may need surgery to repair
- A very small increased lifetime risk of cancer from radiation exposure
- Blood clot in the lung (pulmonary embolism)
- A stroke. This can cause long-term disability
- Death as a result of this procedure is rare.

What happens after the procedure?

After the procedure you will have an X-ray of your chest area to check the leads have remained in position and the device will be electronically checked again. You will be advised that you may not drive for at least a week following the procedure. In some cases, you may not drive for a longer period (e.g. if you are given a defibrillator device) – you should discuss this with your doctor. You will be given more written information about what you should and shouldn't do after the procedure.

Depending on how your operation goes, you may be discharged home the morning after your operation or sometimes sooner. You will be given wound care instructions by the nursing team and information about follow-up at your local pacemaker clinic which normally occurs around one month later. If your pacemaker is operating well you will only need review in the pacemaker clinic once every year.

What happens next?

Your doctor will speak to you about the procedure and answer any questions you may have. You will also be asked to sign a written consent form to confirm you are happy to have the procedure.