



Computed Tomography Angiography (CTA) and Magnetic Resonance Angiography (MRA) Tests

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CTA and MRA tests are non-invasive, advanced imaging studies that provide detailed information about the blood vessels within our bodies and their anatomic relationships with other organs. These tests use modern computerized image processing techniques that let your vascular surgeon view vascular disease three-dimensionally—an important step in assessing the extent of the disease and how best to treat it.

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Description



HOW ARE CTA AND MRA

TESTS SIMILAR?

- Each requires an examination while you lie on a motorized bed that is wheeled into a gantry where scanner detectors are stationed in a circular fashion.
- Each may require administration of an intravenous (IV) contrasting agent that lets your vascular surgeon better visualize certain blood vessels.

HOW ARE THEY DIFFERENT?

There are more differences between CTA and MRA than there are similarities. For example:

- All CTAs require the use of an IV contrast agent, but not all MRAs do.
- CTAs require just a few minutes to complete; MRAs may require 20-30 minutes.
- CTAs involve exposure to radiation (see below), MRAs do not.

Risks

Which is right for you?

Your vascular surgeon decides which imaging study to perform based on a number of factors, including:

YOUR PARTICULAR HEALTH ISSUES

Possible concerns with CTA: allergic reaction to the IV contrast agent, kidney disease or failure, pregnancy

Possible concerns with MRA: presence of a pacemaker or AICD device, stimulators (e.g., for the spine), infusion pumps, certain implants

If Gadolinium IV contrast agent is ordered as part of the MRA: allergic reaction to the IV contrast agent, kidney disease or failure, pregnancy

LOCAL EXPERTISE

- Which test/s are available in your community may be a factor. Not every medical institution offers both CTA and MRA tests as well as the expertise of medical specialists trained to interpret the images.
- Have a frank discussion with your vascular surgeon as to which test will be most helpful in diagnosing your vascular issue and developing a competent and safe treatment plan.

WHAT ABOUT CTA RADIATION?

While CTA is a safe test when performed judiciously, the amount of radiation involved is not insignificant if repeated examinations are planned.

To get an idea of how much radiation is involved, the radiation from a typical CTA is equivalent to about 50 plain-film chest X-rays—about the amount of radiation the average person receives passively each year from the environment (“background radiation”).

An MRA is considered preferable for repeated examinations, but the availability and expertise of interpreting MRA images varies as outlined above.