

About the exam

Computed tomography (CT) is a special type of X-ray imaging test used to create pictures of specific organ systems of your body in a fast and painless way. Coronary CT angiogram (CTA) is a non-invasive heart imaging technique using high-speed computed tomography to visualize your heart blood vessels, called “coronary arteries.”

The scan can detect early signs of coronary heart disease that may be invisible in other heart tests. Advantages include:

- It can provide information about cholesterol buildup in your arteries.
- It can non-invasively detect early stages of heart disease.
- It can be performed more quickly, comfortably and safely than traditional angiography.

Preparing for the exam

The following is a list of steps to help you prepare for the exam. Talk to your doctor if you have questions about any of the instructions.

- Do not smoke for 24 hours before the exam.
- Do not consume any caffeine for at least for eight hours before the exam (including caffeinated or decaffeinated coffee, tea and sodas; energy drinks; chocolate).
- Avoid energy pills or drinks or diet pills on the day before or the day of your exam.
- Do not take Excedrin or pseudoephedrine for 12 hours before your exam.

- Do not use sildenafil (Viagra® or Revatio®) or any similar medications (Levitra®, Cialis®) for 72 hours before your exam. It is not compatible with the medication (nitroglycerin) you will receive during the procedure.
- Continue taking other medications as prescribed by your doctor, unless otherwise instructed.
- Bring a current list of your medications and dosages with you to the appointment.
- On the day of your exam, do not eat for four hours before your scheduled appointment. You may drink water and take your medications.
- Arrive at the imaging center at least one hour before the time of your test. The entire test may take two hours or more.
- If you have diabetes, do not take your insulin or oral diabetic medication the morning of your test.
- If you have claustrophobia, you may request mild IV sedation before scanning to help you relax. If you think you will need sedation, you will also need to arrange for a ride home, as you will not be able to drive.

Tell your doctor if you are:

- Pregnant or possibly pregnant
- Nursing or breastfeeding
- Allergic to iodine, shellfish or any other medications
- Undergoing radiation therapy
- Taking oral diabetes medication (metformin)
- Over 60 years old
- Unable to take beta-blocker medication

Also tell your doctor if you have kidney problems or a history of asthma or emphysema.

Special instructions

If you are pregnant

CT procedures use X-ray beams. The amount of radiation exposure is kept to a minimum for your safety, but X-rays can harm a developing fetus. Therefore, this procedure is not recommended if you are pregnant.

If you have diabetes

If you have diabetes, tell the nurse or technologist what type of medication you take for blood sugar control. If you're on metformin (Glucophage®, Glucovance®, Metaglip®, Avandamet®), it is recommended that you do **not** continue this medication for 48 hours after the procedure. Talk to your doctor about other medications you can take to control your blood sugar during this period. You should drink four to six glasses of water the day of your CTA exam. You should also follow up with your doctor and have blood drawn to check your kidney function before resuming metformin.

If you have known abnormal kidney function (renal insufficiency)

If you have renal insufficiency, talk to your doctor about taking medication before the test to decrease the risk of worsening kidney function. You should drink four to six glasses of water the day of your CTA exam. Follow up with your doctor and have blood drawn to check your kidney function in three to five days.

During the exam

You will be asked to fill out a short form and sign a consent form before proceeding with the exam.

A nurse will start an IV line in your arm. You will receive contrast agent (dye) via the IV line. As the contrast is injected, you will feel warm

and flushed. You may be given medications to lower your heart rate and dilate your heart blood vessels. You will lie on a special scanning table that will move slowly into a large circular opening. You will be asked to hold your breath briefly during scanning.

After the exam

After the exam, you will be monitored for about 30 minutes before you go home. You may continue all normal activities and eat as usual after the exam. Drink extra water on the day of your exam to help to flush the IV contrast from your system.

Results

A cardiologist and radiologist will review and interpret the images of your scan and share the final results with your doctor. Your doctor will discuss the results of your test with you.

Your doctor will talk to you about a treatment plan for you based on the findings in the scan.

If you have significant clogging or severe stenosis (narrowing), you may need further evaluation with cardiac catheterization and possible treatment with balloon angioplasty and stent placement. In cardiac catheterization, a tube is inserted into a blood vessel and guided to the heart to get images of the arteries. In balloon angioplasty, a tube with a small balloon on the end is used to open blocked arteries. A stent is a small metal coil that can be inserted during balloon angioplasty to keep the artery open.

If you have mild or mild to moderate clogging or narrowing of your artery, you may need further evaluation or intervention (balloon angioplasty or stent placement). Your doctor will talk to you about your heart risk

factors, healthy lifestyle and treatment plan.

Since your lungs are close to your heart, they are partly visualized during the exam. However, this test does not provide complete evaluation of your lungs. If this exam shows anything abnormal in your lungs, the radiologist may suggest further evaluation with a chest CT scan.

Risks

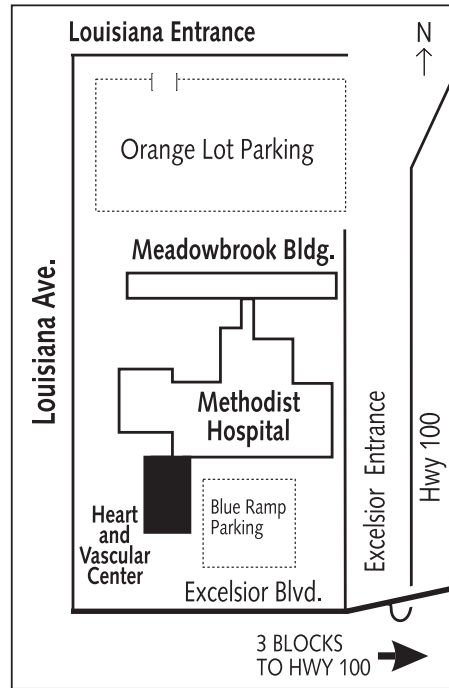
A CTA scan is a low-risk, non-invasive test. Since most CT exams require the use of contrast agent to optimally visualize your heart, it is important that you tell the nurse or technologist if you have had any allergic reaction to this type of contrast agent. Talk to your doctor about any known allergies prior to the exam. If you do have known adverse reaction to contrast agent, your doctor can prepare you for the test by giving you medication before the exam.

Occasionally, some patients do experience allergic reaction to contrast agent for the first time. They can develop itching or a rash following contrast injection. It usually is not serious and gets better on its own. Antihistamines can help relieve symptoms. Rarely, a more serious adverse reaction called anaphylaxis can occur, resulting in breathing difficulty. This is a potentially life-threatening situation which requires immediate attention and treatment with medications to reverse the symptoms.

Payment

This test may be covered by your insurance plan. However, some plans may not cover the cost of this exam. Prior authorization from your insurance company may be required and limited to specific diagnostic reasons. Contact your insurance company if you have questions about your insurance benefits.

You are responsible for all co-payments and deductibles. If you have questions about your bill, call Park Nicollet Heart and Vascular Center at 952-993-7672.



Park Nicollet Health Services is an integrated care system that includes Methodist Hospital, Park Nicollet Clinic, Park Nicollet Foundation and Park Nicollet Institute. Park Nicollet Health Services is based in St. Louis Park and has almost 7,500 employees, including 543 physicians on staff.

parknicollet.com

Coronary CT Angiogram (CTA)

Your test is scheduled on:

_____/_____
Date / Time