

Who might have a MRI or MRA test?

A CT scan is the standard initial test to find out if a stroke was caused by bleeding or a blocked vessel, mainly because it is available at all hospitals and is fast. An MRI scan is better than CT at detecting the brain changes caused by a stroke, but the MRI test takes slightly longer to perform, about 30 to 45 minutes (compared to 20 minutes for a CT scan). In hospitals where it is available, MRI is an effective first test for diagnosing a stroke and identifying bleeding in the brain, as long it does not delay treatment too much.⁴ Some hospitals have stroke-specific MRI tests that take 15 to 20 minutes.³ After the initial diagnosis has been made, an MRI scan is useful in determining what caused the stroke and how much brain tissue can be saved, helping your doctor to make an accurate prognosis and determine the best treatment for you.

MRA can detect blood vessel abnormalities or problems causing reduced or blocked blood flow to the brain and putting you at risk for a first or second stroke. If a [carotid Doppler ultrasound](#) has found narrowing or blockage in the arteries on each side of your neck, an MRA may be used to confirm the results. An MRA is a more sensitive test to help determine if you would benefit from treatments such as [carotid endarterectomy](#) and [carotid stenting](#) to reduce your risk for TIA or stroke.

If you have polycystic kidney disease or a family history of brain aneurysms and bleeding in the space around the brain (*subarachnoid hemorrhage*), your doctor may order an MRA to see if you have an aneurysm so steps can be taken to correct it before it causes a stroke. One study found that people with two or more first-degree relatives (parents, children, or siblings) with subarachnoid hemorrhage may benefit from aneurysm screening.⁵

The accuracy of the MRA depends on the size of the aneurysm: smaller ones are harder to detect. People who are not at high risk for aneurysms should not be routinely screened because the risks of the test may outweigh the benefits.

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