

Sample Topic

Bursitis



The Medical Disability Advisor: Workplace Guidelines for Disability Duration

Fifth Edition

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Editor-in-Chief

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Bursitis

Related Terms

- Carpet-layer's Knee
- Clergyman's Knee
- Dialysis Elbow
- Housemaid's Knee
- Miner's Elbow
- Student's Elbow
- Weaver's Bottom

Medical Codes

- ICD-9-CM: 095.7, 098.52, 726, 726.33, 726.4, 726.5, 726.61, 726.62, 726.63, 726.65, 726.71, 727.3
- ICD-10: M65.9, M70.4, M71.1, M71.5, M71.8, M71.9, M73.0*, M73.1*, M77.8

Definition

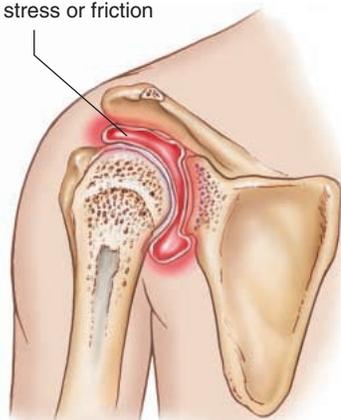
Bursitis is the painful inflammation of any of the 150 to 160 fluid-filled sacs (bursae) that cushion the movement between the bones, muscles, and tendons near the joints. In addition to cushioning pressure points, the bursae are lined with synovial

Normal bursa sac



Normal shoulder joint

Bursa shows inflammation due to excessive stress or friction



Cross-section of shoulder with bursitis

cells that secrete a fluid rich in collagen and proteins. The synovial fluid acts as a lubricant when body parts move. When this fluid becomes infected with bacteria or when the bursa becomes irritated because of excessive pressure or unusual movement, bursitis results. Bursitis also occurs as part of systemic inflammatory diseases such as rheumatoid arthritis or gout.

The shoulder is most susceptible to bursitis, but the condition may also occur in the hips, knees, pelvis, elbows, toes, and heels. Bursitis may be acute or chronic, and infectious or non-infectious.

The cause of bursitis is often unknown. Risk factors for bursitis include having a hobby or a profession that requires repetitive movement, staphylococcal infection, and advancing age. Crystal deposits (due to gout or pseudogout) may also cause bursitis. Rarely, tuberculosis may result in bursitis.

Diagnosis

History: Individuals with this condition may report localized tenderness, warmth, swelling, redness of the skin, a dull ache or stiffness, worsening of pain with movement or pressure, and limited joint movement. If the bursa is infected, the individual may report systemic symptoms including fever and red streaks leading from the affected area. Questions should be directed to a history of recent trauma directly over the bursae or to repetitive activity.

Physical exam: Visual inspection may reveal swelling. Skin should be inspected for breakdown and possible entry of a foreign object. Touching (palpation) the affected joint and bursae often reveals soft, boggy, or tense tissue depending on the amount of fluid build up. The bursa is tender. Motion is limited by pain and swelling in acute cases. More chronic cases may show decreased motion from adhesions and thickening of the tissue. Muscle weakness may develop from lack of use (disuse atrophy).

Tests: Plain x-rays of the joint and surrounding area are generally not helpful in confirming the diagnosis but may be used to detect the calcium deposits seen in chronic bursitis. It is important to look for changes in the bone from more chronic irritation and to rule out bone infection (osteomyelitis). The bursa fluid may be examined by aspiration to rule out gout and infection (synovial fluid analysis). If an infection is suspected, ESR and CBC blood tests may be ordered.

Treatment

Treatment for noninfectious acute bursitis consists of rest, ice, temporary immobilization of the affected area, compression (e.g., elastic bandage), padding, elevation of the affected area above the level of the heart, and pain medication (e.g., nonsteroidal anti-inflammatory agents). In severe cases of noninfectious bursitis, an opioid or an oral corticosteroid may be needed to relieve pain and/or inflammation.

Chronic noninfectious bursitis is treated in a similar fashion, although immobilization and rest may not be of much help. Large calcium deposits in the shoulder may require removal through irrigation or surgery.

Surgical excision of bursae (bursectomy) may be required if the condition is chronic or recurs frequently. Surgery is generally performed only if conservative treatment fails. The type of operation depends on the area affected.

In infectious bursitis, the bursae should be drained and oral antibiotics started as soon as blood cultures are drawn. Staphylococcus aureus is the most common organism. Individuals with systemic symptoms (e.g., fever or chills) may require hospitalization and intravenous antibiotics.

Prognosis

In general, bursitis responds well to conservative treatment. Most individuals respond to therapy in several days. In infectious bursitis, the bursae may need to be drained every 1 to 3 days until the infected fluid does not return. If the underlying cause of the condition is not corrected, chronic bursitis may develop.

Bursectomy usually yields a satisfactory outcome.

Differential Diagnoses

- Blunt injuries to the body part
- Cellulitis
- Costochondritis (inflammation of the rib joints)
- Gout and pseudogout
- Rheumatoid arthritis
- Tendinitis
- Tumors of bone or soft tissue
- Unsuspected or hidden fractures

Specialists

- Orthopedic Surgeon
- Physiatrist
- Rheumatologist
- Sports Medicine Internist

Rehabilitation

The goal of rehabilitation for individuals with bursitis is first to decrease inflammation and pain, and second to restore motion and strength to affected joints.

The physical therapist first instructs the individual how to reduce swelling and minimize pressure from the inflamed bursa. Cold is then used to control swelling and pain, sometimes in conjunction with electrical stimulation. Once the acute pain and inflammation decrease, heat can be used in the rehabilitation process.

After the pain and swelling are greatly reduced, passive range of motion exercises can help restore full motion to the affected joint and/or limb. The type of exercise program depends on the location of the affected bursa, stage of the inflammation

(i.e., recent flare-up or ongoing pain), and whether surgery was required.

Comorbid Conditions

- Compromised immune system (e.g., HIV)
- Diabetes
- Gout
- Obesity
- Rheumatoid arthritis
- Scleroderma

Complications

Poorly treated or untreated acute bursitis may develop into chronic bursitis. Frozen joint syndrome or permanent limitations of a joint's mobility are other possible complications.

Factors Influencing Duration

Factors that may influence length of disability include the number of bursae affected, site, cause, activity, type of treatment, response to treatment process. The individual must understand the need to restrict the repetitive motion that caused the bursitis.

Length of Disability

Supportive treatment, bursitis (nonspecific).

DURATION IN DAYS			
Job Classification	Minimum	Optimum	Maximum
Sedentary	0	3	14
Light	0	3	14
Medium	0	3	28
Heavy	3	14	28
Very Heavy	3	14	28

Return to Work

If a certain activity (e.g., repetitive motion) caused the individual's bursitis, the individual may need to limit the activity or use protective measures. e.g., kneepads or other cushioning should be used when kneeling during gardening or scrubbing floors. Plumbers, roofers, and carpet layers should wear knee protection. Shoes with appropriate cushioning or ankle pads may be needed. The individual should perform exercises to strengthen the muscles and improve flexibility around the affected bursa.

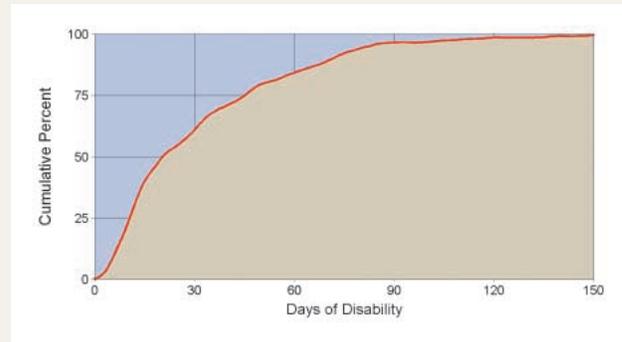
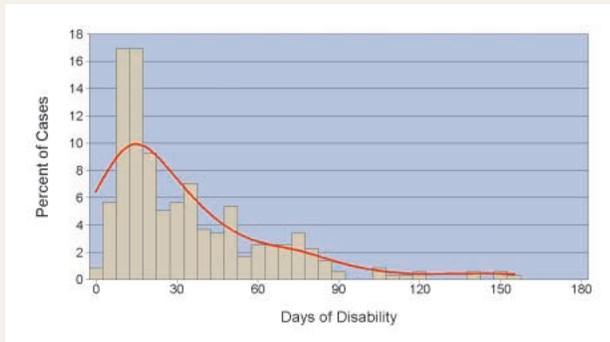
Using heat or ice treatments after work to relieve any soreness may help reduce the recurrence of bursitis.

Anti-inflammatory medications can help relieve pain and inflammation.

Reference Data

DURATION TRENDS - ICD-9-CM: 727.3

Cases	Mean	Min	Max	No Lost Time	Over 6 Months	Percentile:	5th	25th	Median	75th	95th
355	32	0	152	0.8%	0%	Days:	5	11	21	46	83



Note: Differences may exist between the duration tables and the reference graphs. Duration tables provide expected recovery periods based on the type of work performed by the individual. The reference graphs reflect the actual experience of many individuals across the spectrum of physical conditions, in a variety of industries, and with varying levels of case management. Selected graphs combine multiple codes based on similar means and medians.

Failure to Recover

Regarding diagnosis:

- Was diagnosis of bursitis confirmed?
- Did laboratory examination of synovial fluid aspiration reveal crystals or bacterial infection?
- Has individual experienced any complications?

Regarding treatment:

- Did treatment measures such as rest, ice, elevation, compression, immobilization, and pain medication help?
- Were opioids or oral corticosteroids necessary?
- Was surgery indicated?
- If bursitis was infectious, were antibiotics given and bursae drained?

Regarding prognosis:

- Was joint function impaired?

- Would individual benefit from additional physical therapy to strengthen muscles and re-establish joint's full range of motion?
- In infectious bursitis, was the area drained until the infectious fluid no longer returned? Could infection still be present?
- Would individual benefit from additional antibiotic therapy?
- Were comorbid conditions such as gout, rheumatoid arthritis, or chronic overuse appropriately addressed?

General References

Masi, Alfonse T. "Bursitis." *The Merck Manual of Home Health Care*. Ed. Mark H. Beers 2nd ed. Whitehouse Station, NJ: Merck Research Laboratories, 2003. 417-418.

Mayo Clinic Staff. "Bursitis." *MayoClinic.com*. 30 Sep. 2004. Mayo Foundation for Medical Education and Research. 19 May 2005 <<http://www.mayoclinic.com/invoke.cfm?id=DS00032>>.