

Microlife WatchBP Office ABI



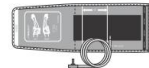
ABI= Ankle Brachial Index
A measure of peripheral artery disease



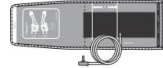
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Cuffs provided with WatchBP ABI



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



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



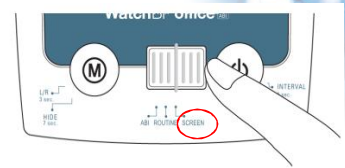
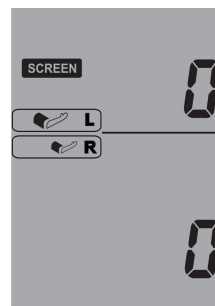
In the mean time the double-arm measurement can be done



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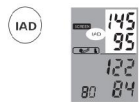
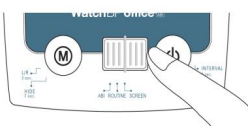
Put the device in screen mode



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Measure both arms



•The arm with the highest blood pressure should be selected!

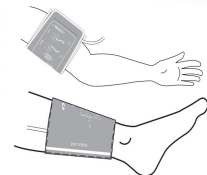
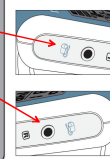
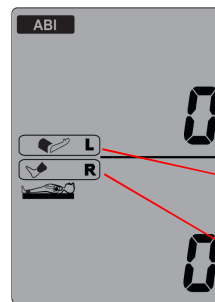
•Also look at the this signal:



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Put the device in ABI mode



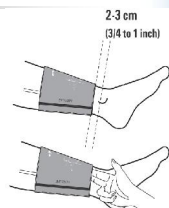
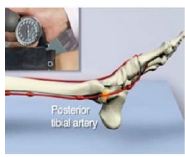
•Left (L): arm measurement
 •Right (R): ankle measurement



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WatchBP Office ABI ankle cuff



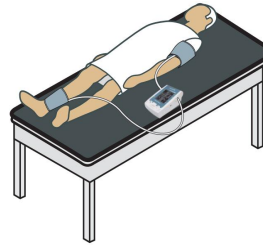
- The cuff must be put on just above the ankle with the tube at the inside (tube upwards) of the leg
- The device measures the higher blood pressure of both the posterior tibial artery and the anterior tibial artery (proximal to the dorsalis pedis artery)

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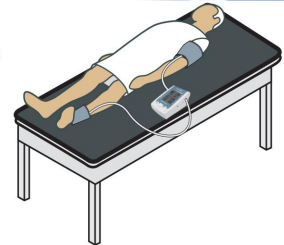
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Measure the arm with the higher BP and both ankles!



Right ABI



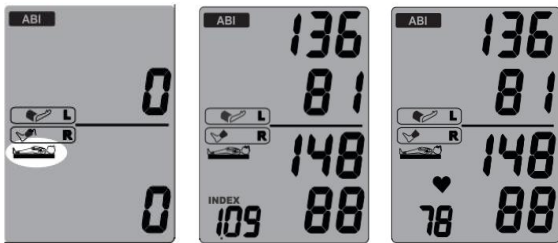
Left ABI

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The ABI is automatically calculated



•ABI= 148/136 (systolic BP)

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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 Kollias³ and George S Stergios¹

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 (Medical Publications, Embase and Cochrane) and meta-analysis of studies assessing the performance 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 (ρ) 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 ($\rho = 0.822 ± 0.022$ vs. $0.680 ± 0.026$, 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 2012; 35: 1-9
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DOI: 10.1093/eurh/hhr212

With Doppler this is 0.9

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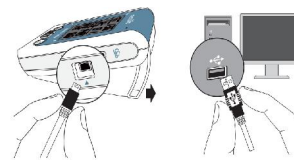
Threshold values WatchBP Office ABI (Advice)

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

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WatchBP office Cardiovascular Screening Report

ID	Name	DOB	Physician									
01234567	Kevin Wu	1980/1/1	PH									
Sex	M	Measurement Day	2010-12-13 13:32									
Right ABI	1.00	Left ABI	1.00									
Measurement Date	2010-12-13 13:32	Measurement Date	2010-12-13 13:32									
S	148/110/80	S	148/110/80									
D	78	D	78									
Average	1.00	Average	1.00									
Right Brachial	Measurement	Left Brachial	Measurement									
S	148/110/80	S	148/110/80									
D	78	D	78									
Average	148/110/80	Average	148/110/80									
Right Ankle	Measurement	Left Ankle	Measurement									
S	148/110/80	S	148/110/80									
D	78	D	78									
Average	148/110/80	Average	148/110/80									
Screen mode	Measurement Date	Time	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right
S	2010-12-13 13:32	13:32	148	110	80	148	110	80	78	78	78	78
D	2010-12-13 13:32	13:32	78	78	78	78	78	78	78	78	78	
Average	2010-12-13 13:32	13:32	148	110	80	148	110	80	78	78	78	
Result mode	Measurement Date	Time	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right
S	2010-12-13 13:32	13:32	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
D	2010-12-13 13:32	13:32	78	78	78	78	78	78	78	78	78	
Average	2010-12-13 13:32	13:32	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	

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