

SMNZ (Waikato) Evening
Seminar Series
Clinical Gems
Foot “core” training

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MSc (Medicine) Exercise Science

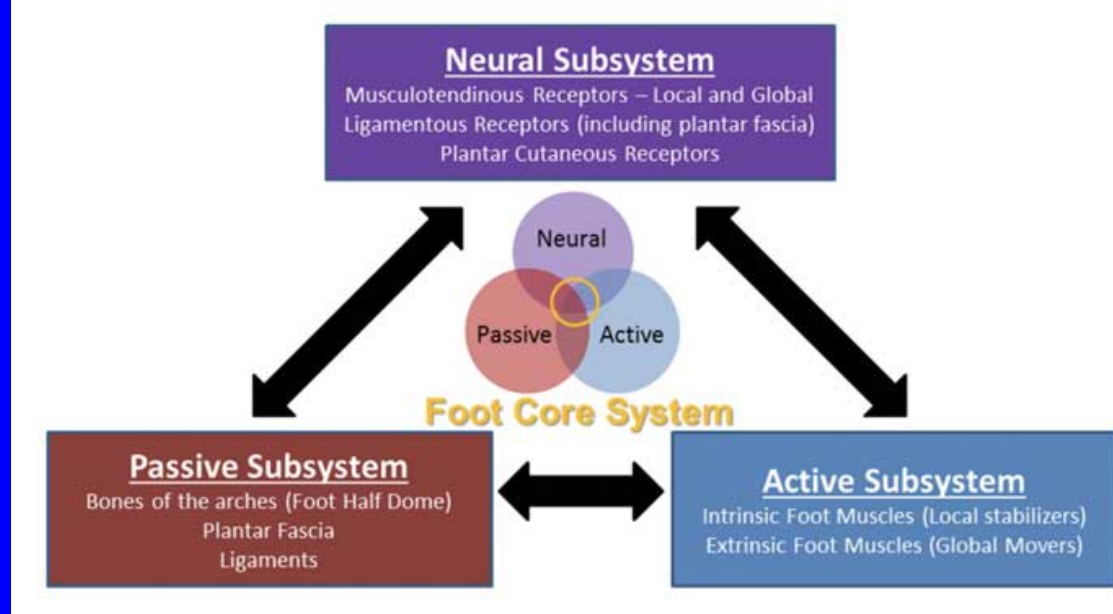
Registered Clinical Exercise Physiologist (CEPNZ)



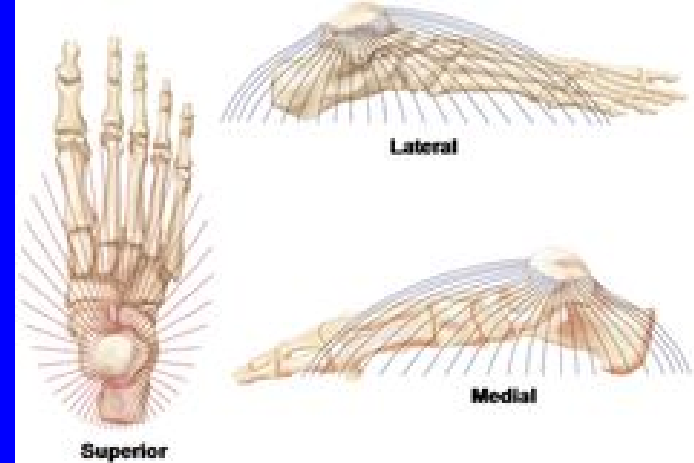
The foot “core” system

Three subsystems:

- **Passive**
 - Bones, ligaments and joint capsules
- **Active**
 - Muscles and tendons
- **Neural**
 - Sensory receptors in the plantar fascia, ligaments, muscles, tendons and joint capsules



Foot core system (cont.)

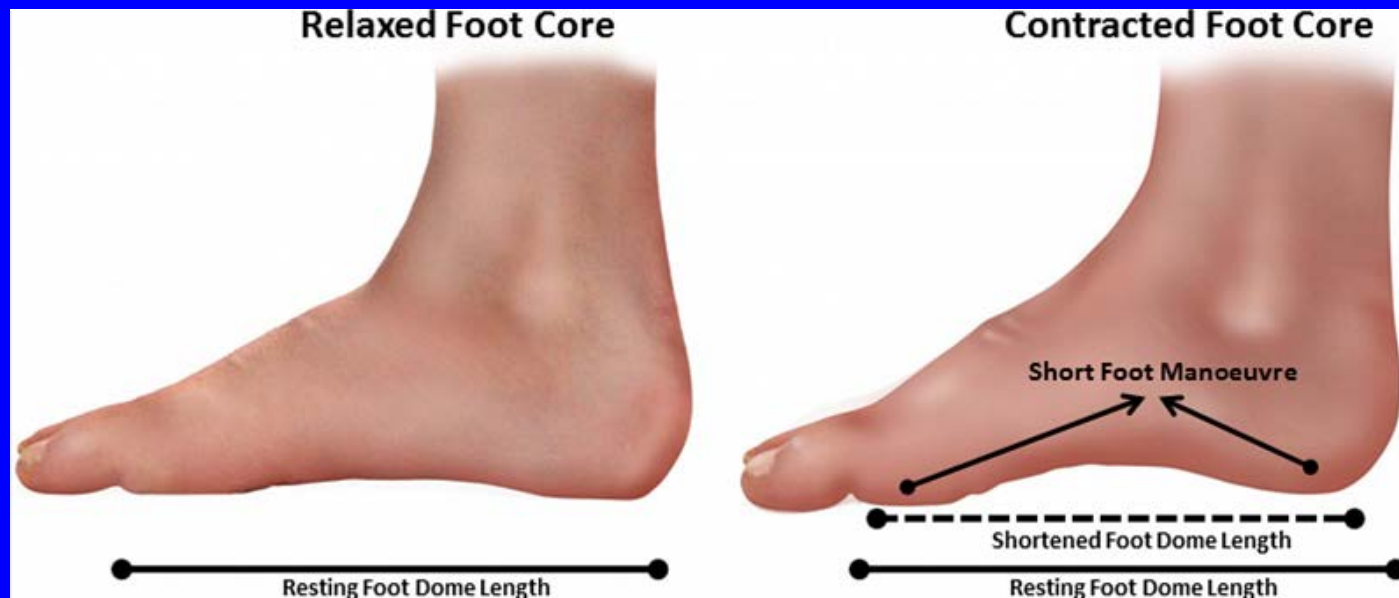


- “The functional configuration of the bony anatomy of the foot results in four distinct arches – medial & lateral longitudinal; anterior and posterior transverse metatarsal arches” (McKeon et al. 2015, pg2).
- McKenzie (1955) proposed that these arches work as “functional half domes”, able to flex and adapt to load changes during dynamic activities.

Foot “core” Exercises

Freeing the Foot – Integrating the Foot Core System into Rehabilitation for Lower Extremity Injuries (McKeon & Fouchet, Clin Sports Med, 2015)

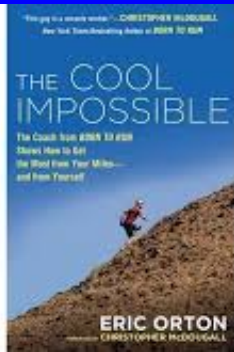
Isolated foot core training Short foot contraction



Foot “core” Exercises

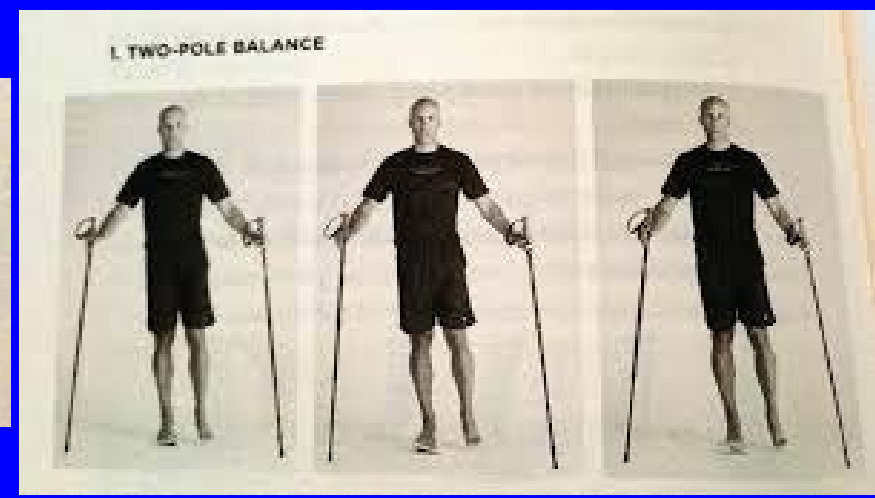
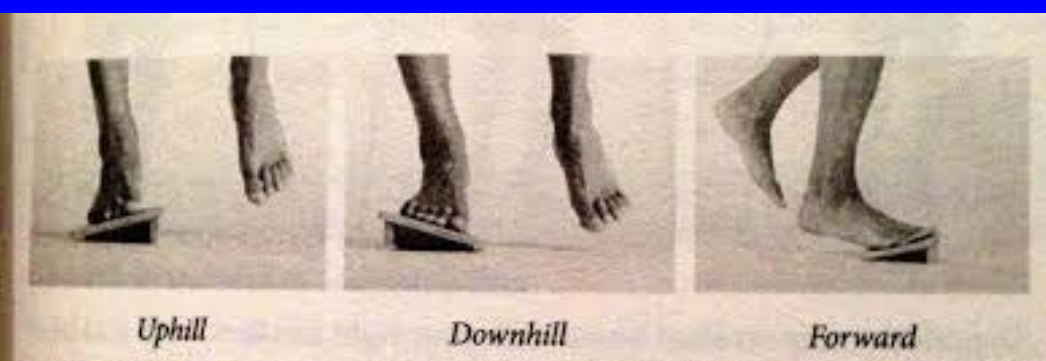
Neuromuscular Electrostimulation (NMES)
for Active-Assisted Intrinsic Foot muscle
training (McKeon & Fouchet, 2015)





Foot “core” Exercises

- Balance & foot muscle retraining (Orton, 2013)
- 30° Slant board :
- Start with 2 poles for balance (30s; 60s; 2min)



Foot “core” Exercises

- Balance & foot muscle retraining (Orton, 2013)
- Progress to 1 pole; then no poles for balance (30s; 60s; 2min)

Forward



Uphill



Downhill



Advanced Foot “core” Exercises

Side lift (uphill)

Frog lift (downhill)

Knee drive
(forward)

