

Pes Planus Treatment

Gait Assessment

- Look for pronation in the stance phase of the gait. In a normal gait cycle pronation occurs 15-20% into the contact phase

Postural Assessment

- Mild pes planus has 4-6 degrees of hindfoot valgus in a standing posterior view
- Moderate pes planus has 6- 10 degrees of hindfoot valgus
- Severe pes planus has 10 -15 degrees of hindfoot valgus
- Achilles tendon has a valgus orientation
- Internal tibial torsion is possible
- Valgus may occur at the knees
- Internal rotation may occur at the hip
- Medial arch is flattened and the foot is pronated
- The talar head bulges medially. There can be redness or a callus where the clients shoe rubs against the talar head
- Valgus orientation of the first metatarsal joint or a bunion may be present.
- The forefoot may be abducted
- With a Morton's foot , the head of the second metatarsal is longer than the first. There may be callus formation over the heads of the first and second metatarsal
- Check for wear pattern on shoes

Palpation

- There may be tenderness at –the spring ligament, the navicular and calcaneal attachment of the long plantar ligament and plantar fascia, the first and second metatarsal heads and the first metatarsophalangeal joint as well as muscles and tendons of the leg
- There may be heat on the first metatarsophalangeal joint(bunion) and on the Plantar surface (plantar fasciitis)
- The texture of the skin over the talar head and the first and second metatarsal may be rough and thick
- The intrinsic foot muscles, tib anterior, tib posterior, and long toe flexors are hypertonic and lengthened. Gastroc, soleus, peroneus longus, brevis and tertius are hypertonic and shortened.
- tp's are likely in longus and brevis.

Testing

- Active Free ROM of the foot, ankle, knee and hip
- Passive Resistive ROM of the foot, ankle, superior tibiofibular jt and hip
- Active Resistive ROM of tib anterior, tib posterior and extensor hallucis longus
- Length testing of gastroc, soleus and peroneals

Special Tests

- Functional or structural pes planus test
- Mortons neuroma test

General treatment

- Massage is started prone
- Hydrotherapy is pre-treatment contrast foot baths and deep moist heat can be used on gastroc and peroneals
- Massage is performed in the context of relaxation including diaphragmatic breathing.
- Start by treating low back – gluteals and thighs

Specific Treatment

- Reduce fascial restrictions – gastroc, peroneals
- Reduce Hypertonicity- gastroc, soleus and all peroneus muscles.
- Reduce pain and trigger points- tp's in peroneus longus and brevis should be checked
- Reduce adhesions- frictions may be appropriate on the Achilles tendon and peroneal tendons. Follow with ice
- Passive relaxed dorsiflexion and inversion may be done throughout the treatment
- Stretch shortened muscles
- Increase circulation- effleurage on post leg and foot
- Turn client supine – work gastroc with hip and knee flexed
- Swedish techniques are used for overstretched muscles supporting the medial longitudinal arch.
- Tib anterior, tib posterior , toe flexors and intrinsic foot muscles are treated using brisk repetitive petrissage, tapotement and point kneading.
- Inferior aspect of tib posterior and flexor digitorum longus may be treated at the inferior medial aspect of the tibia
- Mobilize hypermobile joints – tibiofibular joint and ankle
- Stretch gastroc and soleus in supine
- Finish with effleurage on entire limb