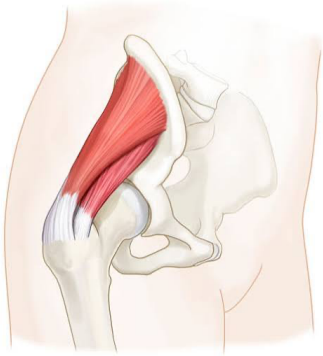
TWIN CITIES ORTHOPEDICS

Gluteal Tendon

Dr. Jonathan Reid

BACKGROUND



The lateral hip is anchored by the insertions of the gluteus medius and gluteus minimus onto the greater trochanter of the femur — a region often called the "rotator cuff of the hip" because of its functional similarity to the shoulder. Anatomically, these tendons wrap around and insert broadly across the trochanter rather than as a single discrete cord, which is why tears here can be partial, longitudinal, or involve the footprint rather than a clean full-thickness rupture. Several bursae cushion this region to reduce friction between tendon, muscle, and bone: subgluteus medius, subgluteus minimus, and the subgluteus maximus (trochanteric bursa). The gluteus medius and minimus act as hip abductors and, critically, as pelvic stabilizers in single-leg stance — during walking or running, they contract to prevent the opposite side of the pelvis from dropping.

Because these muscles fire with every step, repetitive tensile and compressive loading at the trochanteric insertion — especially compression from a tight ITB or adduction posture (like standing with hip "hanging" into adduction) — predisposes the tendons to degenerative changes over time. Pain here (greater trochanteric pain syndrome, GTPS) usually stems from a combination of gluteal tendinopathy, partial tearing, and bursal irritation, and is aggravated by direct pressure (side-lying), prolonged standing with hip adduction, and repetitive loading like stair climbing.

- **Gluteus minimis/medius tendinosis** — The most common gluteal tendon pathology, this chronic, degenerative change termed angiodysplastic dysplasia in the gluteus medius/minimus tendons is characterized by a cascade of events: 1) organized Type I collagen is replaced by thinner, weaker Type III collagen in a disorganized manner, 2) proliferation of ground substance (mucoid degeneration), and 3) growth of new blood vessels and nerve fibers. This results in a thicker, weaker, and functionally painful gluteal tendon. Tendinosis is caused by long-standing mechanical stress on the abductor mechanism from altered hip biomechanics, implant positioning, or chronic overuse.

- **Gluteus minimis/medius tendinitis** — Inflammation of the gluteus medius and/or minimus tendons at their insertion on the greater trochanter, often from altered biomechanics or abductor overload following THA. It typically presents as lateral hip pain worsened by walking, stair climbing, or lying on the affected side, and is seen on MRI as peritendinous edema and tendon thickening without significant fiber disruption.

- **Gluteus minimis/medius partial tearing** — A partial-thickness disruption of the gluteus medius and/or minimus tendon fibers, most commonly at the anterior facet or lateral facet insertion on the greater trochanter, frequently occurring in the setting of pre-existing tendinosis. This appears on MRI as focal fluid-signal defects or fraying within the tendon substance without full-thickness retraction.

- **Subgluteus maximius (trochanteric) bursitis** — Inflammation and fluid distension of the bursa located deep to the gluteus maximus tendon and superficial to the greater trochanter and vastus lateralis, often occurring secondary to adjacent abductor tendinopathy or hardware irritation.

- **Gluteal Tendinosis following Total Hip Arthroplasty (THA)** — Refers to chronic abductor tendon degeneration that develops or progresses following THA, related to factors like altered femoral offset, trochanteric osteotomy healing, iatrogenic injury during surgical approach, or chronic mechanical overload of the remaining intact fibers. Clinically it presents as persistent lateral hip pain and a Trendelenburg gait pattern, and is a major contributor to residual pain and dissatisfaction after otherwise successful hip replacement.

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INITIAL MANAGEMENT

Regardless of the specific diagnosis, initial management of gluteal tendon injuries begins with unloading the tendon to reduce ongoing stress, along with measures to control inflammation and pain. A home exercise program emphasizing gentle stretching is typically introduced early to maintain and enhance tendon pliability and support the healing process. A formal course of physical therapy is often prescribed as well, progressively strengthening the tendon so the person can return to full activity with a tendon that is more resilient and better conditioned for their sport or activity level.

Oral OTC Medications

- **Ibuprofen** (Advil) — For adults and children over 12, 200–400 mg every 4–6 hours (not exceeding 1200 mg per day)
- **Acetaminophen** (Tylenol) — For adults and children over 12, 325-650 mg every 4-6 hrs, (not exceeding 4000 mg per day)
- **Lidocaine patches** (Lidoderm 4%) — Recommended to wear for 12 hours, with 12 hours in between applications

Oral Prescription Medications

- **Meloxicam** (Mobic) — Take one tablet as prescribed with food, do not take this with any other NSAID (e.g., Ibuprofen)

Daily Exercises: As you await beginning physical therapy, start with the stretches and progress as your symptoms allow.

- **Standing Hip Adduction Stretch:** Stand with the affected leg crossed behind the other, then lean your hip away from that side (toward the wall or away from midline) until you feel a stretch along the outer hip; hold 20-30 seconds.
- **Side-lying Hip Adduction Stretch:** Lie on your unaffected side with the top leg bent and lowered toward the floor in front of you, allowing the top hip to drop into adduction; hold 20-30 seconds.
- **Side-lying Isometric Hip Abduction:** Lie on the unaffected side with the affected leg on top, hips stacked, and lift the top leg slightly (staying below 30-45° of abduction to avoid trochanteric compression), holding it still against gravity or light resistance for 30-45 seconds.
- **Single-leg Standing Hip Drop:** Stand on the affected leg on a step or box, and slowly lower the opposite hip toward the floor in a controlled manner over 3-4 seconds before returning to neutral.

Physical therapy: Appointments are scheduled by patients calling the location specific scheduling phone number, which can be found on the provided physical therapy card or by going online. Typically, physical therapy consists of one appointment per week, for 6-8 weeks.

Ultrasound-Guided Corticosteroid Injection

INTERVENTIONAL MANAGEMENT

Gluteal tendon pain that persists despite conservative management, as outlined above, often is indicative of a structural pathology that has not recovered or healed adequately. Depending on the etiology or nature of this structural pathology, additional recovery time may be necessary or an intervention may be required. Reevaluation is likely indicated towards this determination, however, advanced imaging can be helpful to review at the time of reevaluation to better understand the structural pathology.

- Advanced imaging will likely be recommended at the time of reevaluation. Please reach out to Rhodora **(952-456-7209)** to coordinate the appropriate imaging.

Interventional management is tailored to the structural issue preventing recovery and turn to pain-free activity/sport.

- **Orthobiologic Procedure** — Autologous stem cells or blood products (Platelet-rich plasma) can be used to augment tendon recovery
- **Percutaneous Tenotomy (TENJET)**— A minimally invasive intervention that identifies and removes diseased tendon tissue while preserving healthy tendon tissue through a form of guided, high-velocity saline debridement
- **Arthroscopic/Open Debridement +/- tendon repair** — Surgical resection of diseased tendon tissue with tendon augmentation with the use of suturing or repurposing a nearby tendon to add structural support

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For scheduling or questions, please call **952-456-7209** https://tcomn.com/physicians/jonathan-reid

Notes