

Orthotic Design Question 1, Coronal Plane: What support is required to correct alignment of hindfoot and midfoot in the coronal plane to allow dorsiflexion to occur **primarily** at the talocrural joint as the shank advances over the foot?
(Weightbearing Corrective Force Test)



Tactile cues

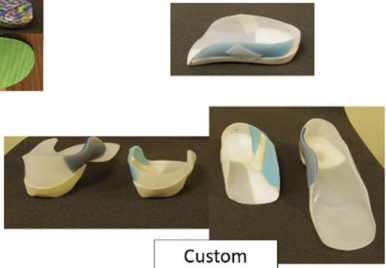
Support at the calcaneus, medial longitudinal arch

Support at the calcaneus, ST, medial longitudinal arch, shaft of the 5th metatarsal

No Intervention/monitor/foot core training



Group 1: Foot Orthotics (FOs)



Support at the calcaneus, medial longitudinal arch, shaft of the 5th metatarsal and around the dorsum of the ankle

Group 2: Supra-Malleolar Orthoses (SMOs)
 -wrap around control

Group 2: Supra-Malleolar Orthoses (SMOs)



Compression-from measurements



Support at the calcaneus, medial longitudinal arch, shaft of the 5th metatarsal, around the dorsum of the ankle, at the tibia for a longer lever arm

Group 3: AFO with motion (with wrap-around)
 -wrap around control with an extension proximal up the tibia for increased lever arm

Group 3: AFOs with Motion



Triplanar support at the calcaneus, medial longitudinal arch, shaft of the 5th metatarsal, around the dorsum of the ankle, and around tibia

Group 4: Solid AFO with wrap-around
 Group 4D: Solid AFO with wrap-around and dynamic element

Group 4: AFOs – Solid
 Group 4D: AFOs – Solid With Dynamic Element

