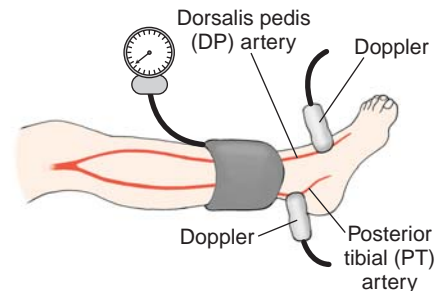
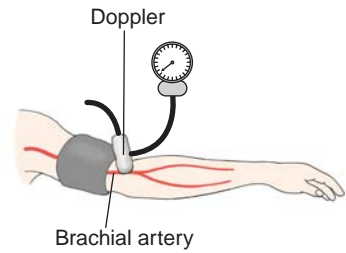


Using the Ankle-Brachial Index

Instructions for Measuring the Ankle-Brachial Index (ABI)

1. Patient should rest supine in a warm room for at least 10 minutes before testing.
2. Place blood pressure cuffs on both arms and ankles as illustrated, then apply ultrasound gel over brachial, dorsalis pedis, and posterior tibial arteries.
3. Measure systolic pressures in the arms
 - Use Doppler to locate brachial pulse
 - Inflate cuff 20 mm Hg above last audible pulse
 - Deflate cuff slowly and record pressure at which pulse becomes audible
 - Obtain 2 measures in each arm and record the average as the brachial pressure in that arm
4. Measure systolic pressures in ankles
 - Use Doppler to locate dorsalis pedis pulse
 - Inflate cuff 20 mm Hg above last audible pulse
 - Deflate cuff slowly and record pressure at which pulse becomes audible
 - Obtain 2 measures in each ankle and record the average as the dorsalis pedis pressure in that leg
 - Repeat above steps for posterior tibial arteries
5. Calculate ABI



$$\text{Right ABI} = \frac{\text{highest right average ankle pressure (DP or PT)}}{\text{highest average arm pressure (right or left)}}$$

$$\text{Left ABI} = \frac{\text{highest left average ankle pressure (DP or PT)}}{\text{highest average arm pressure (right or left)}}$$

Site	1st reading	2nd reading	Average	Site	1st reading	2nd reading	Average
Left brachial				Right brachial			
Left dorsalis pedis				Right dorsalis pedis			
Left posterior tibial				Right posterior tibial			

Ankle-Brachial Index Calculator

$$A - BI = S_A \div S_B$$

Enter values for systolic pressure at:

The ankle: mm/Hg

The brachial artery: mm/Hg

Ankle-brachial index:

Interpretation of Ankle-Brachial Index

- >0.90 (with a range of 0.90 to 1.30) = Normal lower extremity blood flow
- <0.89 to >0.60 = Mild PAD
- <0.59 to >0.40 = Moderate PAD
- <0.39 = Severe PAD

(Sources: *Ankle-Brachial Calculator*—American College of Physicians. Available at: <http://cpsc.acponline.org/enhancements/232abiCalc.html>. Accessed July 3, 2007. Laine C, Goldman D, Wilson JF. In the clinic: peripheral arterial disease. *Ann Int Med* 146(5):ITC 3-1, 2007.)