

Chondromalacia Patellae

Diagnosis Explanation:

Chondromalacia patellae, also known as "runner's knee," is the softening and breakdown of the cartilage on the underside of the kneecap. It is often caused by improper kneecap tracking, overuse, muscle imbalances, or previous knee injuries. Symptoms include pain around or behind the kneecap, especially when squatting, kneeling, using stairs, or sitting for long periods.

Specific Work Modifications:

- **If your job requires standing or walking:** Use cushioned footwear and take short breaks to sit. Consider using a knee brace for support.
- **If your job involves lifting:** Avoid deep knee bending and use proper lifting mechanics to reduce strain on the kneecap.
- **If your job is desk-based:** Avoid prolonged sitting with bent knees. Stretch and extend your legs periodically.
- **Avoid:** Deep squats, kneeling, prolonged standing without breaks, and excessive stair climbing.

Specific Activity Modifications:

- **If you run or play sports:** Reduce high-impact activities and switch to lower-impact exercises like swimming or cycling.
- **If you hike:** Use trekking poles to reduce knee strain, and avoid steep inclines.
- **If you do weightlifting:** Avoid deep squats, lunges, and leg presses. Focus on strengthening the quadriceps without excessive knee stress.
- **Avoid:** Jumping, running on hard surfaces, prolonged kneeling, and repetitive stress on the knee joint.

Recommended Supplements:

- **Glucosamine & Chondroitin** - 1500mg/1200mg daily for cartilage support.
- **Collagen Peptides** - 10g daily to aid cartilage repair.
- **Vitamin C** - 500mg daily to promote collagen production.
- **Turmeric (Curcumin)** - 500-1000mg daily for inflammation reduction.
- **Omega-3 Fatty Acids** - 1000mg daily to help reduce joint pain and stiffness.

Recommended Nutrition and Hydration:

- **Increase Omega-3 Intake** (salmon, walnuts, flaxseeds) to reduce joint inflammation.
- **Consume Collagen-Rich Foods** (bone broth, citrus, tomatoes) to support cartilage repair.

- **Eat Anti-Inflammatory Foods** (leafy greens, berries, nuts, turmeric).
- **Limit Processed Foods & Sugars** to decrease joint inflammation.
- **Hydration:** Drink **8-10 cups of water daily** to maintain joint lubrication and prevent stiffness.

Home Exercise Prescription:

Early Phase (Reducing Pain & Inflammation):

- **Quadriceps Sets** - Tighten thigh muscle, hold for 5 seconds, repeat **10x, 3x/day**.
- **Straight Leg Raises** - Keep knee straight, lift leg, hold for 5 seconds, repeat **10 reps, 3x/day**.
- **Seated Knee Extensions** - Slowly extend knee, hold for 5 seconds, repeat **10 reps, 2x/day**.

Strengthening Phase (Correcting Muscle Imbalance):

- **Clamshells** - Lie on your side, open and close knees like a clamshell, **10 reps, 2x/day**.
- **Wall Sits (Partial)** - Hold a shallow squat against a wall, **10-20 seconds, 2x/day**.
- **Step-Ups** - Step onto a low platform, push through heel, repeat **10 reps, 2x/day**.

Advanced Phase (Stability & Return to Activity):

- **Mini Squats (No Deep Bending)** - Bend slightly at the knees, keep weight on heels, **10 reps, 2x/day**.
- **Stationary Cycling** - Low resistance for **10-15 minutes/day**.
- **Balance Exercises** - Stand on one leg for **10-20 seconds**, increase as tolerated.

Helpful Books:

1. *The Knee Injury Bible: Everything You Need to Know About Knee Pain, Prevention, and Treatment* - Kevin R. Stone, MD.
2. *Heal Your Knees: How to Prevent Knee Surgery and What to Do If You Need It* - Robert Klapper, MD, and Lynda Huey.

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Contact a Key West orthopedic clinic or reach out to Dr. Jason Pirozzolo.