

Cardiac Computed Tomography (CT) at McMaster University Medical Centre (MUMC)

Computed tomography (CT) is a test that uses an x-ray machine to take detailed pictures of the body.

A Cardiac CT takes pictures of your heart. Contrast (dye) is injected into a vein to highlight the structures of your heart such as the blood vessels. A computer puts all of the pictures together to make a picture of the whole heart.

A Cardiac CT is able to show if there are:

- problems with the heart muscle
- problems with the aorta such as an aneurysm
- problems with the sac around the heart, called the pericardium
- any blockages or narrowing in the coronary arteries

**All patients booked for heart surgery will
have a Cardiac CT done before the surgery.**

Getting ready for a Cardiac CT

Before your test:

- Do not use Viagra® or any similar medication on the day before or the day of the test. Viagra® will interact with the medications you will receive during the test. You will need to get a prescription for a beta blocker from your family doctor. Take the beta blocker as prescribed by your doctor. Ask your doctor if you have any questions.
- You may be given additional medication during the test to slow your heart rate down. You will need to arrange to have someone drive you home.

The morning of your test:

- You may have a light breakfast such as cereal or toast and juice. Do not have any food or drink with caffeine before your test. **This includes coffee, tea, energy drinks, chocolate or pop with caffeine.**
- Drink at least 2 to 3 cups (500 to 750 ml) of water in the morning.
- Take all medications as ordered.
- Bring a list with you of all the medications you take.

At the hospital:

- Go directly to the Diagnostic Imaging Department on the second level, yellow section at MUMC.
 - You will change into a hospital gown.
 - Your blood pressure and heart rate will be checked to show if you need to take more medication to lower your heart rate for the test.
 - An intravenous (IV) will be started to give you contrast (dye) during your test. An IV is a thin plastic tube that is put into a vein in your arm.
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- You will lie on a special scanning table.
- A Registered Nurse (RN) or Medical Radiation Technologist (MRT) will clean 4 small areas of your chest and place small, sticky electrode patches on these areas. Men may have their chest partially shaved to help the electrode patches stick. The electrodes are attached to an electrocardiogram (ECG) monitor, which records your heart's electrical activity during the test.
- You will be asked to place your arms behind your head for the scan.
- The table will then move inside the round centre of the scanner.



- A first set of pictures will be taken.
- You will be given a nitroglycerin tablet under your tongue. This will open your blood vessels so they can be seen more clearly in the pictures. We will wait for 2 to 3 minutes before starting your scan.

- Contrast will be injected through the IV in your arm. You may have a metallic taste in your mouth and/or a warm flush feeling like you have wet the bed. This is normal and will last only a few seconds. While taking the pictures, we will ask you not to move or breathe during that time. You will be asked to hold your breath for only 10 to 15 seconds. If you think you may have a problem holding your breath, try practicing before the test. For example, take 2 to 3 deep breaths and then hold your breath for 10 to 15 seconds.
- Once the pictures have been taken, you will be helped out of the scanner. Your vital signs (blood pressure and pulse) will be taken and your IV will be removed.

Your test will last 15 to 20 minutes, but please plan to be here for an hour.

After your test:

- You can return to your normal activities and eat as usual. Drink 8 to 10 cups (2 to 2.5 litres) of water. If you are not allowed to drink a lot of fluids due to fluid restriction, talk to your health care provider.
- If you were given a medication (Metoprolol) to slow your heart rate:
 - You will be asked to stay for 30 minutes after the test to monitor your heart rate and blood pressure. You may have to stay longer after the test depending on your response to the medication. Bring any medications you may have to take during that time (if you take medication for diabetes, bring your medication and the nurse can check your blood sugar if needed). Some patients may feel dizzy, drowsy or notice a headache after the medication is given. Please let the nurse know right away.
 - You will need to arrange for someone to drive you home. You cannot operate any machinery for the rest of the day.