

CT: Coronary Angiogram (CTA) Scan

How to prepare and what to expect

This handout explains how to prepare for a CT coronary angiogram (also called a coronary CTA), how it works, how it is done, what you will feel during the scan, and how to get your results.

What is a coronary angiogram CT scan?

CT stands for *computed tomography*. A CT scan uses a special X-ray machine to take detailed pictures of the inside of your body. A *coronary angiogram* CT, also called a *coronary CTA*, scans the inside of the tiny blood vessels of your heart.

It is a *noninvasive* procedure because we do not need to put anything in your heart. The scanner can scan your entire heart in just 1 heartbeat.

How does it work?

- We will give you medication through an *intravenous* (IV) tube that is placed in an arm vein. This medication slightly slows your heart rate. We may also give you a medication paste to open and relax your blood vessels.
- You will receive *contrast* (X-ray dye) through your IV. The contrast makes it easier for your radiologist to see your heart tissues in the scan images.
- Your technologist will monitor your heartbeat and will be able to tell when the contrast reaches your heart. The CT scanner will then take thousands of images of different parts of your heart.
- The scanner can put these images together to form a complete picture of your heart. Or the images can also focus on only your arteries, heart muscle, or veins.
- If you are having chest pain, your radiologist will be able to see if one of your arteries is blocked. Very quickly, we will know what is causing your chest pain. This scan can also check for other problems in your chest.



For your CT scan, you will lie on a table inside the CT machine.

How do I prepare?

- Keep taking your prescribed medicines as usual.
- Tell your provider if you are pregnant, or if you think you might be pregnant.
- Starting 12 hours before your scan, do **not** eat or drink anything that contains caffeine. This includes coffee, some teas, some kombucha drinks, energy drinks, some sodas, chocolate, and foods with coffee flavoring.
- Do **not** take energy pills or diet pills the day before or the day of your scan.



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of this handout.

- **Do NOT take sildenafil citrate (Viagra), vardenafil hydrochloride (Levitra), tadalafil (Cialis), or similar medications within 48 hours before your scan.** These can affect how your body responds to the medication used during the procedure. If you take them within 48 hours of your scan, we may not be able to give you the medicine that relaxes your heart blood vessels. This could affect the quality of your scan images or require your scan to be rescheduled.
- **If you have pulmonary hypertension and take sildenafil citrate (Viagra), vardenafil hydrochloride (Levitra), tadalafil (Cialis), or any similar medications,** talk with your healthcare provider before stopping them for 48 hours before your scan. If you cannot stop taking these medicines, contact us immediately. If these medications are taken within 48 hours of your scan, we may not be able to give you the medicine that relaxes your heart blood vessels. This could affect the quality of your scan images or require your scan to be rescheduled.
- **If you have asthma or COPD and use a β 2-agonist inhaler, such as albuterol,** talk with your healthcare provider before stopping this medication for 7 days before your scan. If you cannot stop using this medication, contact us right away. If you take this medication before your scan, we may not be able to give you the medicine that slows your heart rate. This could affect the quality of your scan images or require your scan to be rescheduled.

On the Day of Your Scan

- The preparation, CT scan, and monitoring will take about 2 hours total from the time you check in.
- We recommend that you eat only a light meal before your scan.
- Wear loose, comfortable clothes.
- Take your medicines as usual, **except** for the medications listed in the “*How do I prepare*” section. Bring to your appointment a list of the medicines you are taking and give it to the technologist.
- Check in at Radiology **30 minutes before** your appointment time. A staff member will check you in at the Radiology front desk.
- If there is any chance you may be pregnant, tell the CT technologist **before** the scan begins.
- We may ask you to remove any jewelry or any tops with a zipper or snaps. Metal objects may affect the scan.
- CT scans use X-rays. Because of this, you may **not** have a family member or friend in the CT room during the scan.



A CT image of the heart and coronary arteries

Urgent Care

Even if you have a scan scheduled, be sure to get care as needed for any heart problems. **If you have chest pain, call 911 and ask to be taken to the UWMC Emergency Department.**

How is the scan done?

- A CT technologist will start your IV and help you get ready for the scan. This nurse will continue to care for you while you are at the hospital.
- We may give you medication through your IV to slow your heart rate slightly. This medication is called *metoprolol*.
- You may be given a medication paste to open and relax your blood vessels. The medication paste will be applied to your chest. This medication is called *nitroglycerin* or *nitropaste*.
- We will take you to the CT room. We will connect you to a heart monitor and ask you to lie on the CT table.
- We will inject contrast into your IV. Soon after this injection, the scan will start.
- During your scan:
 - The table will move you in and out of the scanner.
 - An automated voice on the scanner will guide you and ask you to hold your breath, for about 5 seconds at a time.

After your scan:

- We will move you out of the CT scanner.
- If we put nitropaste on your chest, we will remove it.
- We will monitor you for about 15-30 minutes and remove your IV. Then you will be able leave the hospital.

What will I feel during the scan?

- You may feel warm or flushed during the contrast dye injection. You may also have a metallic taste in your mouth. These reactions are normal. They should get better in 1 to 2 minutes.
- Sometimes patients will have itching and hives for up to a few hours after the injection. Please tell us if this happens. We can give you medicine to help with this.
- If you start to feel lightheaded or short of breath, tell us **right away**. You may be having an allergic reaction to the contrast. A doctor or nurse will be nearby during the scan to help, if needed.
- The medicine you receive to slow your heart rate may make you feel dizzy if you stand suddenly. This slight dizziness is very rare.

What should I do after the scan?

After the scan, drink plenty of fluids and eat a meal.

Who interprets the results and how do I get them?

- **Urgent scans:** If you are having chest pain when you arrive, we will give your CTA results to the emergency room doctor. You will get these results right away.
- **Planned scans:** If your scan was planned, we will send your final results to your primary care provider (PCP). The radiologist will not talk with you about your results. Your PCP will go over the results with you. You and your PCP will decide the next step, such as treatment for a problem, as needed.

- You may also read your scan results on your MyChart page. If you need copies of your images on disc, call 206.598.6206.

Questions?

Your questions are important. Call your doctor or healthcare provider if you have questions or concerns.

- **UWMC - Montlake Imaging Services:** 206.598.6200
- **UW Roosevelt Radiology:** 206.598.6868
- **Harborview Imaging Services:** 206.744.3105
- **UWMC - Northwest Imaging Services CT:** 206.668.2061