

DIAGNOSING GLUTEAL TENDINOPATHY

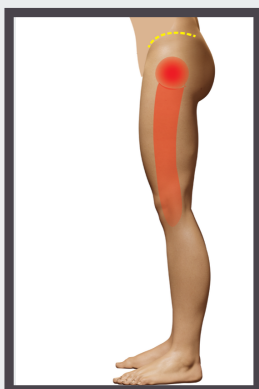
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PATIENT INTERVIEW FEATURES

Key information for a diagnosis of gluteal information will be gathered in the patient interview. The information below outlines features that are helpful for differentiating between the 3 most likely conditions underlying lateral hip pain - gluteal tendinopathy, hip joint pathology and lumbar radiculopathy.

GLUTEAL TENDINOPATHY

1. Pain location



Worst pain is located over the greater trochanter. May radiate a little around the trochanter and down the lateral thigh. Occasionally extends just below the knee.

2. Stiffness

Although range of motion may be limited by pain in more severe presentations, stiffness is rarely reported as a primary issue for those with isolated gluteal tendinopathy.

3. Aggravating Factors

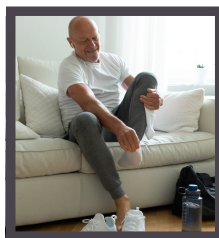
Factors that may assist in differentiating conditions (area of pain remains key)

- Pain/tenderness at the greater trochanter in sidelying
- Trochanteric pain during tasks that involve loading the hip abductors, particularly in an adducted hip position - single leg loading tasks such as standing on one leg to dress, walking hills, stairs, longer distances or at high speeds.

HIP JOINT PATHOLOGY

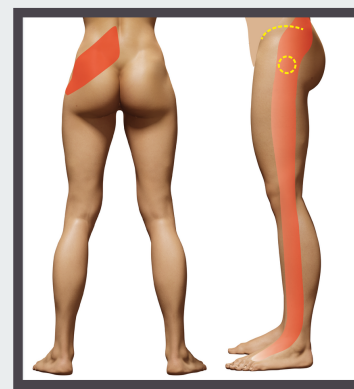


Mid-inguinal or anterolateral 'c-sign' type pain as pictured, above is most common. May also describe posterior hip pain or pain deep between anterior, lateral and posterior joint - 'triangulation sign'.



Hip stiffness, and particularly difficulty with manipulating shoes and socks, has been shown to be a key differentiator between hip osteoarthritis and gluteal tendinopathy.#

LUMBAR RADICULOPATHY



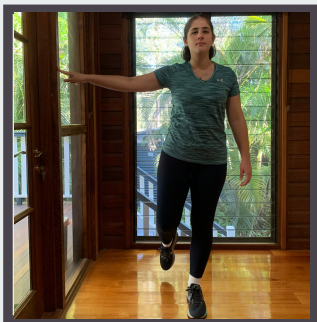
Pain more commonly reported to emanate from the back or buttock and radiate to the lateral hip and thigh, rather than the lateral hip being a key focal area of pain. Pain and paraesthesia may extend to the foot.

Stiffness of the lumbar spine may be reported but there is not usually a primary complaint of restricted hip range of motion.

- Night ache is a more general or deep ache, rather than tenderness over the greater trochanter
- Deep hip flexion tasks such as sitting in low chairs, or squatting
- Weightbearing rotation
- Extension tasks such as prolonged standing, long stride walking/running, Bulgarian split lunge-where the back leg is up on a bench behind.
- Night discomfort usually greatest with sustained lumbar extension lying in supine or prone
- Leaning forward/bending
- Lifting
- Prolonged sitting or standing

PHYSICAL EXAMINATION FEATURES

It is preferable to use a battery of tests, combining both sensitive and specific tests. **A positive test is reproduction of the patient's greater trochanteric pain (GTP).** Also perform tests to screen for a hip joint source of nociception (e.g. range of motion and FADDIR/Impingement tests) and lumbar spine referral (e.g. active range of motion and palpation). A clinical diagnosis of gluteal tendinopathy requires tenderness on palpation plus at least one other positive from the battery of tests below.*



1. Sustained Single Leg Stance Test

TECHNIQUE TIPS

- Stand on one leg for up to 30seconds
- Lift non-test side foot off ground behind
- Fingertip opposite side for balance only
- **Positive test: reproduction of GTP within 30 seconds**
- You can also use time-to-pain-onset as a sign for reassessment over time.

CLINIMETRIC PROPERTIES

SN:38%; SP:100%; +veLR:12.2; -veLR:0.6*

- Highest positive likelihood ratio
- Best for ruling in the condition, when the test is positive

→ **If a patient experiences their GTP within 30s of standing on one leg, the likelihood of them having gluteal tendinopathy is significantly increased**



2. Flexion-Adduction-External Rotation Tests (FADER & FADER-Resisted)

TECHNIQUE TIPS

Part 1: FADER

- Flex hip passively to 90degrees
- Adduct and externally rotate to EOR

Part 2: FADER-Resisted

Add an isometric internal rotation force
Maintain FADER position & ask the patient to resist your external rotation force - 'don't let me move your foot'

CLINIMETRIC PROPERTIES

FADER:SN:30%; SP:87%; +veLR:2.3; -veLR:0.8*

FADER-R:SN:44%; SP:93%; +veLR:6.6; -veLR:0.6*

- Both parts of the test are specific but not sensitive, so best for ruling in the condition
- All clinimetric properties were improved with the addition of the active component

→ **GTP reproduced during FADER-R, increases the likelihood of having the condition**



3. Adduction & Adduction-Resisted Tests (ADD & ADD-R)

TECHNIQUE TIPS

Part 1: ADDUCTION

- Patient in Modified Ober's position - diagonal on bed, hip in neutral F/Ext
- Lower hip passively into EOR Adduction

Part 2: ADDUCTION - Resisted

Add an isometric abduction force
Maintain this position & ask the patient to resist your adduction force

CLINIMETRIC PROPERTIES

ADD: SN:20%; SP:87%; +veLR:1.5; -v LR:1*

ADD-R:SN:38%; SP:93%; +veLR:5.7; -veLR:0.7*

- Both parts of the test are specific but not sensitive, so best for ruling in the condition
- All clinimetric properties were improved with the addition of the active component

→ **GTP reproduced during ADD-R, increases the likelihood of having the condition**



4. Flexion- Abduction - External Rotation Test (FABER)

TECHNIQUE TIPS

- Passively flex the patient's hip and place the foot above their opposite patella
- Stabilise the opposite side of the pelvis and slowly lower the hip into abduction and external rotation

CLINIMETRIC PROPERTIES

SN:42%; SP:80%; +veLR:2.1; -veLR:0.73*

- Best for ruling in the condition when positive but not as useful as active tests

May be useful for differentiating between hip osteoarthritis and GTPS#



5. Palpation

TECHNIQUE TIPS

- Palpate gluteus minimus insertion along the anterior aspect of the greater trochanter (GT)
- Palpate the lateral insertion of gluteus medius across the lateral GT
- Palpate the insertion of the posterior gluteus medius at the posterior-superior aspect of the GT

CLINIMETRIC PROPERTIES

SN:80%; SP:47%; +ve LR:1.5; -ve LR:0.4*

- Best negative likelihood ratio and sensitivity*
- Best for ruling out gluteal tendinopathy

→ **If a patient is not tender over the greater trochanter, the likelihood of them having gluteal tendinopathy is low**

*Grimaldi, A., Mellor, R., Nicolson, P., Hodges, P., Bennell, K. and Vicenzino, B., 2016. Utility of clinical tests to diagnose MRI-confirmed gluteal tendinopathy in patients presenting with lateral hip pain. British Journal of Sports Medicine, 51(6), pp.519-524.

#Fearon, A., Scarvell, J., Neeman, T., Cook, J., Cormick, W. and Smith, P., 2012. Greater trochanteric pain syndrome: defining the clinical syndrome. British Journal of Sports Medicine, 47(10), pp.649-653.