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ORTHOPEDIC SURGERY | SPORTS MEDICINE

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Patella Fracture (Conservative Protocol) Pre-Operative Information

About Your Injury

A patella fracture is a break in the kneecap — the small, round bone at the front of the knee that forms the outer surface of the patellofemoral joint. The patella acts as a pulley for the quadriceps muscle, dramatically increasing the force the quad can generate to extend the leg.

Fractures occur from **direct trauma** (fall onto knee, dashboard injury, direct blow) or **indirect mechanism** (sudden forceful quad contraction). Fracture patterns vary. Displaced fractures require surgical repair. **Comminuted fractures** — where the bone shatters into multiple pieces — are the most complex and require combination of fixation techniques.

Diagnosis is confirmed with X-rays. CT scans help for complex patterns. The key question is: is the extensor mechanism intact?

Your fracture is a **comminuted pattern (multiple fragments)** that requires a more extensive surgical repair. Because the fixation is more complex, your rehabilitation follows a **conservative progression** — slower and more protective than simple fractures — to ensure safe healing of the repair.

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About Your Surgery

The procedure is an **open reduction and internal fixation (ORIF)**: an incision over the front of the kneecap, fracture fragments reassembled, and fixed with a combination of screws, tension band wiring, mesh plating, or suture-based constructs depending on the pattern.

For comminuted fractures with many small fragments, the goal is to preserve as much of the kneecap as possible while creating a stable enough repair to allow guided rehabilitation. The fixation may be less robust than a simple two-part fracture repair.

Because of this, **your knee will be kept in full extension (no bending) for the first 2 weeks** to allow early healing before motion begins. This is more protective than the standard protocol.

Surgery typically takes about 1 hour. This is an outpatient surgery performed they're at at the Proliance Surgery Center at Valley (PSCV) or Valley Medical Center, depending on your insurance. You will go home the same day. You will have a general anesthetic as well as a nerve block to help with postoperative pain

Hardware sits just under the skin, and kneeling can be uncomfortable. 20–40% of patients elect hardware removal at one year or later. This is a short outpatient procedure.

Risks of surgery include stiffness, infection, blood clots, numbness around incisions, continued pain and swelling, hardware irritation, loss of fixation, posttraumatic arthritis, and the need for additional surgery. We use nerve block anesthesia and a post-operative pain protocol to minimize narcotic use.

What happens on the day of surgery: Nursing staff will call to confirm your check-in time. You will check in at the front desk, go to the pre-op area where family can stay with you initially, have an IV placed, and review your health history. You will meet the surgeon and the anesthesia team, then walk back to the OR. You won't remember anything after that until you wake up in the recovery room. Your family will pick up your post-op medications at the pharmacy next door. If you are under 18, your family must stay for the entire procedure. In the recovery room, you will be monitored, given crackers and juice, help changing clothes, and then wheeled to your car. **You will need someone to drive you home and stay with you for the first 24 hours.**

After Surgery — What to Expect

After surgery it is normal to experience pain, swelling, limited motion, and stiffness. These are expected and will improve over time.

Brace locked at 0° for ALL activity including sleep for the first 2 weeks. No bending the knee at all during this phase. Weight bearing is allowed as tolerated with crutches and the brace locked in extension.

Range of motion begins at Week 2 — active-assisted heel slides to 50°. ROM then advances at 10° per week starting from Week 4, reaching 90° by Weeks 8–9. This is a slower progression designed to protect the more complex repair.

Quad activation and NMES (neuromuscular electrical stimulation) begin immediately from Day 1 — even during the immobilization phase. This maintains muscle function while the fracture heals.

Physical therapy should start within 3–5 days of surgery, typically 2 times per week. Please schedule your first PT appointment before your surgery date.

Weeks 0–2	Brace locked at 0° — NO bending the knee. Weight bearing as tolerated with crutches and brace locked. Quad sets every waking hour. NMES to quadriceps 2× daily. Gentle superior patellar glides only (per surgeon). Straight-leg raises when quad allows. Ankle pumps hourly.
Weeks 2–6	ROM begins at Week 2 — active-assisted heel slides to 50°. Full patellar mobilization (all directions) begins. ROM advances 10° per week from Week 4: 60° (Week 5) → 70° (Week 6) → 80° (Week 7) → 90° (Weeks 8–9). Stationary bike begins when ROM reaches 50°. Brace remains locked for walking through Week 6.
Weeks 6–9	Week 6 surgeon review to assess fracture healing and begin brace wean. ROM target 90° by Weeks 8–9. Progressive straight-leg raises with resistance. Crutch wean as quad control improves.
Weeks 10–16	Brace weaned and discontinued. Resisted knee extension begins once fracture union confirmed (Weeks 10–12). Mini-squats, step-ups, leg press begin. Target full ROM (130°+) by Weeks 14–16. Elliptical at Week 13.
Weeks 18–22	Walk-jog running program begins when 8-inch step-down is passed, quad strength ≥70% of opposite leg, and surgeon clearance obtained. Bilateral plyometrics begin. This timeline is later than simple fractures to ensure bone healing is solid.
Months 6–8	Return to cutting, pivoting, and sport-specific activity. Formal return-to-sport testing: quad ≥90% opposite leg, single-leg hop ≥90%. Surgeon clearance required. Published average return to sport is 7 months.

Driving: Right leg typically 6–8 weeks. Left leg typically 4–6 weeks. You must be off narcotic medications before driving.

Preparing for Surgery

Nutrition: A good diet with increased protein and collagen supplementation helps speed your recovery and prevent muscle weakness after surgery. Vitamin C can help with inflammation and stiffness. Start these before surgery and continue through your recovery.

Ice Machine — My #1 Recovery Recommendation

I highly recommend purchasing an ice machine to help your recovery. An ice machine is the single best investment you can make — it allows for continuous icing without the risk of frostbite and is far easier than using ice bags or gel pads. Our clinic staff can fit you for one before surgery and show you how to get the most out of it. Stock up on bags of ice — the machine can go through a bag a day when used regularly.

Prepare your home: Remove throw rugs or obstacles that might catch a crutch and cause a fall. Make sure you have clean sheets and comfortable clothes ready. Stock the refrigerator with healthy food and buy bags of ice for the ice machine.

Handicap placard: You will be given a handicap parking pass application at your clinic visit. Get this at a DMV office before your surgery so you do not have to deal with it while recovering.

Day-of-Surgery Checklist

- ☐ Verify your check-in time and follow instructions on when to stop eating and drinking
- ☐ Schedule Physical Therapy for 5–7 days after surgery (do this before surgery)
- ☐ Bring your brace — you will be fitted at your pre-operative visit
- ☐ Wear comfortable clothes that fit over a brace (sweatpants work well)
- ☐ No perfume or lotion on your skin
- ☐ Remove or leave jewelry at home
- ☐ Have the ice machine and bags of ice ready at home for when you return

If surgery is at PSCV:

Contact Information

Questions about your surgery:	(425) 656-5060
PSCV Surgery Center:	(425) 226-2041
Surgery Scheduling:	(425) 528-7155
Pre-op Nurse:	(425) 291-1465
Billing:	(425) 291-1414
Surgery Center Address:	4009 Talbot Rd S, Ste 200, Renton, WA 98055

If Surgery is at Valley Medical Center:

Contact Information

Questions about your surgery:	(425) 656-5060
Valley Medical Center Address:	400 S. 43rd Street, Renton, WA 98055