CAVUS Foot Surgery

Cavus Foot = Excessively high plantar medial arch
- Primarily a sagittal plane deformity
- Radiographs: Meary’s and Hibbs angles. Increased calcaneal inclination angle on lateral view, with bullet hole sinus tarsi and decreased Kite’s angle on DP view
- Two common frontal plane deformities associated with pes cavus: forefoot valgus (plantarflexed 1st ray) and calcaneal varus (inverted heel)

Cavus Foot Classifications
- Anterior (AKA Pseudoequinus)
- Posterior
- Combined

Etiologies- often secondary to a neuromuscular disorder and associated muscle imbalance
- Charcot Marie Tooth
- Spina bifida
- Poliomyelitis
- Spinal cord tumor
- Trauma
- Muscular dystrophy
- Cerebral palsy
- Friedrichs Ataxia

Coleman Block
- Purpose- evaluate flexibility of rearfoot
- Place block under lateral forefoot while weight-bearing
- Flexible → plantarflexed 1st ray and calcaneus will be vertical
- Rigid → calcaneus remain in varus- due to structural deformity of calcaneus

Treatment Options: Osseous Procedure
DFWO: Dorsiflexing wedge osteotomy of 1st met
- Indication: plantarflexed 1st met/flexible pes cavus
Dwyer: Lateral closing wedge calcaneal osteotomy
- Indication: rigid cavus/calcaneal varus
- Often performed with plantar fascia release, TAL or gastroc recession
Triple Arthrodesis: Fusion of STJ, talonavicular, and calcaneocuboid joints
- Indication: Progressive neurological cavus/severe rigid deformity
- Complications: Stiff foot, shorting, non-union (talonavicular joint)
Cole: Dorsally based wedge osteotomy through midfoot
- Indications: rigid anterior cavus when apex of deformity is at the midfoot (lesser tarsus)
  - Wedge from distal cuboid/cuneiforms → proximal cuboid/navicular
  - Elevates forefoot out of equinus
- Contraindications: when deformity is not in midfoot, skeletally immature patient
- Complications: shortening since removing wedge
Jahss: Cole procedure performed at Lisfranc’s joint
- Indications: Sagittal and frontal plane deformities, arthritis at tarsometatarsal joints
- Contraindications: STJ abnormalities, severe rearfoot varus
Japas: displacement V-shaped osteotomy of midfoot
- Indications: anterior cavus
- Contraindications: skeletally immature patient
- Apex of osteotomy is at navicular with arms extending into cuboid and medial cuneiform
- Advantages- no shortening since wedge does not have to be removed
- Disadvantages- arthritis and delayed union, creation of painful dorsal bump