

ABI Screening Procedure

Please Read the User Manual first– This is a quick reference guide

Contraindications: Do not perform the ABI exam on someone suspected of having acute deep venous thrombosis, and do not take an arm pressure in an arm with a shunt or dialysis graft.

Patient Preparation: The patient should be relaxed in a supine position for 5-10 minutes in a warm room. Explain the examination to the patient. This is an ideal time to enter patient information

The ABI Procedure

- Wrap appropriate cuffs at each site – generally 12cm cuffs on the arms and 10cm cuffs on the ankles.



Arm Pressure

- Connect the aneroid hose to the right arm cuff. Place the Doppler probe at an angle to the skin over either the radial (preferred) or brachial artery. Use plenty of ultrasonic gel and slowly move the probe until the best signal is obtained.
- Inflation the cuff until you no longer hear the signal, and continue for an additional 20 mmHg.
- Slowly bleed pressure down until the signal returns and note that return pressure. This is the systolic pressure. Then rapidly deflate the cuff. Enter the pressure into the respective brachial field on the report.

- Inflation and bleed the cuff as you did with the PT artery and arm, noting return pressure. Enter the systolic pressure into the respective DP field on the report.
- When finished with the right side move to the left ankle.
- Take the ankle pressures at the PT and the DP.
- Follow by taking the left brachial arm pressure.

Calculating the ABI

An ABI value is determined for each leg.

Use the higher of the two pressures at the ankle (either the PT or the DP) and divide that by the higher of the two arm pressures to determine the ABI for each leg.

Ankle Pressures

- Now take the pressures at the right ankle, using the Doppler probe on the posterior tibial (PT) artery, which is usually found just behind (roughly half an inch- about the diameter of a dime) the ankle bone. Occlude the artery in the same manner you did on the arm in the previous step, noting return pressure. Record return pressure in the respective field on report.
- Now take the pressure using the Doppler probe on the dorsalis pedis (DP) artery, which is usually right on top of the foot. Avoid occluding the artery by pressing too hard with the probe, be gentle.

Helpful Hints

- Hold the probe close to the end and support the probe with your hand resting on the patient so that the probe does not move as the cuff is inflated and deflated. It also helps to rest your hand on the patient to keep the probe in place. One of the keys to a successful exam is being able to keep the probe in place as you inflate and deflate. If it moves you will not be able to hear the Doppler sounds return and you will have to repeat the inflation. The "**Cheater**" will help with all these issues – be sure and fill it with plenty of gel.
- If the ankle pressure is high, above 200 mmHg, or the cuff cannot obliterate the Doppler sounds, this indicates that the artery may be incompressible due to calcification.

Don't be discouraged if measuring the ABI seems slow or clumsy at first. Like any procedure, the ABI becomes easier to do with practice. As you become more comfortable with the exam, you may also change the order of above steps as fits your practice.