



EACVI

European Association of
Cardiovascular Imaging

What is CT scan of the Heart?

The CT scanner is a special X-ray machine to produce images of your heart and the blood vessels that supply your heart muscle. It is an open, ring-like piece of equipment that resembles a doughnut rather than a tunnel.

Uses and Benefits of CT Heart (and/or Coronary Angiogram) Scan:

A coronary CT angiogram allows the detection of any narrowed or blocked artery(ies) supplying your heart muscle (coronary artery disease).

Sometimes, a CT heart scan is used to assess heart valves and/or aorta further after echo. We also may use CT heart scans in patients with congenital heart disease to further assess anatomical structures not clearly depicted on echo.

The CT scan provides fine details of your heart in unlimited field of view in slice sections. The scan is non-invasive and quick.

When do we use it?

A coronary CT angiogram scan is used when there are symptoms of coronary artery disease, but no previous diagnosis of this. The results will help your doctor decide if you need any medical treatment or a procedure. It is also used in patients who have had coronary artery bypass who are having symptoms and the patency of the grafts need to be checked.

It is also used to plan for heart procedures as it offers accurate visualisation of the 3-dimensional heart structure. This allows clear assessment of the anatomy and the measurements of different cardiac structures.

How it is performed and what will happen during the scan ?

The procedure is non-invasive and doesn't require recovery time. You will be asked to lie on your back on the scanning table. Small sticky patches, electrodes, will be put on your chest. The electrodes are connected to a monitor that shows a tracing of your heart rhythm and how fast your heart is beating. As the heart is constantly moving (beating) structure, the timing of the scan is synchronised to a time where your heart has the least movement. To better see your arteries on the scan, the doctor supervising your scan will spray a medicine known as GTN. GTN may cause a slight headache or dizziness, but this will not last long.

As we mentioned earlier, the timing of the pictures taken for your heart when it is moving the least, so the images are not blurry. Your body will move through the open ring, "doughnut", as this is where the camera is. You will receive a dye to visualise your heart structures. You may experience a metallic taste in your mouth and/or a warm flush, but this will also pass quickly. In order to ensure the images are of good quality and not blurry, you will be asked to remain still and to comply with the breath holding instructions. If you have difficulty in holding your breath, you need to let the team performing your scan know. The radiographer and doctor performing your scan can see you and will be speaking to you through a microphone.



The scan usually takes 10-15 minutes, but sometimes additional preparations to lower your heart on the day on the day of the scan are needed to ensure good quality images. If needed, this can take 1-2 hours.

Any preparations needed before the scan

12 hours before your scan, please do not have any caffeinated or decaffeinated drinks, chocolate or medication that contains caffeine, as these will raise your heart rate.

Please do not eat for four hours before the scan.

You may be given medications to lower your heart rate a few days prior to the exam or on the day of the exam.

You should continue to take your routine medications as usual. Please bring your prescription with you on the day on the scan as it may be useful for the doctors know what medications you are taking.

If you are diabetic and are taking metformin, please let the contact the team doing your scan know before your appointment.

If you are asthmatic, please bring your inhalers with you on the day of the scan.