

# Penile Brachial Examination with simpleABI Cuff-Link Systems

## Rule out Peripheral Artery Disease

- With the patient in a supine position obtain bilateral brachial and ankle systolic pressures and calculate ankle brachial indices (ABI).
- An abnormal ABI should be followed with a full segmental exam or duplex scan to determine if aorto-iliac artery disease is present.

## Physical exam

- Palpate pedal pulses and evaluate for apparent ischemic changes in feet that may signal the presence of peripheral arterial disease.

## Penile systolic pressure

- Apply an appropriately sized penile blood pressure cuff to the base of the penis and connect cuff to a pressure manometer.
- Apply acoustic gel to the penis just proximal to the glans and locate a dorsal artery with a vascular Doppler probe.
- Inflate the cuff slowly keeping the probe over the artery to obliterate signal.
- Slowly deflate the cuff until Doppler signal returns and note the penile systolic pressure. Repeat the pressure measurement to assure reproducibility.
- The penile pressure test may also be performed with PPG instead of Doppler.

## Penile Brachial Index (PBI)

Divide the penile pressure by the higher of the two brachial pressures to calculate this index

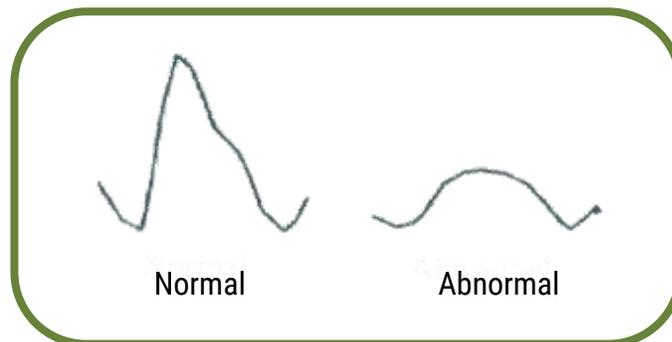
**0.7 - 1.0 = normal**

**0.6 - 0.7 = borderline normal**

**< 0.6 = abnormal**

## Pulse Volume Recording (PVR)

1. Connect the penile cuff to the PVR instrument and inflate cuff to 65 mmHg.
2. Record several PVR waveforms.
3. A PVR waveform that is low in amplitude and of rounded contour is abnormal, as shown below.



## Helpful Hints

Hold the probe close to the end and support the probe on the skin 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.