

Cardiac Resynchronization Therapy (CRT) Facts

1. What is the purpose of a cardiac resynchronization therapy (CRT) device?

Synchronize the right and left ventricles to help with heart failure symptoms. When a patient has heart failure, their ventricles are stretched due to fluid overload and the increased work of the heart. This leads to asynchrony between the right and left ventricles which further reduces cardiac output. By stimulating the right and left ventricle at the same time, they contract simultaneously which improves cardiac output and heart failure symptoms.

2. Where is the most common anatomic location of a CRT generator?

Anterior left upper chest wall, subcutaneous pocket. Other locations can be right anterior upper chest wall or abdomen, depending on the size of the patient and anatomic limitations.

3. How many leads does a CRT device have?

Three, 1 in the right atrium, 1 in the right ventricle and 1 on the surface of the left ventricle.

4. What is a CRT-P?

This is a CRT device that only acts as a pacemaker. It paces the right and left ventricles to improve cardiac output.

5. What is a CRT-D?

This is a CRT device that also defibrillates. It acts like an ICD and senses ventricular arrhythmias and can deliver energy to the heart to terminate these arrhythmias.

6. Hazards patients need to avoid include:

Large magnets, having an MRI and security wands can all cause interference with the generator and cause either inappropriate shocks or no shocks that are required.

The heat produced by the leads and generator while having an MRI can cause tissue damage to the heart, veins or chest.