

Ankle brachial pressure index

- The ankle brachial pressure index is a relatively simple method for quantifying the severity of arterial occlusion in the leg.
- It is important to note that ABPI's can only supplement clinical history and examination. There are many reasons for false high or low readings.
- ABPI readings are particularly unreliable in diabetic patients. The readings tend to be falsely elevated due to rigidity of the calf vessels.
- ABPI measurement should not delay referral in critical ischaemia
- Method
 - A blood pressure cuff is inflated around the lower calf muscle above the ankle joint, and a doppler ultrasound probe placed over the dorsalis pedis artery.
 - The maximum cuff pressure at which the Doppler signal (arterial waveform) can just be heard is recorded.
 - This should be repeated with the probe placed over the posterior tibial artery.
 - The higher of the two readings is related to the pressure measured over the brachial artery.
 - $ABPI = \text{brachial occlusion pressure} / \text{ankle occlusion pressure}$
- By definition peripheral arterial disease is present if the ABPI is less than 0.9. However, many patients with reduced ABPI are symptom free.
- The following table shows typical ABPI readings in various clinical states:

<u>Clinical status</u>	<u>ABPI</u>
Symptom free	≥ 0.9
Intermittent claudication	0.89 – 0.5
Rest pain	0.49 – 0.3
Ulceration and gangrene	≤ 0.29