



## Big Toe Fusion (1<sup>st</sup> MTPJ Arthrodesis) Rehab



Big toe fusion, or first metatarsophalangeal joint (1st MTPJ) fusion, is a surgical procedure to fuse the base of the big toe (first metatarsal head to proximal phalanx) in a pain-free, rigid position for patients with severe arthritis or deformity.

### See Also:

[Big toe arthritis](#)

[Big toe fusion](#)

### Rehabilitation goals

- Protect the fusion site and promote bone healing
- Control pain and swelling
- Maintain mobility of adjacent joints
- Gradually restore weight-bearing and gait
- Rebuild strength, balance and function



## Expected recovery time

Milestone	Timeframe range
Wound healing and suture removal	2–3 weeks
Initiation of partial weight-bearing	2–6 weeks
Progression to full weight-bearing	6–8 weeks
Transition to normal footwear	6–12 weeks
Improvement in strength and gait	8–12 weeks
Return to low-impact activities	12–16 weeks
Return to full/pre-injury activities	16–20 weeks

## Phase 1: Early Post-op (0–2 weeks)

### Goals

- Protect fusion
- Minimise pain and swelling
- Prevent stiffness in ankle and lesser toes

### Instructions

- Non-weight-bearing (use crutches or walker) or toe-touch only in postoperative boot
- Elevate foot above heart level as often as possible
- Apply ice pack (0–4 °C) for 15–20 minutes, 2–3 times daily
- Keep dressing clean and dry; follow wound-care instructions
- Take prescribed analgesics and DVT prophylaxis

### Exercises

- Ankle pumps (10–15 reps, hourly)
- Toe wiggles within pain limits
- Isometric “grip” of toes (press toes down gently into towel, hold 5 s ×10)
- Deep breathing and gentle core engagement



## Phase 2: Intermediate Recovery (2–6 weeks)

### *Goals*

- Continue bone healing
- Begin protected weight-bearing
- Maintain ankle and midfoot mobility
- Prevent calf/hamstring stiffness

### *Instructions*

- At ~2 weeks, proceed to partial weight-bearing in boot as tolerated
- Continue elevation and icing post-activity
- Remove sutures per surgeon's timing (often 2–3 weeks)
- Monitor incision for signs of infection

### *Exercises*

- Ankle circles and alphabet (5 minutes, 2× daily)
- Towel toe curls (gently scrunch towel with toes, 10 reps)
- Seated heel slides (flex/extend knee, 10–15 reps)
- Straight-leg raises in boot (10 reps × 3 sets)

## Phase 3: Advanced Recovery (6–12 weeks)

### *Goals*

- Achieve full weight-bearing without boot
- Improve strength of intrinsic foot muscles
- Normalize gait pattern
- Enhance proprioception

### *Instructions*

- Transition into a supportive, stiff-soled shoe at 6–8 weeks
- Discontinue crutches when comfortable, maintain even gait
- Avoid high-impact activities until cleared

### *Exercises*

- Marble pickups with toes (10 reps × 2)
- Resistance-band plantarflexion/dorsiflexion/inversion/eversion (10 reps × 3)
- Standing heel-raises (double-leg → single-leg, 10–15 reps)
- Balance drills (single-leg stand on firm surface, progress to foam)



## Phase 4: Return to Activities (12–20 weeks)

### *Goals*

- Restore full functional capacity
- Return safely to low- and high-impact activities
- Maximise endurance and strength

### *Instructions*

- Gradually introduce cycling, swimming, elliptical
- At ~16 weeks, begin gentle jogging or sport-specific drills if fusion is confirmed
- Progress intensity based on comfort and surgeon/therapist clearance

### *Exercises*

- Proprioceptive plyometrics (gentle hops, box-step-downs)
- Sport-specific movements (agility cones, lateral shuffles)
- Progressive resistance training for lower limb
- Endurance walking/hiking as tolerated

## When to contact your surgeon

- Fever > 38 °C or chills
- Increasing pain unrelieved by medication
- Redness, swelling or warmth spreading beyond incision
- New or increased wound drainage or bleeding
- Numbness, tingling or loss of movement in foot/toes
- Inability to bear any weight after phased progression
- Signs of deep vein thrombosis (calf pain, swelling)

### **Disclaimer:**

Note: This is a general guideline. Your physiotherapist or surgeon may adjust the protocol based on your specific condition and progress.