Computed Tomographic Angiography (CTA)

A Detailed Look at Your Blood Vessels
What Is CTA?

CTA (computed tomographic angiography) is a test that creates detailed pictures of your blood vessels. During a CTA, a machine takes x-rays from different angles. A computer turns the x-rays into images that can be viewed on a screen.

CTA is used to look at vessels that carry blood to and from the major organs of the body.
What Is CTA Used For?
CTA can help your doctor find problems in your blood vessels, including:

- **Narrowing or blockage**, which can lead to problems such as leg pain, stroke, or heart attack.
- **Aneurysm**, a ballooning out of a blood vessel wall.
- **Dissection**, a tear in the layers of a blood vessel wall.
- **Pulmonary embolism**, a blood clot in the lung.

CTA can also be used to:

- **Check the result** of a previous surgery, such as the placement of a stent.
- **Help your doctor** determine whether further testing is needed and decide on a treatment plan.
- **Get more information** about your blood vessels before surgery is done.

Risks and Complications of CTA

- Exposure to radiation from x-rays
- Swelling, infection, or other problems at the IV site
- Rare contrast-related problems, such as allergic reaction or kidney damage
Before Your Test

• Follow instructions you are given for how to prepare for the test.
• Ask your doctor if you need a blood test before the CTA to check your kidney function.
• Tell your doctor what medications you currently take. Ask if you should stop taking any of them before the test (especially diabetes medications). Also, bring a list of your medications to show the x-ray technologist.
• Let your doctor know if you have any allergies to contrast fluid. He or she may give you medication to prevent a reaction.
• If you’re pregnant or think you may be, talk with your doctor about whether you can have a CTA.
• Don’t wear metal items such as jewelry, a watch or belt buckle, or hair clips. If you wear dentures, you may have to remove them.
• Allow time to check in.
This CTA scan shows the carotid arteries, which run up through the neck to the brain.
During Your Test

Your CTA is done in the radiology department of a hospital or in an outpatient facility. The test is performed by an x-ray technologist. It can take from 30 to 60 minutes or more, depending on what is being tested. During your CTA:

• You may wear a hospital gown.
• Contrast fluid (special dye that makes the image easier to see) is used. It is given to you through an intravenous (IV) line in your arm. The contrast may make you feel warm or give you a strange taste in your mouth. This will pass soon.
• You lie on a narrow table that slides into a round hole.
• You will be asked to hold your breath for a few seconds at certain times.
• After the test, the table slides out of the scanner. You may have to wait briefly on the table while the technologist makes sure the images are clear.

What to Tell the Technologist

For your safety, let the technologist know if you:

• Have any allergies to foods or drugs.
• Have kidney problems.
• Are pregnant or think you may be.
• Are breastfeeding.
For Your Comfort

• It’s best if you relax and remain as still as you can. The technologist may use Velcro straps to help you keep from moving.
• Only a part of your body will be inside the scanner at any time.
• The scan itself is painless.

After Your Test

• You can return to normal activities right away.
• You can remove the bandage from your IV site an hour or so after the test. If the site gets red, swollen, or painful 1 to 2 days later, call your doctor.
• Any contrast you were given will pass naturally out of your body in your urine within a day. Unless you are on fluid restriction, drink plenty of fluids to help the contrast pass.
• Your doctor will let you know when the test results are ready.
The Next Step

Your doctor will discuss the results of your test with you. He or she will talk to you about any further testing or treatment that may be needed.