

TBPI WORKSHEET

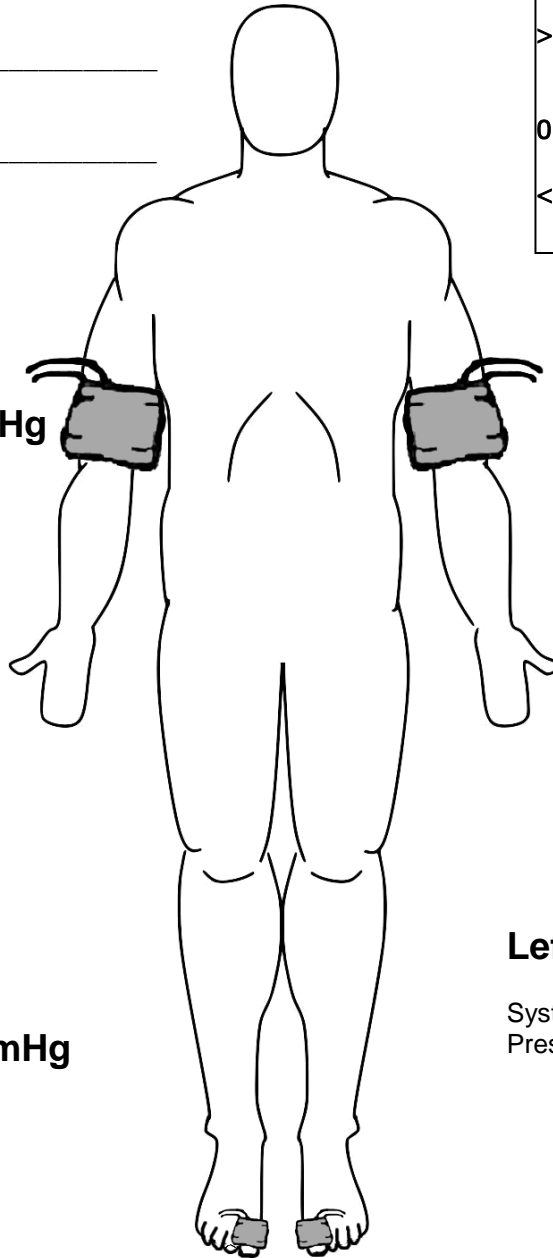
TBPI INTERPRETATION

> 0.7	Normal indicating no arterial Disease
0.64 - 0.7	Borderline
< 0.64	Abnormal indicating arterial disease

Date _____

Patient Name _____

Clinician Signature _____



Right Arm

Systolic Pressure mmHg

Left Arm

Systolic Pressure mmHg

Right Great Toe

Systolic Pressure mmHg

Left Great Toe

Systolic Pressure mmHg

Right TBI equals Ratio of:

$$\frac{\text{Right Toe Pressure } \boxed{}\boxed{}\boxed{} \text{ mmHg}}{\text{Higher Arm Pressure (right or left arm) } \boxed{}\boxed{}\boxed{} \text{ mmHg}} = \boxed{}.\boxed{}\boxed{} *$$

Left TBI equals Ratio of:

$$\frac{\text{Left Toe Pressure } \boxed{}\boxed{}\boxed{} \text{ mmHg}}{\text{Higher Arm Pressure (right or left arm) } \boxed{}\boxed{}\boxed{} \text{ mmHg}} = \boxed{}.\boxed{}\boxed{} *$$

* The lower of these numbers is the overall TBPI.

Overall TBPI _____

PERFORMING THE TBPI TEST

The TBPI measurement is performed with the patient resting in a supine position. The systolic blood pressure is determined in both arms, and the ankle systolic blood pressure is determined for the right and left posterior tibial (PT) and the dorsalis pedis (DP) arteries. The TBPI for each leg is determined by dividing the toe pressure by the higher of the two brachial readings. The lower TBPI of the two is used for diagnostic purposes.

TBPI PROCEDURE

Step 1. Have the patient lie in a supine position with shoes and stockings removed for at least 10 minutes prior to obtaining blood pressure measurements.

Step 2. Apply the blood pressure cuff snugly on the upper arm with the lower edge of the cuff 1 inch above the antecubital fossa. Usually the cuff that is the appropriate size for the patient's arm will also be suitable for the ankle pressure measurement. In the rare instance that upper arm and ankle pressures are markedly different, choose cuff sizes that are appropriate for each site.

Step 3. Apply a 1–2 centimeter ribbon of Doppler gel to the antecubital area. Be sure to use enough gel.

Step 4. Turn the Doppler probe on and place it at the antecubital area at approximately a 60-degree angle to the surface of the skin. Move the probe around until the clearest arterial pulse sounds are heard and keep the probe at that position.

Step 5. Inflate the blood pressure cuff to approx. 20 mm Hg above the numerical reading where the pulse sounds cease.

Step 6. Deflate the cuff at a rate of 2 mm Hg per second until the first arterial pulse sound is heard (Korotkoff sound). When this number is determined, deflate the cuff completely and record this systolic reading. Remove the gel from the patient's skin with a tissue.

Step 7. Repeat the procedure in the other arm and record reading

Step 8. Palpate the area around the medial malleolus to find the posterior tibial (PT) arterial pulse.

Step 9. Place the toe cuff around the base of the great toe. (Use the second toe if the great toe can't be used.)

Step 10. Palpate the pulse signal on the toe's distal pad area. Apply transmission gel to the pulse site.

Step 11. Place the tip of the Doppler probe onto the gel at a 45-degree angle to the skin surface. Direct the probe toward the patient's head to detect the pulse signal.

Step 12. Slowly inflate the toe cuff until the pulse signal is no longer heard (to a maximum of 200 mm Hg). A partial squeeze should adequately inflate the cuff.

Step 13. Slowly deflate the cuff until the pulse signal returns. The point where the pulse signal returns is the toe's systolic pressure.

Step 14. Remove the toe cuff. Use gauze pads to remove leftover gel from the patient's skin and from the Doppler probe. Gently clean the Doppler probe with a damp cloth.

Step 15. Repeat the procedure in the other foot and record reading

Step 16. Use the TBPI worksheet page to calculate the patient's Toe Brachial pressure index.

HELPFUL HINTS

- Follow the instructions specific to the Doppler probe you are using.
- Be sure to use enough gel.
- Use appropriate cuff size, the cuff width should be 20% larger than the limb diameter to compress all of the soft tissue evenly.
- Be sure you're centered on the pulse when you take the reading; if you're off to the side, the reading will be low.
- Ensure the patient has avoided tobacco and caffeine for 30 minutes before the procedure; both can increase blood pressure
- Patients with an TABI value of 0.64 or less are diagnosed as having LEAD (Lower extremity arterial Disease) and considered at increased risk for cardiovascular ischemic events. Prompt investigation and risk-reducing treatments are then warranted.