

Alfi Morris Beshay, MD, MSc, FRCP(C)
Internal Medicine & Cardiovascular Disease

Ankle Brachial index – Patient Information Sheet

Definition

- The ankle brachial index, or ABI, is a simple test that compares the blood pressure in the upper and lower limbs. If it is abnormal, it may mean that a person has peripheral artery disease (PAD) in the blood vessels in his or her legs.

Why is the test performed ?

- If you have symptoms of PAD (like pain in the legs with activity) or if you are at risk for PAD. The ABI test can diagnose PAD and identify people who have a high risk for coronary artery disease as well.
- Things that can increase your risk for PAD include: Smoking, Diabetes, older than age 70, High levels of lipids in your blood, known plaque formation in other arteries, like the coronary arteries in your heart, Abnormal pulses in your lower legs, having diabetes and one additional risk factor, such as smoking or high blood pressure even if you are younger than age 50
- If you have PAD, the test can check the severity of your PAD and see if your condition is getting worse.
- If you had surgery on the blood vessels of your legs, it could detect how well blood is flowing into the leg.

How is the test performed ?

- The test is very similar to a standard blood pressure test. In general, during your ABI test You will lie flat during the procedure, a technician will place a blood pressure cuff just above your ankle. The technician may place an ultrasound probe over the artery. He or she will use this to listen to the blood flow through the vessel.
- The technician will inflate the blood pressure cuff. He or she will increase the pressure until the blood stops flowing through the vessel. This may be a little uncomfortable, but it will not hurt. The technician will slowly release the pressure in the cuff.
- The technician will repeat this process on your other ankle and on both of your arms.
- Sometimes healthcare providers will combine an ABI test with an exercise test. You might have an ABI done before and right after exercise, to see how exercise changes this value.
- You should be able to go back to your normal activities right after your ABI test.

How to prepare for the test ?

- There is very little you need to do to prepare for an ABI test. You can follow a normal diet on the day of the test. You shouldn't need to stop taking any medicines before the procedure.
- You may want to wear loose, comfortable clothes. This will allow the technician to easily place the blood pressure cuff on your arm and ankle. You'll need to rest for at least 15 to 30 minutes before the procedure.

How the test will feel ?

- There is no discomfort associated with the test. The test is very similar to a standard blood pressure test. When the technician inflate the blood pressure cuff this may be a little uncomfortable, but it won't hurt.

What the risks are ?

- There are no risks associated with the test. The test is very similar to a standard blood pressure test.

Special considerations

- You may have ankle-brachial index testing before and immediately after walking on a treadmill. An exercise ankle-brachial index test can assess the severity of the narrowed arteries during walking.