What is CRT-D?

CRT-D is a specialist pacemaker which is a type of treatment that can help improve symptoms caused by heart failure. In most people, the symptoms of heart failure can be well controlled with tablets alone. However despite tablets, some people continue to feel very restricted by symptoms of heart failure. CRT-D has been designed to work with your tablets to try and improve these symptoms.

It works by restoring a coordinated or ‘synchronised’ squeezing pattern to the heart as it contracts. This results in a more effective heart beat which in some people may improve some of the symptoms of heart failure.

Some people with heart failure can have a dangerous heart rhythm called ventricular fibrillation or tachycardia. These can put their life at risk if they are not treated quickly. The CRT-D can recognise these very fast heart rhythms and deliver an electric shock to correct the heart rhythm.

Will it work for me?

Identifying people who might benefit from having CRT-D is difficult. The individual’s response to CRT-D is variable and often not easy to predict. The clinician who recommends this procedure should explain why they feel CRT-D may help you.

Pre-assessment clinic

Before the procedure, you will be invited to attend a pre-assessment clinic. This will usually be one week before the planned procedure. This appointment is very important and will take approximately 1 hour. You may also require blood tests, swabs and a chest x-ray. Please call the number on this paperwork to if you are unable to attend the appointment.

The procedure itself takes place on level 4 in The Cardiac Suite. This is a unit designed specifically for performing tests and procedures on the heart.

Cardiac Investigation Unit
01722 429258
As X-rays are used, it is important you tell us immediately if there is any chance you could be pregnant.

You should not eat for 6 hours but you can drink water until 2 hours before. You can take your tablets as usual with some water but do not take your diuretic tablets [i.e. furosemide]. If you have diabetes, you should speak to the nurse at the pre-assessment about what you should do. You should wear loose comfortable clothes as you will be asked to undress from the waist up. You will be offered a hospital gown.

A cannula (a small flexible plastic tube inserted into a vein) will be inserted into your arm and electrodes will be attached to your chest and limbs to monitor your heart rhythm [ECG]. Your blood pressure will also be monitored regularly throughout the procedure.

You will be given sedation through the cannula in your arm to prevent any discomfort and to help you relax.

**During the CRT-D procedure**

Throughout the test, you will be looked after by an experienced team of people including the Cardiologist who will be implanting the device. A small cut [approx. 8cm] is made about 5cm below the left shoulder, above the breast. This will leave a scar. The pacemaker wires are inserted through a vein, one at a time. These wires are carefully manipulated into three separate areas of the heart:- one into the right atrium, one into the right ventricle, and one into the left ventricle. The position of the wires will be checked using X-ray and the performance of the device will be checked using a special monitoring device. A life threatening rhythm may be induced under controlled circumstances, and the CRT-D will be instructed to treat with a shock. You will be told if this is the case during your procedure.

Once the cardiologist is happy that all is working well, the wires will be attached to a small battery which is then secured in place under the skin. The cut will be closed using dissolvable stitches and a dressing will be applied.

**After the CRT-D procedure**

You will be transferred to Tisbury Ward [the cardiac ward] where you will be monitored overnight. You should try to keep your arm as still as possible initially because excessive movement can cause the wires to become dislodged. You will be given antibiotics to take before and after the procedure to minimise the risk of infection.

The next day you will have a chest X-ray to check the position of the pacemaker leads and a pacemaker check. The wound should be kept clean and dry until it has fully healed. You can help by avoiding lifting your arm for the first two weeks. You will be given a pacemaker identification card [WHICH YOU SHOULD CARRY WITH YOU AT ALL TIMES] and an appointment to come back for a further check to test the device approximately four weeks where you will also be seen by the heart failure specialist nurse.
Follow up care

You will need a check of your device every 6 months. This will either take place in the cardiac investigation department or by ‘remote monitoring’. This works by sending relevant information down your telephone line. You will be given information about all of these checks during your first follow-up appointment.

Getting back to normal

After a short period of convalescence, you should be able to return to your normal activities. The DVLA has strict rules about driving after this type of pacemaker. The rules vary according to your specific condition but as a minimum, you cannot drive for 1 month. It is important that you inform the DVLA and your insurance company that you have had CRT-D. Stricter rules may apply if you drive for a living or have had any recent loss of consciousness. The DVLA should be able to advise you further.

There is no reason why you can’t return to work but you may need to inform your Occupational Health Department or Health and Safety Advisor.

It may be possible to reduce some of the tablets you are taking but this should be done in consultation with your clinician at your outpatient appointment.

What to do if the device gives a shock

You may get a warning that the device is going to deliver a shock. If this happens, you should try to sit or lie down and if possible tell someone nearby what is going to happen. You should recover very quickly but must let us know as soon as possible. You may have to leave a message on an answer phone but someone will get back to you as soon as possible. If you feel unwell after a shock, you should dial 999 or come to A+E. YOU MUST NOT DRIVE until you have been given the all clear.

Is there any equipment that may affect my device?

You should avoid carrying magnets or place a magnet over your chest. Most electromagnetic interference will not damage your device but if you ever feel dizzy or experience palpitations whilst using an electrical appliance, you should move away from the device and let us know.

Contact details

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Cardiac Co-ordinator
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Heart Failure Team
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