

Osgood-Schlatter Disease

Diagnosis Explanation:

Osgood-Schlatter disease is an **overuse injury** that causes pain and swelling at the **tibial tuberosity** (the bony bump below the kneecap). It occurs when the **patellar tendon pulls on the growing bone**, leading to irritation and sometimes a visible lump. This condition is common in **adolescents** who participate in running, jumping, or sports requiring frequent knee bending. Symptoms include **pain with activity, tenderness below the kneecap, swelling, and discomfort when kneeling**.

Specific Work Modifications:

- **If your job requires standing or walking:** Take frequent seated breaks, and use cushioned shoes or **insoles** for shock absorption.
- **If your job involves lifting:** Avoid deep squatting and excessive knee bending. Lift with **proper posture** to reduce knee strain.
- **If your job is desk-based:** Keep the knee **elevated** when sitting to reduce swelling, and stretch periodically.
- **Avoid:** Kneeling, deep squats, prolonged standing, and repetitive jumping movements.

Specific Activity Modifications:

- **If you run or play sports:** Reduce intensity, avoid hard surfaces, and incorporate **low-impact activities** like cycling or swimming.
- **If you hike:** Use **trekking poles**, avoid steep inclines, and wear **shock-absorbing footwear**.
- **If you do weightlifting:** Avoid **deep squats, lunges, and leg presses**. Focus on **controlled movements and core stability**.
- **Avoid:** Jumping, sprinting, kneeling, repetitive stress on the knee, and high-impact activities until symptoms improve.

Recommended Supplements:

- **Collagen Peptides** - 10g daily for tendon and cartilage support.
- **Vitamin C** - 500mg daily to aid collagen production and tissue repair.
- **Calcium & Vitamin D** - 1000mg/800 IU daily for bone strength.
- **Magnesium** - 300-400mg daily to support muscle relaxation and prevent cramps.
- **Omega-3 Fatty Acids** - 1000mg daily to reduce inflammation.

Recommended Nutrition and Hydration:

- **Increase Lean Protein** (chicken, fish, tofu, eggs) to support bone and tendon repair.

- **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 support joint function and muscle recovery.

Home Exercise Prescription:

Early Phase (Reducing Pain & Swelling):

- **RICE Protocol** - Rest, Ice (15-20 min, 3x/day), Compression (brace or patellar strap), Elevation.
- **Quadriceps Stretch** - Stand and pull the foot toward the glutes, **hold 20 seconds, 3x/day**.
- **Hamstring Stretch** - Sit with one leg extended, reach for toes, **hold 20 seconds, 3x/day**.
- **Ankle Pumps** - Move ankle up and down to improve circulation, **10 reps, 3x/day**.

Strengthening Phase (Improving Knee Stability):

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

Advanced Phase (Returning to Activity & Preventing Recurrence):

- **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. *Peak: The New Science of Athletic Performance That Is Revolutionizing Sports* - Marc Bubbs, ND.

Click here for more orthopedic patient information.

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