Fact Sheet

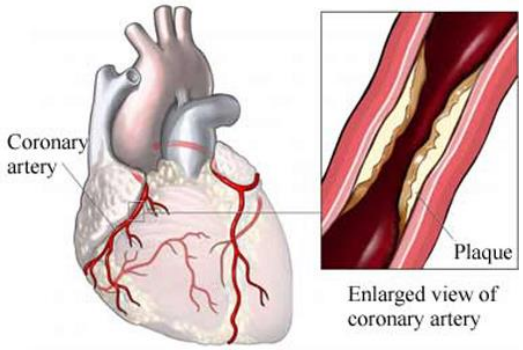
Computed Tomography Coronary Angiogram (CTCA)

Introduction
Angiography is the X-ray imaging of blood vessels using contrast agents injected into the bloodstream through a thin plastic tube (catheter) that is placed directly in the blood vessel. The images taken are called angiograms. Angiography provides information about blood vessel abnormalities, such as narrowing, blockage, inflammation, abnormal widening and bleeding, using a liquid contrast agent

CTCA uses computed tomography (CT) scanning to take pictures or images (angiograms) of the coronary arteries of the beating heart.

Purpose
This test helps determine if plaque buildup has narrowed a patient's coronary arteries, the blood vessels that supply the heart.

Plaque is made of various substances circulating in the blood, such as fat, cholesterol and calcium that deposit along the inner lining of the arteries. Plaque, which builds up over time, can reduce or in some cases completely block blood flow.



Preparation
As contrast material (dye) is used in this procedure, you will be required to fast for 4 hours before the test (however you should keep drinking water).

On the night before and the morning of the exam, you may be asked to take a beta blocker medication to lower your heart rate to optimize the quality of the exam.

On the day before and day of your exam, you may be asked to avoid:

- Diet pills and caffeinated drinks such as coffee, tea, energy drinks or sodas. These may increase heart rate and limit the ability of the exam to evaluate for plaque in the coronary arteries.
- Viagra or any similar medication. They are not compatible with the medications you will receive during the procedure.

On the morning of the scan, you will be required to arrive one hour earlier than your appointment scan time for our staff to assess your heart rate.

To achieve the highest quality and accurate scan, we require the heart rate to be slower than 60 beats per minute. Beta-blocker medication will be required to slow down the heart rate if it is above 60. It generally will require at least one hour to take effect.

You will need to complete a consent form before the scan, in regards to your medical history, allergies, are you pregnant or think you might be pregnant.

You will be required to change into gown.

For the scan, you should remain as still as possible and follow breathing instructions. You may need to have contrast injected into a vein in your arm to highlight the area being studied (see Iodinated contrast fact sheet). The whole test usually takes 10 to 20 minutes.

Results
Will be analyzed by our Level B accredited (senior level) Radiologist or by a Cardiologist. A detail report will be delivered to your referring doctor. You should not have any issues after your test. You need to discuss the results with your treating doctor.

As there are typically over 500 images in each scan, there is a lengthy after-scan processing required. We endeavor to keep our turn around time (from the time of the scan to the report being delivered) within 48 hours of your scan. Please inform our clerical staff to arrange appropriate measures if urgent report is necessary.

Risks
The dose of radiation used in a CT scan is generally small and rarely produces harmful effects. If you have many CT scans, there is a slight increase in the lifetime risk of cancer. The small potential risk is balanced against the benefits of picking up serious heart disease. The radiation dose will be kept as low as possible.

More Information
InsideRadiology by the Royal Australian and New Zealand College of Radiologists:
www.insideradiology.com.au

RadiologyInfo by the American College of Radiology and Radiological Society of North America:
www.radiologyinfo.org