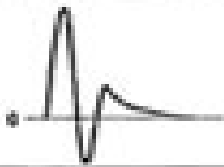


ANALYSIS OF LOWER EXTREMITY DOPPLER ARTERIAL WAVEFORM PATTERNS

The Doppler arterial waveforms obtained from the lower extremity may be classified into six categories as an aid in interpretation.

TYPE	TYPICAL WAVEFORM	FINDINGS
O		The contour exhibits a steeply rising upstroke at the onset of systole, rapid systolic downstroke, and reverse flow (below baseline). Doppler sounds are loud and sharp. Normal peak forward velocity = 30 ± 10 cm at the dorsalis pedis artery.
I		The contour demonstrates a strong but diminished systolic component and loss of reverse flow. The width of systolic pulse is broadened. The Doppler sounds are diminished very little as compared to the type "O" pattern.
II		The contour shows prolongation of both the upstroke and the downstroke and diminished waveform amplitude (flattening). Doppler sounds are heard during systole and continuing through all or most of diastole.
III		The contour exhibits slowly rising velocity during systole, and the amplitude of the waveform is reduced. Doppler sounds are not sharp even during systole.
IV		The amplitude of the waveform and the Doppler sounds is greatly reduced.
V		The amplitude of the waveform is extremely reduced. The contour is hardly recognizable as an arterial blood flow waveform. The Doppler sounds are very faint.

Normal Peak Forward Velocity in Cm/Sec

Femoral Artery
Posterior Tibial Artery
Dorsalis Pedis Artery

40.7 ± 10.8 (from 29.8 cm/sec to 51.6 cm/sec)
 16.0 ± 10.0 (from 6 cm/sec to 26 cm/sec)
 16.8 ± 5.7 (from 11.1 cm/sec to 22.5 cm/sec)