Magnetic Resonance Angiography (MRA)

A Detailed Look at Your Blood Vessels
What Is MRA?
MRA (magnetic resonance angiography) is a test that creates detailed pictures of your blood vessels. It uses a large magnet and a computer to create images that can be viewed on a screen. No x-rays are used, so no radiation is involved.

What Is MRA Used For?
MRA 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.

MRA 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 MRA
Swelling, infection, or other problems at the IV site are possible after an MRA. Discuss risks with your doctor.
MRA is used to look at vessels that carry blood to and from the major organs of the body.
Before Your Test

• Follow instructions you are given for how to prepare for the test.

• Tell your doctor if you are pregnant, or if you have a pacemaker, brain aneurysm clip, or other metal implant in your body. Also mention any metal pieces or shrapnel in your body.

• Let your doctor know if you have kidney problems. He or she may want to order a different test instead.

• Be sure to mention if you are claustrophobic (afraid of confined spaces). Your doctor may prescribe a sedative to be taken before the test.

This MRA scan shows (1) the abdominal aorta, (2) the blood vessels serving the kidneys, and (3) the arteries branching into the legs.
• Let your doctor know what medications you take. Ask if you should stop taking any of them before the test. Also, bring a list of your medications to show the technologist.
• Tell your doctor if you have allergies to contrast fluid. He or she may give you medication to prevent a reaction.
• Don’t wear metal items such as jewelry, a watch, or a belt buckle.
• Allow time to check in.
During Your Test
Your MRA is done in the radiology department of a hospital or in an outpatient facility. The test is performed by a technologist. It can take from 30 minutes to 2 hours or more, depending on what is being tested. During your MRA:

• You may wear a hospital gown.
• Contrast fluid (special dye that makes the image easier to see) may be given through an intravenous (IV) line in your arm.
• You lie on a table that slides into a narrow tube.
• The machine makes loud clanking and whirring sounds. You may be given earplugs to reduce the noise.
• You will be asked to hold very still for several minutes at a time.
• You can hear and talk to the technologist through an intercom. He or she will tell you when you can shift position.
• 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 had any previous surgery.
• Have a pacemaker or other implant.
• Have metal splinters in your body, especially in the eyes.
• Have allergies to contrast or medications.
• Are pregnant or think you may be.
For Your Comfort

• Try to relax. Remain as still as you can.
• Know that only a part of your body will be inside the scanner at any time.
• You will be in a confined space. If this is a problem for you, tell your technologist.
• The test itself is painless.

After Your Test

• Unless you took a sedative, you can return to normal activities right away. If you took a sedative, you will need an adult family member or friend to give you a ride home.
• 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.