

When symmetry in foot function during gait is perturbed, undesired torque can be generated, and stress is transmitted along and within the tendons and muscles, ligaments and bones. Torque and stress are mechanical components that for which continuous over-time, wear and tear body tissues, thus potential causes for symptoms of discomfort and pain.

Asymmetry in gait can be measured using F-Scan®. Symptoms associated with gait asymmetry include:

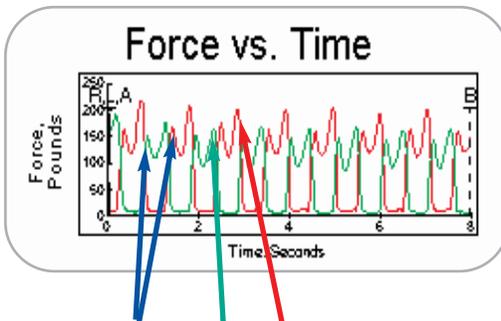
- Left knee pain when running
- Stiff big toes when walking.
- Calluses on medial side of big toe.

Measure asymmetry, act on the cause, and eliminate symptoms of discomfort and pain using F-Scan.

Gait Curve - Force vs. Time graph of vertical ground reaction forces - Improving asymmetry.

1. 3/4 length test/temp orthotics with 1/4 in. heel lift added under right heel.

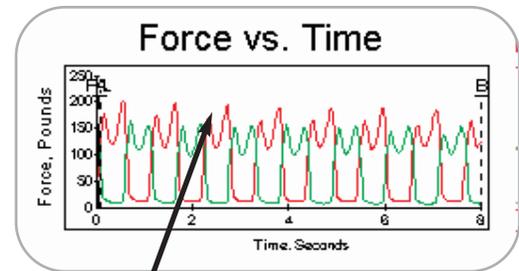
B
E
F
O
R
E



Note asymmetry in curve patterns. Right foot shows greater forces at toe-off relative to left foot, and during heel strike for both feet.

Desired outcome is to reduce differences in peak forces during toe-off for right foot relative to right heel strike, and relative to heel strike and toe-off of left foot.

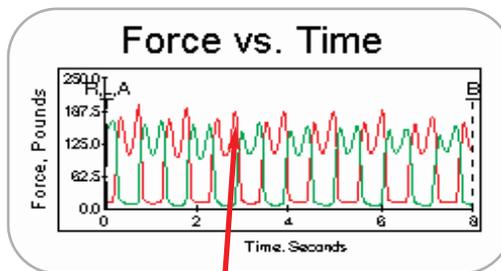
A
F
T
E
R



Note reduction of peak forces at toe-off for right foot with respect to right heel strike, and relative to heel strike and toe-off of left foot. Some reduction in asymmetry has been achieved.

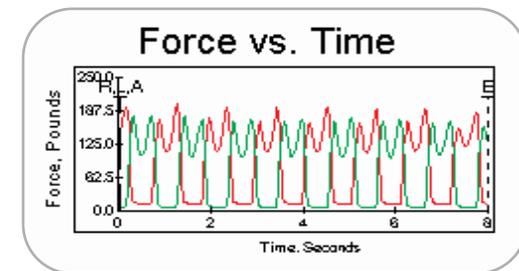
2. Cut-outs in orthotic under 1st metatarsal heads now made.

A
F
T
E
R



Note more reduction in peak forces during right toe-off relative to right heel strike, left heel strike and toe-off. There is now much improved symmetry between left and right curve patterns.

A
F
T
E
R



1/8 in. heel did not have effect on peak forces and patterns of curves. Lower limb mechanics can be such that 1/8 in. under both heels has little effect on symmetry of gait for this patient.