

Osteochondritis Dissecans (Knee)

Diagnosis Explanation:

Osteochondritis dissecans (OCD) is a condition where a small piece of bone and cartilage in the knee joint **loses blood supply and begins to separate** from the surrounding bone. This commonly affects **adolescents and young adults** and is often due to **repetitive stress, trauma, or genetic factors**. Symptoms include **knee pain, swelling, stiffness, clicking, locking, and occasional instability**. Severe cases may require **surgical treatment** if the bone fragment becomes loose.

Specific Work Modifications:

- **If your job requires standing or walking:** Take frequent seated breaks and use **shock-absorbing footwear**.
- **If your job involves lifting:** Avoid **deep squatting and twisting motions** to prevent stress on the knee joint.
- **If your job is desk-based:** Keep your leg **elevated** when sitting and stretch periodically.
- **Avoid:** Prolonged standing, kneeling, excessive stair climbing, and repetitive impact on the knee.

Specific Activity Modifications:

- **If you run or play sports:** Reduce high-impact activities and transition to **low-impact options** like swimming or cycling.
- **If you hike:** Stick to **flat trails** and use **trekking poles** for additional support.
- **If you do weightlifting:** Avoid **deep squats, lunges, and leg presses** until fully healed. Focus on **controlled, low-impact strength training**.
- **Avoid:** Jumping, pivoting, sprinting, and high-impact exercises that place stress on the knee.

Recommended Supplements:

- **Collagen Peptides** - 10g daily to support cartilage and bone repair.
- **Glucosamine & Chondroitin** - 1500mg/1200mg daily for joint health.
- **Vitamin D3 + Calcium** - 1000 IU/500mg daily to support bone regeneration.
- **Omega-3 Fatty Acids** - 1000mg daily to reduce inflammation.
- **Vitamin C** - 500mg daily to promote collagen synthesis.

Recommended Nutrition and Hydration:

- **Increase Lean Protein** (chicken, fish, eggs, tofu) to aid bone and cartilage healing.
- **Eat Anti-Inflammatory Foods** (berries, leafy greens, turmeric, nuts) to reduce swelling.

- **Consume Hydrating Foods** (cucumber, watermelon, citrus) to maintain joint lubrication.
- **Limit Processed Foods & Sugars** to prevent inflammation.
- **Hydration:** Drink **8-10 cups of water daily** to maintain joint function and support healing.

Home Exercise Prescription:

Early Phase (Reducing Pain & Swelling, Improving Mobility):

- **RICE Protocol** - Rest, Ice (15-20 min, 3x/day), Compression (brace if prescribed), Elevation.
- **Quadriceps Sets** - Tighten thigh muscle, hold for 5 seconds, repeat **10 reps, 3x/day**.
- **Heel Slides** - Gently slide heel toward buttocks to maintain knee mobility, **10 reps, 2x/day**.
- **Seated Knee Extensions** - Slowly extend knee, hold for 5 seconds, repeat **10 reps, 2x/day**.

Strengthening Phase (Regaining Strength & Stability):

- **Straight Leg Raises** - Keep knee straight, lift leg, hold 5 seconds, repeat **10 reps, 2x/day**.
- **Glute Bridges** - Lie on back, lift hips while keeping hamstrings relaxed, **10 reps, 2x/day**.
- **Mini Squats (No Deep Bending)** - Slight knee bends while keeping weight on heels, **10 reps, 2x/day**.

Advanced Phase (Building Strength & Returning to Activity):

- **Step-Ups** - Step onto a low platform, push through the heel, repeat **10 reps, 2x/day**.
- **Stationary Cycling** - Low resistance for **10-15 minutes/day**.
- **Balance Exercises** - Stand on injured 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.

Click here for more orthopedic patient information.

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