

Foot Centering Biomechanics Glossary

This Foot Centering Biomechanics Glossary has been assembled to help define and explain some of the terminology and nomenclature that replaces several examples of the antiquated iconic language of Biomechanics in order to better understand this replacement.

They are presented alphabetically without regard to importance or usefulness.

The BioKickstand of the Foot

The most complex biomachine of Biomechanics. It is located at the 1st MTPJ of the forefoot. It engages and disengages when working. When it can no longer engage it is said to be broken. The foot loses its ability to become a rigid lever in closed chain when the BioKickstand is broken. It must be fixed or replaced when broken.

Disengaged Joint

- 1. The flexible, more adaptable phase of a working joint where the Joint surfaces are the least congruous allowing motion to occur between the bones**
- 2. The singular phase of a broken joint in need of repair or replacement due to a lack of its ability to engage**

Dynamic Foot Braces (DFB's)

Custom Foot Inserts proven restorative and corrective for controlling the stability, support, strength, symmetry and balance of the foot and posture. DFB's incorporate Foot Centering Biomechanics and are cast, dispensed, monitored and maintained Functional Foot Type specific by Certified Professionals

Engaged Joint

A joint with a joint space in closed-packed position that has maximal joint surface congruency. The effect of closed packing of a joint is to stabilize the bones that the joints connect to function as if they are one bone

Flexible Adapter Foot

The phase of foot function where the joints of the foot are disengaged allowing for reduced joint surface congruency. This allows more flexibility and movement and less stiffness between the bones it connects

Foot Centering Biomechanics

Foot Centering Biomechanics begins with the assertion that Newtonian Mechanics may not perfectly apply to living, thinking, reactive organisms such as man that have the ability to internally react to, foster or deny its primary laws and principles.

FC Biomechanics is an integrative system that exists from the ground up beginning with the feet. It subgroups all feet into one of five Functional Foot Type cohorts that can then be treated aggressively and safely independent from the other functional foot types for better outcomes.

It focuses on the joints and their ability to close pack bone segments or allow them to be more flexible and moveable allowing us to stand and task efficiently and injury free for a lifetime.

Utilizing SERM-PERM Testing and Optimal Functional Positioning to control and maneuver the Five Harmonies of Life (Stability, Support, Strength, Symmetry and Balance)

Foot Centering Biomechanics includes diagnostic and treatment tools and protocols that are utilized functional foot type specific including wedges, kinesiology tape, foot inserts and exercise and movement programs based on science and existing evidence and artistic, professional and clinical success.

Foot Centering Wedges

Foot Centering Wedges are U.S. Patented solid pieces of adhesive felt and foam. There is a heel pad shape (felt), a half heel pad shape (felt), a vault shape (foam) and a forefoot shape (felt), These wedges are applied to any foot on an existing foot orthotic, shoe insert or directly to the inside of a shoe, Functional Foot Type Specific, to affect the weightbearing structure and function of the foot.

Functional Foot Typing

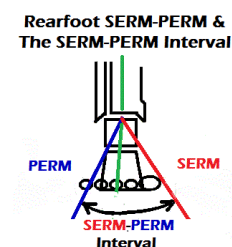
Functional Foot Typing is a U.S. Patented methodology (like Blood Typing) that classifies all feet into five subgroups depending on their rearfoot and forefoot characteristics for the purpose of developing and utilizing classifications for diagnosis and treatment. Functional Foot Typing develops Consensus among its users and patients, better predictable clinical outcomes and better research opportunities

Optimal Functional Position

A limited range of positions of a foot in stance or function that maintains the efficiency, performance and longevity of that foot structurally. Gravity, grf and shoes while serving important useful purposes also contribute unfavorable forces that must be dampened or overcome in order to reduce degeneration, deformity, injury and performance issues.

PERM (see SERM and the SERM-PERM Interval)

The Pronatory End Range of Motion of a joint in both open and closed chain useful to measure the total range of motion of that joint as one half of SERM and PERM. A qualitative statistic reported as a direction on the dominant plane of motion of the joint (inverted-everted, dorsiflexed-plantarflexed, abducted-adducted)

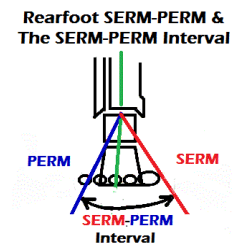


Rigid Lever Foot

The phase of foot function where the Joints of the foot are engaged producing increased joint surface congruency. The result is less flexibility and movement and more stiffness and stability between the Bones it connects (Closed Packing)

SERM (see PERM and the SERM-PERM Interval)

The Supinatory End Range of Motion of a Joint in both Open and closed chain useful to measure the total range of motion of that joint as one half of SERM and PERM. A qualitative statistic reported as a direction on the dominant plane of motion of the joint (inverted-everted, dorsiflexed-plantarflexed, abducted-adducted).



The SERM-PERM Interval (see SERM and PERM)

The interval of motion between the SERM and PERM of a Joint. A qualitative statistic reported as low, medium or high. Motion within the SERM-PERM Interval is efficient and injury free.

The Vault of the Foot:

The Vault of The Foot is a three dimensional area that is defined by the bones bordering the two longitudinal arches and the roof that connects them and the skin and connective tissue floor below. The Vault contains connective tissues, muscles, nerves, ligaments, vascular elements body fluids. The Vault of the Foot changes in shape (open or closed chain), density and function depending on the state of the foot and the actions and tasks it is performing (rigid lever, flexible adapter).