

Bursitis

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What is a Bursa?

- A **bursa** is a small flat sac lined with synovium
- Contains a thin lubricating fluid layer
- Reduces friction between: tendon and bone
- Normally not palpable unless inflamed

What is Bursitis?

Definition

Bursitis = inflammation of a bursa



Causes:Bursitis

The cause of bursitis is the overuse of structures surrounding the bursa, leading to:

- Excessive friction and inflammation of the bursal walls.
- Bursitis is usually secondary to other conditions such as tendinitis.

Contributing factors are :

Intrinsic Factors:

- muscle imbalances
- poor biomechanics,
- Postural dysfunctions such as scoliosis or hyper-kyphosis
- lack of flexibility.

Extrinsic Factors

- Repetitive occupational activities
- Sports overuse
- Prolonged kneeling/sitting
- Poor equipment biomechanics



Less commonly conditions causes Bursitis :

- **acute trauma,**
- **infection**
- **pathologies** such as osteoarthritis, gout and rheumatoid arthritis

Acute traumatic bursitis usually occurs to the:

- olecranon
- trochanteric
- Ischial
- prepatellar or
- calcaneal bursae

A bursa can become infected, especially if a needle is introduced into it for some therapeutic purpose.

Shoulder Bursae

Subacromial / Subdeltoid Bursa

Location:

- Between the acromion and supraspinatus tendon
- Part lies between deltoid muscle and humerus

Palpation:

- Palpated through anterior deltoid near acromion

Subscapular Bursa

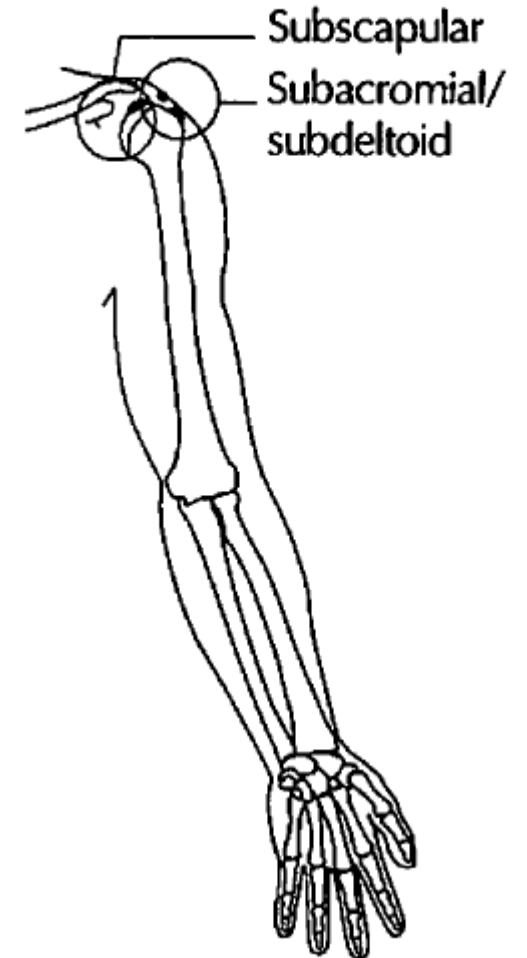
Location:

- Between scapula and subscapularis muscle

Important:

- Not easily palpable

ANTERIOR VIEW



Shoulder Bursitis:

What Happens?

- Bursa becomes inflamed and irritated
- Commonly part of shoulder impingement syndrome

Bursa gets compressed between:

- Rotator cuff tendons
- Coracoacromial ligament
- Acromion
- Sometimes biceps tendon



Shoulder Bursitis:

Causes

Common Causes

- Overuse of shoulder
- Repetitive overhead activities
- Sports activities
- Trauma or fall on outstretched arm



Calcific Tendinitis & Bursitis

Acute Calcific Tendinitis

- Calcium deposits form in tendon
- Can lead to acute bursitis

Symptoms:

- Severe shoulder pain
- Pain increases with movement

Important:

- Some people have calcium deposits without pain



Signs & Symptoms:Common Symptoms

- Shoulder pain
- Painful movement
- Pain with overhead motion
- Night pain
- Reduced ROM
- Tenderness near acromion



Assessment Findings

Observation

- Guarded shoulder posture
- Painful arc

Palpation

- Tenderness near anterior deltoid/acromion

Special Tests

- Neer impingement
- Painful arc test



Massage Treatment Goals

- **Acute Stage**
- Reduce pain
- Reduce inflammation
- Avoid compressing bursa
- **Chronic Stage**
- Improve mobility
- Reduce muscle tension
- Treat surrounding muscles



Key RMT Precautions

- **Avoid:**
 - Deep pressure directly on bursa
 - Aggressive stretching in acute stage
- **Refer Out If:**
 - Severe inflammation
 - Suspected infection
 - Major ROM loss

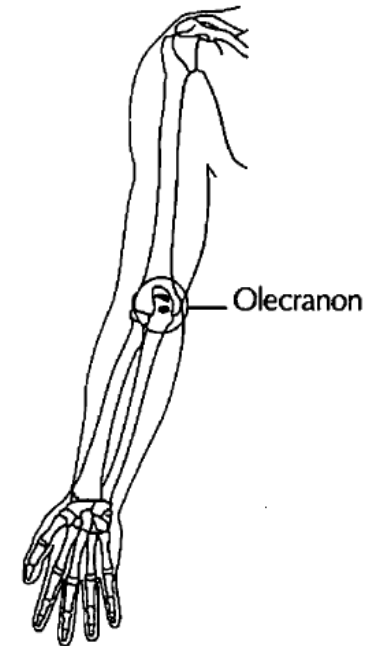


Olecranon Bursitis

“Student’s Elbow”

- **Location:** The olecranon bursa lies between the olecranon and the subcutaneous fascia and is quite swollen and obvious when inflamed.
- **Cause:**
 - Repetitive pressure on elbow
 - Trauma
 - Wrestling/contact pressure
- **Findings:**
 - Visible swelling
 - Pain on compression
 - Warmth and redness

POSTERIOR VIEW

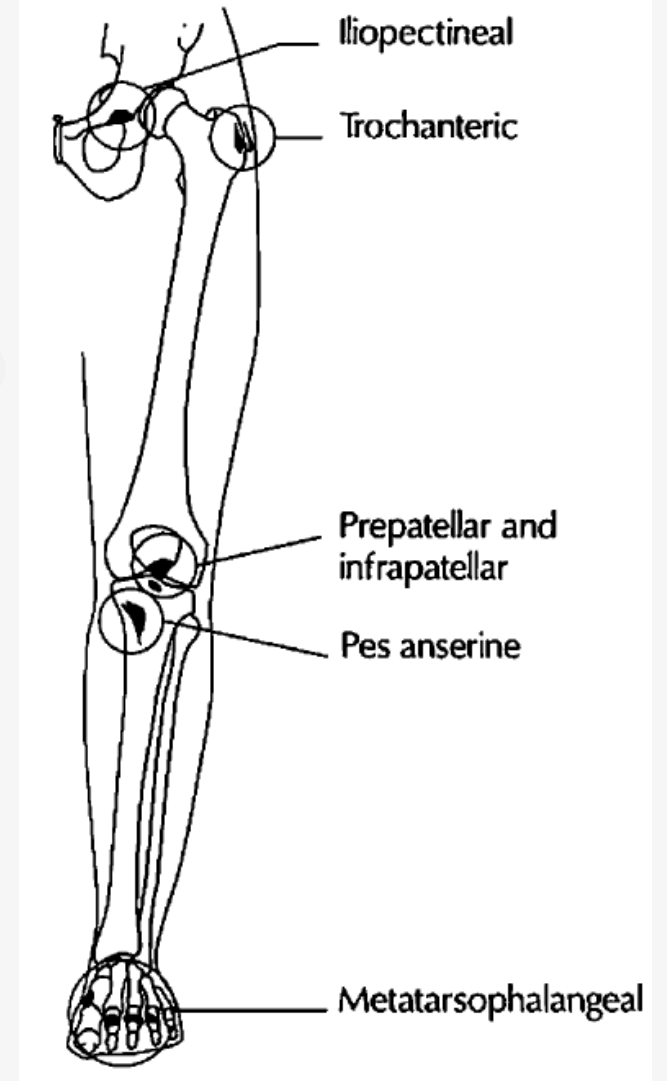


TROCHANTERIC BURSTITIS

- **What is Trochanteric Bursitis?**
- Inflammation of bursae at the greater trochanter
- Common cause of lateral hip pain

Location of Bursa

- **Two Main Bursae**
- **1. Gluteus Maximus Bursa**
- Between gluteus maximus tendon and greater trochanter
- **2. Gluteus Medius Bursa**
- Between gluteus medius tendon and greater trochanter



Palpation

- **Palpation Findings**

- Bursa palpated through gluteus maximus tendon
- Tenderness over lateral hip
- Pain on compression

Signs & Symptoms :Common Symptoms

- Lateral hip pain
- Cannot sleep on affected side
- Pain climbing stairs
- Pain getting out of a car
- Antalgic gait possible



Causes

- Leg length discrepancy
- Altered hip biomechanics
- Low back pain
- Osteoarthritis
- Surgery
- Repetitive activities
- Iliotibial band tightness/contracture



Why IT Band Matters

- **Iliotibial Band Contracture**
- Tight IT band increases friction
- Friction irritates trochanteric bursa
- Repetitive hip movement worsens symptoms



Assessment

- **Observation**

- Antalgic gait
- Difficulty weight bearing

- **Palpation**

- Tender lateral hip
- Heat/swelling possible

- **Special Tests**

- Ober's test may be positive
- FABER test may reproduce pain



Massage Treatment Goals

- **Acute Stage**

- Reduce pain and inflammation
- Avoid direct compression

- **Chronic Stage**

- Reduce IT band tightness
- Improve hip biomechanics
- Decrease muscle hypertonicity



- **Massage :**

- Gentle effleurage
- Lymphatic drainage
- Myofascial release
- Trigger point therapy
- Gluteal and IT band treatment
- Stretching surrounding muscles



ILIOPECTINEAL BURSITIS

What is Iliopectineal Bursa?

- A bursa located at the front of the hip
- Reduces friction around the hip flexors

Location

Lies between:

- Iliopsoas muscle
- Iliofemoral ligament

Palpation Position

- Client supine
- Hip flexed to 90°
- **Bursa Location**
- 1–2 cm inferior to middle third of inguinal ligament



- **Signs & Symptoms**

- Anterior hip pain
- Pain may radiate down anterior thigh
- Pain due to pressure on femoral nerve

Postural Findings

- Antalgic Posture

- **Common Position:**

- Hip flexion
- External rotation

- **Reason:**

- Reduces pressure and pain around the bursa



- **Causes**

- Tight hip flexors
- Repetitive hip activity
- Overuse of iliopsoas muscle

- **Activities May Include:**

- Running
- Climbing
- Repetitive lifting
- Sports with repeated hip flexion



- **Assessment**

Observation

- Antalgic gait/posture
- Difficulty extending hip

Palpation

- Tenderness near inguinal ligament
- Pain with compression

ROM Findings

- Pain with hip extension
- Tight hip flexors



Massage Treatment Goals

- **Acute Stage**
- Reduce pain and inflammation
- Relax surrounding muscles
- Avoid direct pressure
- **Chronic Stage**
- Improve hip flexor flexibility
- Reduce tension
- Improve hip biomechanics



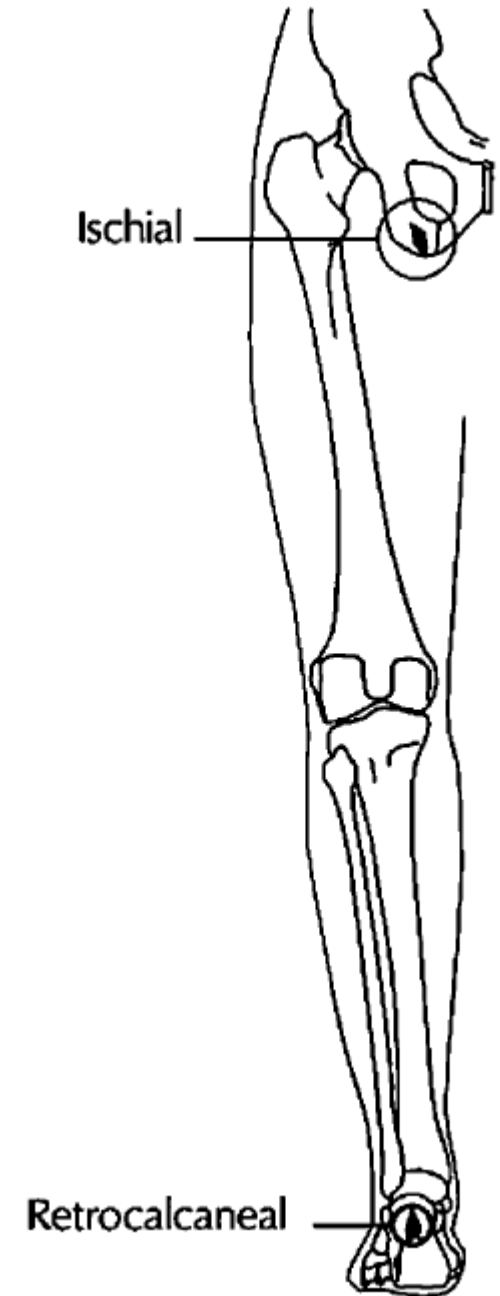
Ischial Bursitis

“Weaver’s Bottom” / “Bench Warmer’s Bursitis”

- **What is Ischial Bursa?**
- Bursa located at the sitting bone area
- Helps reduce friction during sitting and movement

Location

- Lies between:
 - Gluteus maximus
 - Ischial tuberosity
- **Palpation**
- Palpated through gluteus maximus





Signs & Symptoms

- Localized pain over ischial tuberosity
- Pain while sitting
- Pain may refer down posterior leg
- Can mimic sciatic pain

Functional Findings

During Driving

- Pressing brake or gas pedal may reduce pain
- **Why?**
- Increased hamstring tone rotates ischial tuberosity away from seat pressure

Gait Findings

- **Antalgic Gait**

- Client leans toward affected side
- Shortened stride length
- Standing on toes may be painful

Causes

- Sitting on hard surfaces for long periods
- Horseback riding
- Prolonged sitting
- Excessive sprinting
- Repetitive hamstring contraction

Assessment

- **Observation**

- Painful sitting posture
- Antalgic gait

- **Palpation**

- Tenderness over ischial tuberosity
- Possible warmth/swelling

- **ROM**

- Pain with hamstring activity
- Pain with prolonged sitting



Massage Treatment Goals

- **Acute Stage**

- Reduce pain and inflammation
- Avoid direct compression

- **Chronic Stage**

- Reduce hamstring tension
- Improve pelvic biomechanics
- Decrease muscle hypertonicity



Retrocalcaneal Bursitis

- **What is Retrocalcaneal Bursa?**
- A bursa located at the back of the heel
- Helps reduce friction around the Achilles tendon
- **Location**
- Lies between:
 - Achilles tendon
 - Calcaneus (heel bone)

Palpation

- Bursa palpated on either side of Achilles tendon

- **Signs & Symptoms**

- Local heel pain
- Tenderness near Achilles tendon
- Pain during walking or running
- Swelling possible
- Pain with ankle movement

- **Causes**

- Overuse activities
- Tight gastrocnemius-soleus complex
- Running and jumping activities
- Repetitive strain on Achilles tendon



Assessment

- **Observation**

- Antalgic gait
- Difficulty walking or heel raise

- **Palpation**

- Tenderness beside Achilles tendon
- Possible swelling and warmth

- **ROM Findings**

- Pain with dorsiflexion
- Tight calf muscles



Massage Treatment Goals

- **Acute Stage**
 - Reduce pain and inflammation
 - Reduce calf muscle tension
 - Avoid direct compression on bursa
- **Chronic Stage**
 - Improve calf flexibility
 - Restore ankle mobility
 - Improve biomechanics



BAKER'S CYST

- Popliteal Synovial Cyst

What is a Baker's Cyst?

- A fluid-filled synovial cyst behind the knee
- Usually appears in the popliteal space
- Common around the lateral side of the knee



- **Anatomy**

May develop from:

- Enlargement of extracapsular bursa between:
 - Gastrocnemius
 - Semimembranosus muscles
- OR
- Herniation of synovium through posterior joint capsule

Who Can Get It?

Baker's Cyst Can Occur In:

- Children
- Adults
- **Signs & Symptoms**
- Swelling behind knee
- Tightness in popliteal area
- Discomfort with knee flexion
- Feeling of fullness behind knee
- May restrict movement



Important Research Findings

- **Natural Resolution**
- **Study Findings:**
 - 51 out of 70 cysts disappeared on their own
 - Resolved within less than 2 years
- **After Surgery:**
 - Many cysts returned within 7 months
 - Some recurrent cysts later disappeared spontaneously
- **Current Recommendation**
 - Usually left untreated
 - Observation is common approach
 - Surgery often avoided due to recurrence



Bunion (Hallux Valgus)

- **What is a Bunion?**
- A bunion develops at the:
 - First metatarsophalangeal (MTP) joint
- **Involves:**
- Excessive bone growth (exostosis)
- Callus formation
- Inflamed and thickened bursa



- **What is Hallux Valgus?**
- **Hallux Valgus Deformity**
- First metatarsal deviates medially
- Big toe (hallux) deviates laterally
- **Result:**
- Visible bunion at base of big toe



- **Causes**

- Poor foot biomechanics
- Joint hypermobility
- Improper weight distribution
- Tight or poor footwear
- Repetitive stress on foot

- **Signs & Symptoms**

- Pain at base of big toe
- Swelling and redness
- Difficulty wearing shoes
- Visible toe deformity
- Inflamed bursa
- Tenderness during walking

Assessment Findings

- **Observation**

- Lateral deviation of big toe
- Enlarged first MTP joint
- Callus formation

- **Palpation**

- Tenderness
- Warmth
- Thickened bursa



- **Massage Goals**

- Reduce muscle tension
- Improve foot mobility
- Reduce pain
- Improve circulation

- **Areas to Treat**

- Plantar fascia
- Foot intrinsic muscles
- Calf muscles
- Tibialis posterior/peroneals



- **Massage Precautions**

- **Avoid**

- Excessive pressure directly on inflamed bunion
- Aggressive joint mobilization in acute inflammation

- **Use**

- Gentle soft tissue techniques
- Relaxation massage
- Gentle stretching



Acute Bursitis: Symptom Picture

- **Acute Stage**
- Heat
- Swelling
- Deep burning pain
- Pain at rest and movement
- Restricted ROM
- Sleep disturbance
- Pain on compression



Chronic Bursitis :Symptom Picture

- **Chronic Stage**
- Localized achy pain
- Fibrosis and adhesions
- Less ROM restriction
- Chronic inflammation
- Trigger points
- Muscle hypertonicity



Contraindications: Bursitis

- With acute bursitis, the therapist
- should avoid compressing the bursa
- or applying techniques that place a drag on the surrounding tissues.
- On-site techniques are contraindicated with acute bursitis.
- If infective bursitis is suspected, the client is referred for medical attention.

Medical Management : Bursitis

- **Medical Treatments May Include:**

- Rest
- NSAIDs
- Ice
- Ultrasound
- Corticosteroid injection
- Aspiration
- Surgery (rare)



Self-Care: Bursitis

- **Self-Care & Prevention**
- Ice during flare-ups
- Stretch tight muscles
- Gradual strengthening
- Correct posture
- Modify activities
- **Prevention**
- Proper biomechanics
- Improve flexibility
- Correct muscle imbalance
- Avoid repetitive compression



- **Key Clinical Notes for RMTs**

- Acute bursitis = avoid direct compression
- Chronic bursitis often involves surrounding fascial dysfunction
- Always assess biomechanics and posture
- Differentiate bursitis from tendinitis
- Treat compensating muscles and movement patterns



