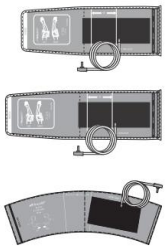
Microlife WatchBP Office ABI

ABI= Ankle Brachial Index
A measure of peripheral artery disease

Cuffs provided with WatchBP ABI



M (Medium size) for upper arm
22 - 32 cm (8.7 - 12.6 inches)
With air tube 130 cm

L (Large size) for upper arm
32-42 cm (12.6-16.5 inches)
With air tube 130 cm

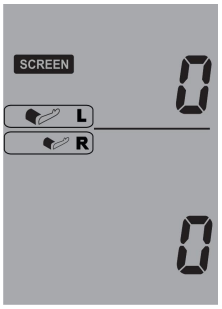
M (Medium size) for ankle
22 - 32 cm (8.7 - 12.6 inches)
With air tube 200 cm

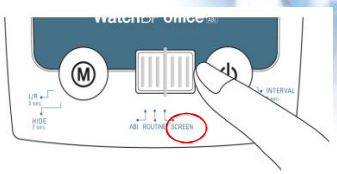
- Optional: S and XL size cuffs

Before starting the ABI assessment patient must have been in supine position for <u>at least</u> 5 minutes!

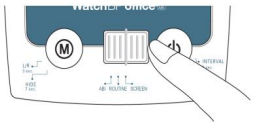
In the mean time the double-arm measurement can be done

Put the device in screen mode



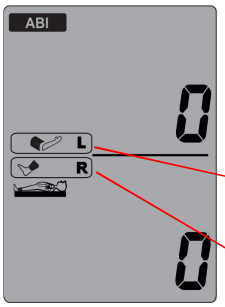


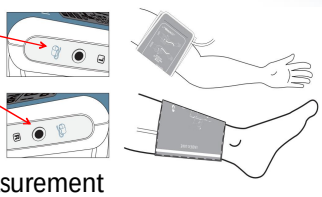
Measure both arms



- The arm with the highest blood pressure should be selected!
- Also look at the this signal:

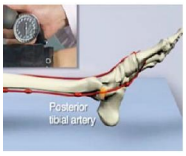
Put the device in ABI mode

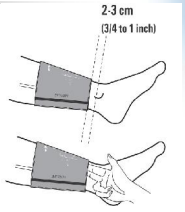




- Left (L): arm measurement
- Right (R): ankle measurement

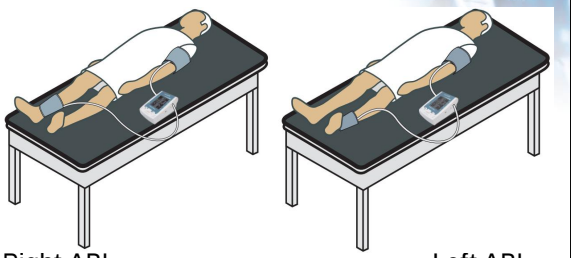
WatchBP Office ABI ankle cuff





- The cuff must be put on just above the ankle with the tube at the inside (tube upwards) of the leg
- The device measures the higher blood pressure of both the posterior tibial artery and the anterior tibial artery (proximal to the dorsalis pedis artery)

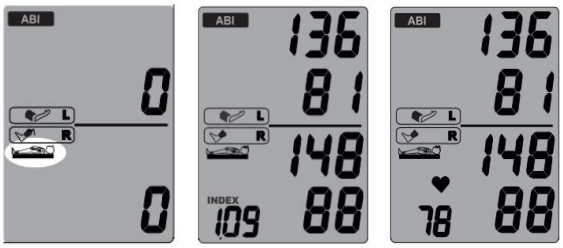
Measure the arm with the higher BP and both ankles!



Right ABI

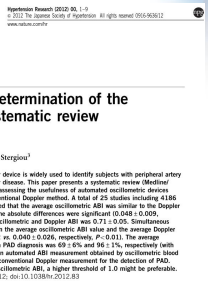
Left ABI

The ABI is automatically calculated



•ABI= 148/136 (systolic BP)

Oscillometric devices: threshold values for PAD is at an ABI value of 1.0



REVIEW

Automated oscillometric determination of the ankle-brachial index: a systematic review and meta-analysis

Willem J Verberk[1,2], Anastasios Kollias[3] and George S Stergiou[3]

Measurement of the ankle-brachial index (ABI) using a Doppler device is widely used to identify subjects with peripheral artery disease (PAD), and those who are at high risk of cardiovascular disease. This paper presents a systematic review (Medline/PubMed, Embase and Cochrane) and meta-analysis of studies assessing the usefulness of automated oscillometric devices for ABI estimation and PAD detection compared with the conventional Doppler method. A total of 25 studies including 4186 subjects were analyzed. A random-effects model analysis showed that the average oscillometric ABI was similar to the Doppler ABI (mean difference ± s.e. 0.020 ± 0.018, $P = 0.3$) but that the absolute differences were significant (0.048 ± 0.009, $P < 0.01$). The pooled correlation coefficient (r between the oscillometric and Doppler ABI was 0.71 ± 0.05. Simultaneous arm–leg measurements resulted in a smaller difference between the average oscillometric ABI value and the average Doppler ABI value than did sequential measurements (−0.012 ± 0.022 vs. 0.040 ± 0.026, respectively, $P < 0.01$). The average sensitivity and specificity of the oscillometric ABI estimation in PAD diagnosis was 69 ± 6% and 96 ± 1%, respectively (with Doppler ABI taken as the reference). These data suggest that an automated ABI measurement obtained by oscillometric blood pressure monitors is a reliable and practical alternative to the conventional Doppler measurement for the detection of PAD. To increase the sensitivity of the PAD diagnosis based on an oscillometric ABI, a higher threshold of 1.0 might be preferable.

Hypertension Research advance online publication, 28 June 2012; doi:10.1038/hr.2012.83

With Doppler this is 0.9

Threshold values WatchBP Office ABI (Advice)

ABI	Interpretation
>1.3	Abnormal Vessel hardening (from arterial disease)
1.0 - 1.3	Normal
0.9 – 1.0	Mild arterial disease
0.65 - 0.9	Moderate arterial disease
Lager 0.65	Severe arterial disease