

Ankle Brachial Pressure Index (ABPI) and Toe Brachial Index (TBI)



What are ankle brachial pressure indices (ABPIs)?

This test may also be called “a Doppler test”. It involves taking a blood pressure reading of your upper arms (at the level of the brachial artery) and ankles. The blood pressure in your arms and ankles should be the same, when you are lying down. In people with narrowed/blocked arteries in their legs, the blood pressure at the ankle will be lower than the arm.

This test is a safe and effective way to assess if there is any disease in the arteries of your legs. This will allow

the consultant to plan the appropriate treatment for you, if necessary.

The test involves inflating a blood pressure cuff, it should be painless but if it is uncomfortable please let us know. This test does not use any radiation or needles. There are no risks or side effects associated with this test.

How is an ABPI test performed?

There is no preparation required and you may eat and drink as usual prior to the test.

A clinical scientist or healthcare support worker (who might be male or female) will perform and interpret your ABPIs. You will be asked to remove your shoes and socks, roll up your trousers and sleeves to access the upper arm and ankles. You will then lie down on the couch. A blood pressure cuff will be placed around your arms and ankles. A small amount of gel will be placed on your arm and your ankles, and a “pencil” like device, called a handheld Doppler, will be used to listen to the blood flow.

The blood pressure cuffs will be pumped up to determine the blood pressure. This may feel tight but should not be painful.

The investigation takes approximately 30 minutes. During the test, you may hear some “swooshing” noises from the handheld Doppler. These sounds are normal. We may also use an automated ABPI kit where both arms and legs will be investigated at the same time.

An exercise test may also be performed. You may be asked to do some calf raises for up to 3 minutes and then the ABPI will be repeated. It can be stopped sooner if required.



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Toe Brachial Pressure Index:

The TBI is similar to the ABPI in that it compares the blood pressure in the toe to the blood pressure in the upper limb. A lower toe pressure would suggest a narrowing or blockage in a blood vessel. This test involves putting a small cuff on the big toe and a small sensor on the pad of the toe. The cuff will be inflated and deflated to obtain the reading. We will then place the sensor on your finger and the blood pressure cuff on your upper arm and repeat the process. This shouldn't be painful but might feel tight while we perform the test.

What happens next?

The person performing the test will inform you of the result and then write a report for the doctor who requested the scan.