

Metatarsalgia

Localized or generalized pain in the forefoot

Primary Metatarsalgia ¹

First ray insufficiency, disproportionately long second metatarsal, increased metatarsal declination

Secondary Metatarsalgia ²

Equinus deformity, Trauma, Metabolic disorders, Morton's neuroma, Freiberg's disease (avascular necrosis), iatrogenic metatarsalgia

Etiology ^{1,2}

- Plantarflexed metatarsal
- Abnormal metatarsal length
- Hallux valgus
- Hallux rigidus
- Dorsiflexion ROM deficit
- Gastroc-soleus contracture
- Hindfoot equinus

Increased metatarsal load!¹



Could it be?

Avascular necrosis

Stress fracture

Morton's neuroma

Tarsal tunnel syndrome

Trauma

Plantar fasciitis

Sesamoiditis

Arterial insufficiency

Compartment syndrome

Clinical Exam

Observe for callus
(under metatarsal heads or toes)

Palpate for pain

Silfverskiold Test

Ankle ROM

Gastroc-soleus flexibility

Joint mobility

1st ray hypermobility

Gait Mechanics

Assess intrinsic motor control

Assess proximal joints

Clinical Findings



Plantar Keratosis ²

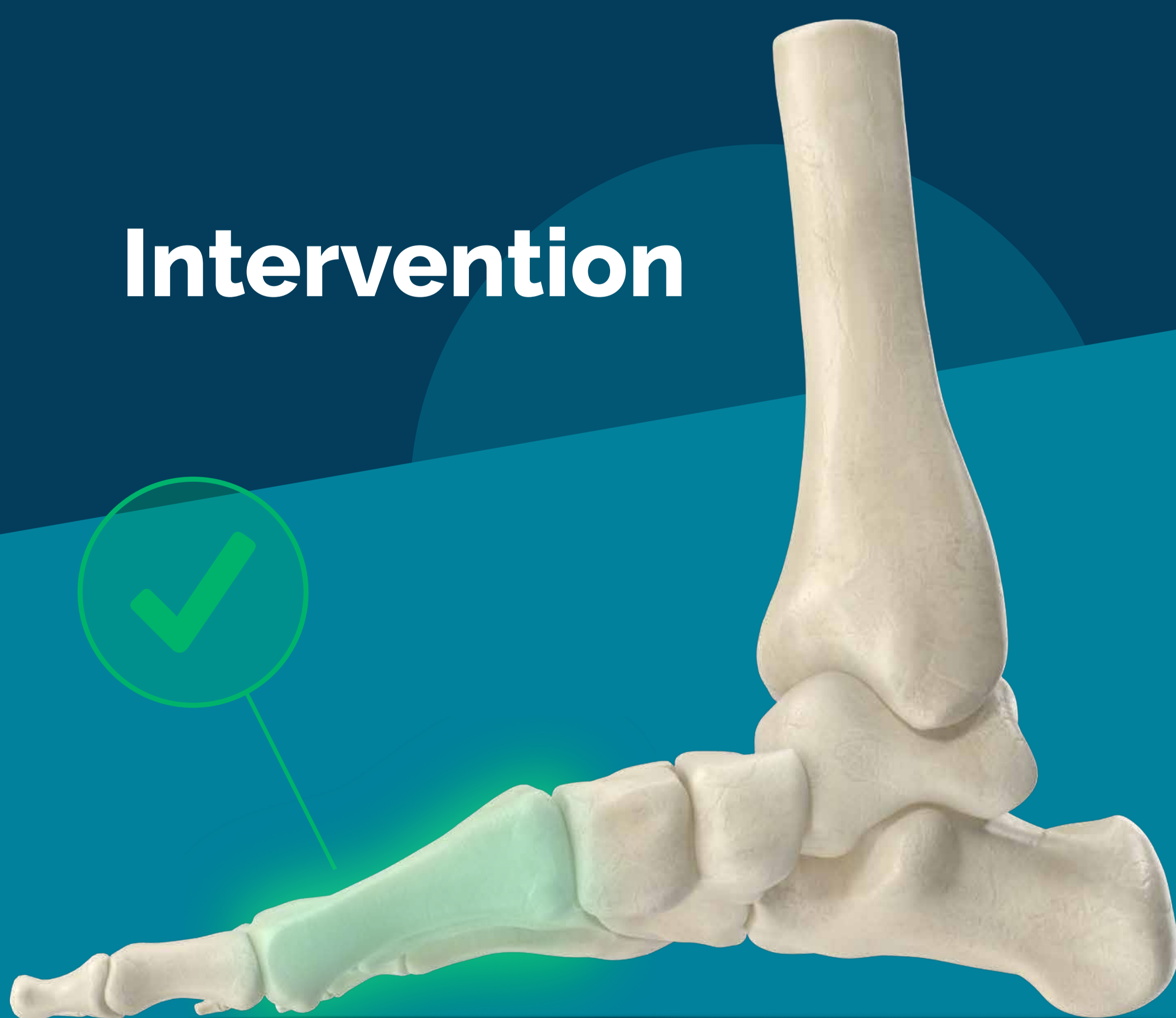


Pain with pressure at metatarsal head ²



Pain at mid or terminal stance of gait ²

Intervention



✓ Massage, stretching and joint mobilization

✓ Gait education: Normalize rockers and loading

✓ Shoe modification: Avoid heels, use rocker bottom shoes Use MT pads or cushioned insole Avoid constrictive footwear

✓ Training modification: Active rest. If conservative treatment fails, surgical intervention through osteotomy is suggested