STANFORD
SCHOOL OF MEDICINE
Stanford University Medical Center

DEPARTMENT OF ORTHOPEDIC SURGERY
SPORTS MEDICINE
Marc R. Safran, MD
Professor, Orthopaedic Surgery
Chief, Division of Sports Medicine

PREPATELLAR BURSITIS

DESCRIPTION

A bursa functions like a water balloon to reduce friction and wear of the soft tissues against bone. The pre-patellar bursa is a bursa between the patella (knee cap) and the overlying skin. This bursa allows the skin to glide easily and without friction over the patella. Pre-patellar bursitis is when there is inflammation and pain of this bursa.

FREQUENT SIGNS AND SYMPTOMS

- Pain, tenderness, swelling, warmth and/or redness over the front of the patella at the pre-patellar bursa.
- Limited movement in the affected area occasionally with radiation of pain into adjacent areas. Occasionally severe pain with movement of the affected knee.
- Crepitation (a crackling sound) when the bursa is moved or touched
- Occasionally painless swelling of the bursa.
- Fever (when infected).

CAUSES

Usually due to sudden direct trauma or to repetitive kneeling and/or knee bending. Less commonly, due to overuse or strenuous, unaccustomed exercise of the knee

RISK INCREASES WITH

- Sports that require kneeling or landing on the knees, such as volleyball or football.
- Vigorous or repetitive athletic training (particularly running down hills or inclines) or sudden increase or change in activity level (weekend warriors)
- Artificial turf

EXPECTED OUTCOME

Usually curable within 2 weeks if treated appropriately with conservative treatment and resting the affected area.

POSSIBLE COMPLICATIONS

- Healing time will be prolonged if not appropriately treated or if not given adequate time to heal
- Frequent recurrence of symptoms resulting in a chronic, repetitive problem.
- Joint stiffness with permanent limitation of the affected joint's mobility
- Infection of bursa
- Chronic inflammation or scarring of bursa

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GENERAL TREATMENT CONSIDERATIONS

Initial treatment consists of medication and ice to relieve the pain, stretching and strengthening exercises (particularly the quadriceps and hamstring muscles) and modifying the activity which initially cause the problem to occur. These all can be carried out at home, though referral to a physical therapist or athletic trainer for further evaluation and treatment may be helpful. Knee pads for those on their knees a lot or at risk of falling and landing on the knees to protect the bursa while the inflammation settles down. An elastic bandage may be used to help reduce swelling. If symptoms persist or recur, withdrawing fluid from the bursa, with or without injection or cortisone, may be needed. Bursae that persist in spite of conservative treatment, recur or are infected may require surgical excision (removal).

MEDICATION

- Non-steroidal anti-inflammatory medications, such as aspirin and ibuprofen (do not take if surgery planned in 7 days or less), or other minor pain relievers, such as acetaminophen, are often recommended. Take these as directed by your physician. Contact him/her immediately if any bleeding, stomach upset or an allergic reaction occurs.
- Pain relievers are usually not prescribed for this condition. If your physician does prescribe pain medications, use only as directed.
- Cortisone injections into the bursa reduce inflammation, and may be administered, though this is not usually recommended as a means to return to sports.
- Antibiotics if the bursa is infected

HEAT AND COLD:

- Cold is used to relieve pain and reduce inflammation for acute and chronic cases. Cold should be applied for 10 - 15 minutes every 2-3 hours for inflammation and pain, and immediately after any activity which aggravates your symptoms. Use ice packs or an ice massage.
- Heat may be used prior to performing stretching and strengthening activities prescribed by your physician, physical therapist or athletic trainer. Use heat pack or a warm soak.

NOTIFY OUR OFFICE IF

- Symptoms get worse or do not improve in 2 weeks despite treatment
- Is signs of infection develop, including fever to 101 F, increased pain, redness, warmth or purulent drainage from the bursa
- New, unexplained symptoms develop. Drugs used in treatment may produce side-effects.

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