

Localized or generalized pain in the forefoot^{1,2}



Primary Metatarsalgia:¹
abnormal pressure distribution at metatarsal heads

Secondary Metatarsalgia:¹
systemic disease or orthopaedic abnormalities that contribute to increased forefoot loading.

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?
sesamoiditis
stress fracture
tarsal tunnel syndrome
Morton's neuroma
Trauma
avascular necrosis
plantar fasciitis
arterial insufficiency
compartment syndrome

Clinical Exam

Observe for callus
Palpate for pain

Ankle ROM
Gastroc-soleus flexibility
Joint mobility

Assess intrinsic motor control

Gait Mechanics

Clinical Findings



Plantar Keratosis²

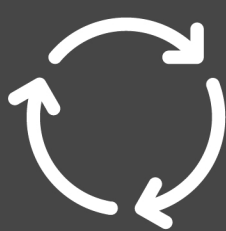


Pain with pressure at metatarsal head²



Pain at mid- or terminal stance of gait²

Intervention



Massage
Stretching¹
Joint mobilization



Gait education:
Normalize
Rockers and loading



Shoe modification:^{1,3}
Avoid heels
Use rockerbottoms
Use MT pads or cushioned insole



Training modification:
Decrease volume

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