

ABPI (Ankle-Brachial Pressure Index)

		brachial systolic pressure (mmHg)											
		100	110	120	130	140	150	160	170	180	190		200
ankle systolic pressure (mmHg)	20	0.20	0.18	0.17	0.15	0.14	0.13	0.13	0.12	0.11	0.11	0.10	very severe ischemia
	30	0.30	0.27	0.25	0.23	0.21	0.20	0.19	0.18	0.17	0.16	0.15	
	40	0.40	0.36	0.33	0.31	0.29	0.27	0.25	0.24	0.22	0.21	0.20	
	50	0.50	0.45	0.42	0.38	0.36	0.33	0.31	0.29	0.28	0.26	0.25	severe ischemia
	60	0.60	0.55	0.50	0.46	0.43	0.40	0.38	0.35	0.33	0.32	0.30	
	70	0.70	0.64	0.58	0.54	0.50	0.47	0.45	0.41	0.39	0.37	0.35	moderate ischemia
	80	0.80	0.73	0.67	0.62	0.57	0.53	0.50	0.47	0.44	0.42	0.40	
	90	0.90	0.82	0.75	0.69	0.64	0.60	0.56	0.53	0.50	0.47	0.45	
	100	1.00	0.91	0.83	0.77	0.71	0.67	0.63	0.59	0.56	0.53	0.50	mild ischemia
	110	1.10	1.00	0.92	0.85	0.79	0.73	0.69	0.65	0.61	0.58	0.55	
	120	1.20	1.09	1.00	0.92	0.86	0.80	0.75	0.71	0.67	0.63	0.60	
	130	1.30	1.18	1.08	1.00	0.93	0.87	0.81	0.76	0.72	0.68	0.65	normal
140	1.40	1.27	1.17	1.08	1.00	0.93	0.88	0.82	0.78	0.74	0.70		
150	1.50	1.36	1.25	1.15	1.07	1.00	0.94	0.88	0.83	0.79	0.75		
160	1.60	1.45	1.33	1.23	1.14	1.07	1.00	0.94	0.89	0.84	0.80		
170	1.70	1.55	1.42	1.31	1.21	1.13	1.06	1.00	0.94	0.89	0.85		
180	1.80	1.64	1.50	1.38	1.29	1.20	1.13	1.06	1.00	0.95	0.90		
190	1.90	1.73	1.58	1.46	1.36	1.27	1.19	1.12	1.06	1.00	0.95		
200	2.00	1.82	1.67	1.54	1.43	1.33	1.25	1.18	1.11	1.05	1.00		

Use this table as a guide to interpret ABPI values in relation to compression.

- **ABPI < 0.5: Very severe and severe ischemia**
- Compression should not be used
- **ABPI 0.5–0.8: Moderate and mild ischemia**
- 3M™ Coban™ 2 Layer Lite Compression System
- **ABPI ≥ 0.8: Normal**
- 3M™ Coban™ 2 Layer Lite Compression System, 3M™ Coban™ 2 Layer Compression System

Position Statement on the Use of the Ankle Brachial Index in the Evaluation of Patients with Peripheral Vascular Disease. A Consensus Statement Developed by the Standards Division of the Society of Interventional Radiology

ABIs as high as 1.10 are normal; abnormal values are those less than 1.0. The majority of patients with claudication have ABIs ranging from 0.3 to 0.9. Rest pain or severe occlusive disease typically occurs with an ABI lower than 0.50. Indexes lower than 0.20 are associated with ischemic or gangrenous extremities.

Sacks D., MD et al; J Vasc Interv Radiol 2003; 14:S389



Assessing an Ankle-Brachial Pressure Index (ABPI)

An Ankle-Brachial Pressure Index (ABPI) is a noninvasive method of assessing the patient's arterial circulation by comparing the brachial systolic pressure and the ankle systolic pressure.

Equipment

- Blood-pressure cuff (sphygmomanometer cuff)
- Hand-held Doppler ultrasound
- Ultrasound gel

Instructions

1. Position the patient lying as flat as he or she can tolerate. Allow 15 minutes for the patient to adjust to this position.
2. Place the blood-pressure cuff around his or her arm, making sure the cuff is the appropriate size and length for the limb. Apply ultrasound gel over the brachial pulse.
3. Hold the Doppler probe at a 45 to 60 degree angle over the brachial pulse until a strong pulse is obtained.
4. Inflate the cuff until the Doppler signal disappears. Slowly deflate the cuff until the signal returns. The measurement at which the signal returns is the brachial systolic pressure.
5. Remove the cuff from the arm. Repeat this process in the other arm. Record the highest of the two readings.
6. Place the blood-pressure cuff around the affected leg, immediately above the ankle. Cover any area of ulceration with gauze prior to blood-pressure cuff placement.
7. Palpate the posterior tibial pulse or dorsalis pedis pulse. If unable to palpate pulses, use Doppler probe to assess.
8. Place the probe with ultrasound gel at a 45 to 60 degree angle and hold in position.
9. Inflate the blood-pressure cuff until the signal disappears. Slowly deflate the cuff until the signal returns. This is the ankle systolic pressure.
10. To calculate the ABPI, divide the ankle pressure by the brachial pressure.

$$ABPI = \frac{\text{Ankle systolic pressure}}{\text{Brachial systolic pressure}}$$



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Interpretation

- Normal resting pressure is generally 1.0.
- An ABPI of less than 0.8 indicates mild to moderate arterial occlusive disease. Apply leg compression only with the supervision of a licensed health care professional.
- An ABPI of less than 0.5 indicates severe arterial occlusive disease.
- Obtain an ABPI on the unaffected limb to provide a reference value.
- Abnormal results should be referred to a physician.
- Wound debridement should not be attempted if ABPI < 0.8.
- ABPI values are often falsely elevated in patients with diabetes and may be an unreliable indicator of perfusion status.

3M™ Coban™ 2 Layer Compression System

3M™ Coban™ 2 Layer Compression System is designed to consistently deliver comfortable, therapeutic compression for the treatment of venous leg ulcers and other conditions where compression therapy is appropriate. Can be used with ABPI greater than or equal to 0.8.

3M™ Coban™ 2 Layer Lite Compression System is specifically designed to be comfortable for patients less tolerant of compression therapy, have mixed etiology with an ABPI greater than or equal to 0.5, are new to compression, or where tolerance is not known, are frail or less mobile.

