

Avascular Necrosis of the Hip

Explanation of Diagnosis

Avascular necrosis (AVN) of the hip occurs when **blood flow to the femoral head (top of the thigh bone) is reduced or blocked**, leading to **bone death and joint damage**. It can be caused by **trauma, long-term corticosteroid use, excessive alcohol consumption, or certain medical conditions (e.g., sickle cell disease, lupus)**. Symptoms include **hip pain, stiffness, reduced range of motion, and difficulty walking**. If untreated, AVN can lead to **hip arthritis and collapse of the femoral head**, requiring hip replacement surgery.

Specific Work Modifications

- **Avoid prolonged standing, walking, or weight-bearing activities.**
- **Use a cane or crutches** to reduce stress on the hip.
- **Modify tasks to allow seated work** when possible.
- **If standing is required, take frequent breaks** and shift weight between legs.
- **Use an ergonomic chair with lumbar support** to minimize hip strain.

Specific Activity Modifications

- **Avoid high-impact activities** such as running, jumping, or heavy lifting.
- **Modify workouts** by switching to **low-impact exercises** such as swimming, stationary cycling, or water aerobics.
- **Use proper warm-ups and stretching** before any activity.
- **Gradually return to activity** under medical guidance.

Recommended Supplements

- **Vitamin D3 (1000-2000 IU daily)** - Supports bone health and calcium absorption.
- **Calcium (1000-1200 mg daily)** - Helps maintain bone density.
- **Magnesium (300-400 mg daily)** - Supports muscle relaxation and bone strength.
- **Collagen peptides (10 g daily)** - Aids in joint and bone repair.
- **Omega-3 fatty acids (1000 mg daily)** - Reduces joint inflammation.

Recommended Nutrition and Hydration

Diet Recommendations:

- **Bone-supporting foods:** Dairy products, leafy greens, almonds, salmon, and fortified cereals.
- **Anti-inflammatory foods:** Fatty fish (salmon, sardines), turmeric, berries, walnuts,

and olive oil.

- **Protein-rich foods:** Chicken, eggs, lentils, and dairy to support bone and muscle function.
- **Limit processed foods, sugar, and alcohol,** which can weaken bones and increase inflammation.

Hydration Tips:

- **Drink at least 2-3 liters of water daily** to support joint and bone health.
- **Limit caffeine and alcohol,** which can interfere with calcium absorption.

Home Exercise Prescription

No high-impact exercises. Focus on non-weight-bearing exercises to maintain hip mobility and strength.

Phase 1: Pain Management & Mobility (Weeks 1-4)

1. Seated Hip Flexor Stretch

- Sit in a chair, bring one knee toward your chest, and hold.
- **Hold for 20-30 seconds, repeat 3 times per side.**

2. Pelvic Tilts

- Lie on your back with knees bent, tighten your core, and flatten your lower back.
- **Hold for 5 seconds, repeat 10 reps.**

3. Ankle Pumps (Maintain Circulation)

- Move your foot up and down like pressing a gas pedal.
- **10 reps, 2-3 times daily.**

Phase 2: Strength & Stability (Weeks 4+, If Pain Improves)

4. Bridges

- Lie on your back, bend knees, and lift hips without arching your back.
- **10 reps, 2 times daily.**

5. Clamshells (Hip Strengthening)

- Lie on your side with knees bent, open knees like a clamshell.
- **10 reps per side, 2 times daily.**

6. Water-Based Therapy (Pool Exercises)

- Walk or do gentle leg lifts in a pool to reduce joint impact.
- **10-15 minutes, 2-3 times weekly.**

Avoid running, jumping, or prolonged weight-bearing activities until cleared by a doctor.

Helpful Books

1. *"Saving My Hip: A Personal Guide to Avascular Necrosis"* - Ann Kearns
2. *"The Hip Handbook: A Guide to Preventing and Treating Hip Pain"* - Nicolas Piuizzi, MD

Click [here](#) for more orthopedic patient information.

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