

Ankle-Brachial Index Test (ABI)

What is an ABI?

The ABI test is used to document the presence or absence of peripheral artery disease, and can be performed every year to assess whether PAD is getting worse. Blood pressure measurements are taken at the arms and legs using a pencil shaped ultrasound device called a Doppler.

Preparation:

There is no preparation for the ABI test.

Resting ABI:

You will be asked to remove your clothing around your legs, shoes, and socks. A technician will wrap 10 blood pressure cuffs around your arms and legs at various places including the ankles and maybe the toes. Because pulses in your legs and ankles are inaudible through a stethoscope, the Doppler is used. The technician will put ultrasound jelly on your pulse points and use the Doppler to take your blood pressure from each of the 10 cuffs. The Doppler will make a loud noise as the technician finds your pulse, but this is normal. The cuffs will inflate until the pulse can no longer be heard through the Doppler and then deflated. You should not experience any pain, but you may feel some discomfort around the thickest parts of your legs such as the calves and upper thighs. After the blood pressures are taken, each cuff will then inflate to only 70 mmHg to evaluate your PVR waveforms. These will detect the “total flow” of blood in a segment of your limbs and should not be uncomfortable.

Stress ABI:

If your results from a Resting ABI are normal or have no significant changes, your doctor may want you to have a Stress ABI. You will be asked to walk on a treadmill for five minutes at an incline of 10%. This may cause leg pain, so let the technician know if you experience any pain at all. Immediately after the five minutes, the arm and ankle blood pressure measurements will be taken again to detect any changes from the exercise.

After the Test:

After the test is complete, the results from an ABI will be read by a physician trained to read ABI's. You should receive the results from your doctor within 48 hours about your test and what steps you are advised to take afterward.