

Patellar Fracture with ORIF PROTOCOL-(Dr. Rolf)

Brace locked at 0 degrees for ambulation for 6-8 weeks with use of bilateral axillary crutches.

Initial Visit: Dressing change

Start P.T. at 2-3 weeks from surgery

Referring Physician will assign patient's WB status depending on the type of repair and the quality of patient's tissue.

Patient's with good tissue quality and a stable repair, generally may start WBAT with brace locked in extension with the use of a walker or 2 crutches.

Patient's with more severe injuries, poor tissue quality or repairs that are not quite as stable will generally be NWB with a knee brace locked in extension using either a walker or 2 crutches for the first 3-6 weeks.

At 2-3 weeks home E-stim unit (if needed) for quadriceps muscle re-ed.

At 6 weeks typically can open the brace 0-90 degrees with ambulation with bilateral axillary crutches, unless otherwise specified.

PRECAUTIONS: Avoid impact loads/sudden activation (eccentric load)

Avoid active knee extension for 6 weeks

GOALS:

- A/AAROM 90-100 degrees by 6 weeks, 0-105/110 degrees by week 8, 0-120/130 degrees by week 10, and 0-130 degrees by week 12.

Week 1-4

No active ROM knee extension.

- PROM knee ext to 0 degrees
- AROM/AAROM knee flexion – very gently – Dr. Rolf will define the safe range at the time of surgery.
- Gradually unlock brace for sitting as PROM knee flexion improves

Exercises:

- Ankle pumps
- Gentle Patellar mobilizations all directions-**no forceful passive motions**
- Hamstring stretch sitting
- Gastroc stretch with towel
- Heelslides
- Quad sets – may add E-stim for re-education at 2-3 weeks upon MD approval

- Active-Assistive SLR (abduction/extension) locked in full knee extension can generally begin between week 1 and week 3 as long as it is approved by MD and as long as there is no anterior knee/patellar pain
- Active SLR (flexion/abduction/extension) locked in full knee extension can generally begin at week 3 as long as it is approved by MD and as long as there is no anterior knee/patellar pain-do not allow an extensor lag with SLR flexion – use e-stim as needed to facilitate quad contraction.

Week 5:

Gradually increase A/AAROM knee flexion

Exercises:

- Continue knee flexion ROM – rocking chair at home
- Active SLR 4 way – no weight for flexion – watch for extensor lag – increase resistance for hip abduction, adduction, and extension.

Add aquatic therapy if available. Move slowly so water is assistive and not resistive. Make sure have water shoes and move slowly around pool deck so that they do not slip and fall.

Aquatic therapy exercises:

- With knee submerged in water, knee dangling at 80-90 degrees – slowly actively extend knee to 0 degrees.
- Water walking in chest deep water
- SLR 4 way in the water with knee straight
- Knee flexion in water

Week 6-8:

Brace – unlock brace for sitting to 90 degrees at 6 weeks.

If quad control sufficient at 8 weeks unlock brace 0-90 degrees for ambulation with bilateral axillary crutches and gradually open brace as ROM improves.

Progress to ambulation at 8 weeks with no crutches as quadriceps strength allows.

D/C crutches and brace at 8-12 weeks depending on patient's quadriceps control.

Emphasize frequent ROM exercises

Goals – Gradually increase P/A/AAROM during weeks 6-8

Exercises:

- Submaximal multi-angle isometrics (30-50% only) as long as painfree
- Gradually increase weight on all SLR, if no lag present
- Week 6 – bike (begin with rocking and progress to full revolutions)
- Week 6 – Closed chain terminal knee extension with theraband
- Week 6 – SAQ (AROM)-no resistance-only do if no patellar pain
- Week 7 – LAQ (AROM)- no resistance-only do if no patellar pain
- Week 8 – SAQ (gradually increase resistance-if painfree)
- Week 8 – LAQ (gradually increase resistance-if painfree)
- Week 8 – weight shifts
- Week 8 –BAPS – with bilateral LE weight bearing
- Week 8 – cone walking

Week 9-10:

Exercises:

- Bilateral leg press in safe range 0-30/45 degrees – concentric only – no significant load work until 12 weeks.
- Weight shift on minitramp or BOSU ball or airex
- Toe raises
- Treadmill – Concentrate on pattern with eccentric knee control

Week 11-16:

Exercises:

- Leg press – Gradually increase weight and begin unilateral leg press at week 12
- At 12 weeks, begin wall squats-0-30 if painfree and good quad control
- Balance activities: unilateral stance eyes open and closed, balance master
- Standing minisquats in painfree range from 0-30/45 degrees.
- Step-ups – start concentrically, 2” to start and progress as tolerated
- Week 16 – elliptical machine if patient can tolerate well without any complaints of pain

**Please email Dr. Rolf with any questions!
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Updated 2/11/2013