

Rehabilitation Guidelines: Post Flatfoot Reconstruction



Flat feet



Normal feet

The breakdown of the arch of the foot is commonly referred to as “flatfoot.” The flatfoot deformity occurs slowly over several years and results in weakening of the foot intrinsic musculature and ligaments as well as contractures and imbalance of the calf musculature. Flatfoot reconstructive surgery consists of several surgical procedures that are designed to correct the misaligned foot. A preoperative assessment including clinical exam and radiographs is used to determine the combination of procedures required to correct the flatfoot deformity.



PHASE I (surgery to 4 weeks)

Goal	<ul style="list-style-type: none">● Edema management● Pain Control● Ensure healing process● Maintain safe Non-weight bearing(NWB) practices● Maintain Hip and Knee Range of Motion (ROM)● Maintain forefoot ROM● Minimize atrophy
Precautions	<ul style="list-style-type: none">● NWB in cast in dorsiflexion● Keep the incision dry● Watch for signs of infection● Avoid long periods of dependent positioning of the foot during the first week to assist in wound healing
Intervention	<ul style="list-style-type: none">● Modalities for pain and oedema● Muscle strengthening for hip and knee● Inner range quads, 4-ways Straight leg raise (supine, hip abduction, adduction, prone), clamshell● Joint mobilization and soft tissue work, as indicated● Toes exercises

Fig 1.1

4 ways SLR



PHASE III (Week 12 to week 24)

Goal	<ul style="list-style-type: none">● Increase balance and proprioception● Normal ankle and foot mobility● Full ankle strength● Single limb heel raise with good mechanics achieved by 24th week● Return to recreational activities● Edema management
Precautions	<ul style="list-style-type: none">● Use caution with combined resisted plantar flexion and inversion● Monitor post exercise swelling
Intervention	<ul style="list-style-type: none">● Manual Therapy to increase range of motion, decrease soft tissue restrictions● Pilates Reformer - calf raises in supine● Single limb stance activities● Double limb heel raises● Eccentric Gastrocnemius strengthening● Single limb heel raises● Stationary bike / Biking with resistance● Rowing● Incline treadmill walking● Plyometrics and agility drills if appropriate (6 months onwards)



PHASE II (Week 4 to week 12)

Goal	<ul style="list-style-type: none">● Progression to Full-weight bearing (FWB) in boot● Progression to FWB in supportive shoes (week 6)● Normal gait● Increase Range of motion at ankle and foot● Edema management● Strengthen proximal and distal muscle groups
Precautions	<ul style="list-style-type: none">● Monitor post exercise swelling
Intervention	<ul style="list-style-type: none">● Progressive weight shifting onto affected extremity● Gastroc-soleus stretching● Closed chain exercises● Double limb proprioceptive exercises: on foam, rocker board, partial tandem/tandem stance● Strengthen medial ankle and arch with foot doming exercises

References:

1. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4094099/>
2. <https://www.healthline.com/health/flat-feet-exercises#tennis/golf-ball-rolls>
3. <https://www.ncbi.nlm.nih.gov/pubmed/30517043>

Rehabilitation Guidelines: Post Flatfoot Reconstruction (Summary)

	Post op-4 weeks	Week 4- week 12	Week 12- week 24
Goal	<ul style="list-style-type: none"> • Edema management • Pain Control 	<ul style="list-style-type: none"> • Normal gait • Increase Range of Movement at ankle and foot 	<ul style="list-style-type: none"> • Normal ankle and foot mobility • Full ankle strength
Precaution	<ul style="list-style-type: none"> •Non-weight bearing (NWB) in cast in dorsiflexion •Keep the incision dry •Watch for signs of infection 	Monitor post exercise swelling	Use caution with combined resisted plantar flexion and inversion
Suggested exercise	<p>Start:</p> <ul style="list-style-type: none"> - Cryotherapy - Soft tissue mobilization to ankle/foot/effleurage for oedema - Strengthening for hip and knee - Simple ankle ROM exercises 	<ul style="list-style-type: none"> -Closed chain exercises -Double limb proprioceptive exercises: on foam, rocker board, partial tandem/tandem stance -Theraband exercises to strengthen intrinsic muscle -Suggest exercise inside the pool once the scars dried and intact 	<ul style="list-style-type: none"> -Incline treadmill walking -Plyometrics and agility drills if appropriate -Continue proprioceptive training and Eccentric heel raises
Ambulation	Non-Weight Bearing in cast Ambulate with bilateral crutches	Safe crutch use with weight bearing in Walking Boot -Normalize gait pattern with sport shoes (push off)	Normal gait pattern with sport shoes