

Nonatherosclerotic Peripheral Artery Disease

The recommended imaging tests for nonatherosclerotic peripheral artery disease (<https://www.radiologyinfo.org/en/info/pad>) include ultrasound (<https://www.radiologyinfo.org/en/info/vascularus>) duplex Doppler (ultrasound), intravascular ultrasound (inside arteries), MR angiography (<https://www.radiologyinfo.org/en/info/angiomr>) (MRA; MRI of arteries with or without intravenous [IV] contrast dye), CT angiography (<https://www.radiologyinfo.org/en/info/angiocr>) (CTA; CT scan of arteries using IV contrast), arteriography (x-rays of arteries with IV contrast).

If a pinched artery around the knee is suspected or if narrowing of artery leading to legs is suspected, then CTA, MRA of the lower extremities without and with IV contrast, and ultrasound are usually appropriate as initial imaging tests. MRA without contrast and arteriography may be appropriate.

For those with suspected or known inflammation of the blood vessels of the lower extremities, arteriography or CTA is usually appropriate, as is MRA without and with IV contrast. An MRA without IV contrast or ultrasound may be appropriate.

In cases of a suspected or known tear in a blood vessel or in an individual with connective tissue lower extremity vascular disease, CTA or MRA without and with IV contrast is usually appropriate. MRA without IV contrast or arteriography may be appropriate.

With suspected or known other noninflammatory lower extremity vascular diseases (such as fibromuscular dysplasia or segmental arterial mediolysis), a CTA, MRA without and with IV contrast, or arteriography is usually appropriate. An MRA without IV contrast, an ultrasound, or intravascular ultrasound may be appropriate.

In individuals with trauma to the lower extremity blood vessels, a CTA is usually appropriate. An arteriography or ultrasound may be appropriate.

For more information, see the *Peripheral Artery Disease (PAD) page* (<https://www.radiologyinfo.org/en/info/pad>).

— Susan Anemone and MacArinze Ojiaku, MD. This information originally appeared in the *Journal of the American College of Radiology*.

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