Coronary CT Angiography and Calcium Scoring

(Coronary CTA-Calcium Scoring)

Definition

A CTA scan is a type of x-ray that uses Contrast Dye. It uses a computer to make pictures of the inside of the body. In this case, images of the heart and chest are taken.

Reasons for Test

Coronary CT angiography (CCTA) is a special kind of CT scan that provides high-resolution pictures of the heart and Coronary arteries. Your doctor will look for signs of:

- Anatomic Anomalies
- Blockages of blood vessels (plaques)
- Injuries
- Other Diseases

Your doctor may recommend a CCTA scan if you have the following symptoms:

- Cardiac Risk Factors
- Chest Pain
- Exercise Induced shortness of breath
- Family history of early (before age 50) heart attack or stroke
- High blood pressure
- Cholesterol Abnormalities
- Evaluation of Coronary Artery bypass grafts and stents

Possible Complications

A medication called "contrast" is used to help improve the pictures. Complications with contrast are rare. Possible complications with contrast include:
Allergic reaction
Kidney failure

Be sure to discuss these risks with your doctor before the test.

A Coronary CTA scan may not be advised if you are pregnant. Talk to your doctor.

What to Expect

Prior to Test

Your doctor may tell you:

Before you arrive for the study, you will receive a common blood pressure medication that also lowers the heart rate so we can see the small coronary arteries better.

- On the day of the procedure, refrain from any exercise prior to the exam
- Refrain from any caffeine for 24 hours (coffee, tea, sodas, etc.) before the procedure
- Refrain from any nicotine for 24 hours before the procedure
- Refrain from any stimulant medications for 24 hours (decongestants, antihistamines, etc.)
- Refrain from Viagra for at least 48 hours and Cialis and Levitra for at least 72 hours before this procedure.
- Also, you must not eat for 4 hours prior to the procedure, although you are encouraged to drink 2 8-ounce glasses of water during that period.
- Take the medication that you are given 2 hours before you arrive for your study.

Description of the Test

Contrast is necessary for CCTA. It helps make cardiac anatomy and vessels easier to see in the images.

Be prepared to be at the Imaging Department for 60-90 minutes for the entire process. This allows us time to review your paperwork, start the IV, and possibly administer more medication if your heart rate remains high after the first dose.

An IV will be place in your arm in front of the elbow just before the procedure. Three EKG leads will be attached to your chest during the imaging period so pictures can be obtained in sync with your heart rate. You will receive nitroglycerin under your tongue to dilate your arteries just before the procedure.

Imaging takes place during IV injection of iodine containing contrast material. You will be instructed to hold your breath for 7-10 seconds during imaging.

After Test

After imaging you can return to your usual daily routine and diet immediately. You will be told to drink extra fluid for the next couple days. This will flush the contrast from your body.

How Long Will It Take?

The exam will take about 20-30 minutes. Total time at the healthcare facility will be 30 minutes to 2 hours.

Will It Hurt?

CT scans are painless. There may be some discomfort when the IV is placed and/or removed. You may feel warm and flushed when contrast is injected into your vein or you may have a metallic taste in your mouth.
Results
The CT images will be sent to a radiologist who will analyze them. Your doctor will receive the results and discuss them with you.

Call Your Doctor
If you are given contrast, call your doctor if any of the following occurs after the test:

- Hives
- Itching
- Nausea
- Swollen, itchy eyes
- Tightness of throat
- Difficulty breathing

In case of an emergency, call for medical help right away.