

PREPATELLAR BURSITIS



■ ■ ■ Description

A bursa functions like a water balloon to reduce friction and wear of the soft tissues against bone. The prepatellar bursa is a bursa between the patella (kneecap) and the overlying skin. This bursa allows the skin to glide easily and without friction over the patella. Prepatellar bursitis is characterized by inflammation and pain of this bursa.

■ ■ ■ Common Signs and Symptoms

- Pain, tenderness, swelling, warmth, or redness over the front of the patella at the prepatellar 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, sudden direct trauma or repetitive kneeling or knee bending
- Less commonly, 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)
- Improper warm-up or overstretching
- Poor technique
- Artificial turf

■ ■ ■ Preventive Measures

- Avoid injuries or overuse of muscles whenever possible.
- Appropriately warm up and cool down.
- Maintain appropriate conditioning:
 - Knee flexibility
 - Muscle strength and endurance
 - Cardiovascular fitness
- Use proper technique and wear protective equipment, including knee pads.

■ ■ ■ Expected Outcome

This condition is usually curable within 2 weeks if treated appropriately with conservative treatment and resting of the affected area.

■ ■ ■ Possible Complications

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

■ ■ ■ 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 modification of the activity that initially caused the problem. These all can be carried out at home, although referral to a physical therapist or athletic trainer for further evaluation and treatment may be helpful. For those on their knees often or for those at risk of falling and landing on the knees, knee pads should be worn 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

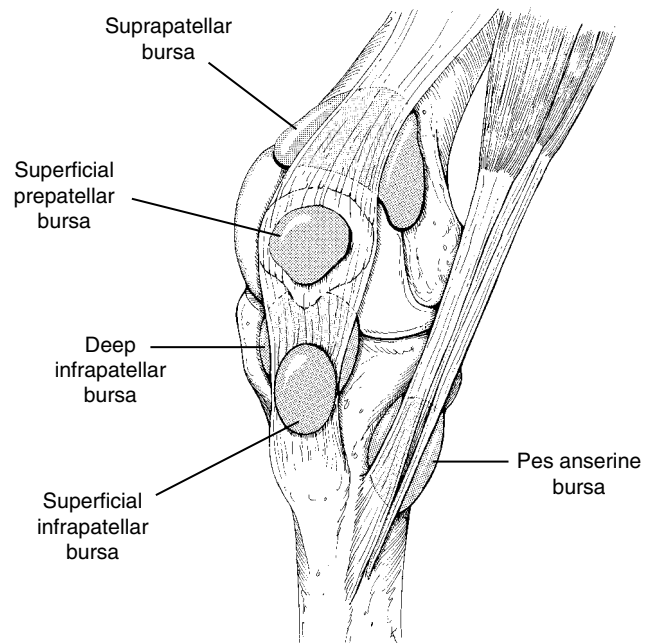


Figure 1

From Scuderi GR, McCann PD, Bruno PJ: Sports Medicine: Principles of Primary Care. St. Louis, Mosby, 1997, p. 369.

or without injection or cortisone, may be needed. Bursae that persist in spite of conservative treatment, that recur, or that are infected may require surgical excision (removal).

■ ■ ■ Medication

- Nonsteroidal anti-inflammatory medications, such as aspirin and ibuprofen (do not take within 7 days before surgery), or other minor pain relievers, such as acetaminophen, are often recommended. Take these as directed by your physician. Contact your physician immediately if any bleeding, stomach upset, or signs of an allergic reaction occur.
- Pain relievers are usually not prescribed for this condition. If your physician does prescribe pain medications, use only as directed.
- Cortisone injection into the bursa reduces inflammation and may be administered, although this is not usually recommended as a means to return to sports.
- Antibiotics may be prescribed 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 to 15 minutes every 2 to 3 hours for inflammation and pain and immediately after any activity that aggravates your symptoms. Use ice packs or an ice massage.
- Heat may be used before performing stretching and strengthening activities prescribed by your physician, physical therapist, or athletic trainer. Use a heat pack or a warm soak.

■ ■ ■ Notify Our Office If

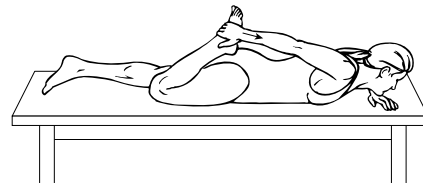
- Symptoms get worse or do not improve in 2 weeks despite treatment
- Signs of infection develop, including fever to 101°F, increased pain, redness, warmth, or purulent drainage from the bursa
- New, unexplained symptoms develop (drugs used in treatment may produce side effects)

EXERCISES

> RANGE OF MOTION AND STRETCHING EXERCISES • Prepatellar Bursitis

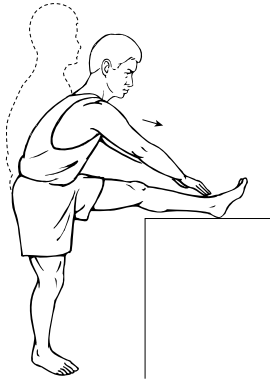
These are some of the *initial* exercises you may start your rehabilitation program with until you see your physician, physical therapist, or athletic trainer again or until your symptoms are resolved. Please remember:

- Flexible tissue is more tolerant of the stresses placed on it during activities.
- Each stretch should be held for 20 to 30 seconds.
- A *gentle* stretching sensation should be felt.



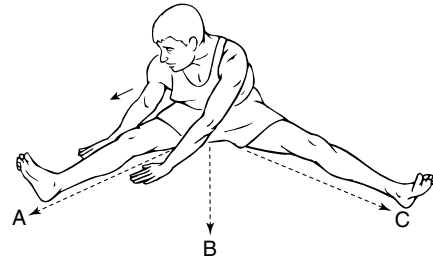
STRETCH • Quadriceps, Prone

1. Lie on your stomach as shown.
2. Bend your knee, grasping your toes, foot, or ankle. If you are too “tight” to do this, loop a belt or towel around your ankle and grasp that.
3. Pull your heel toward your buttock until you feel a stretching sensation in the front of your thigh.
4. Keep your knees together.
5. Hold this position for _____ seconds.
6. Repeat exercise _____ times, _____ times per day.



FLEXIBILITY • Hamstrings, Ballet

1. Stand and prop the leg you are stretching on a chair, table, or other stable object.
2. Place both hands on the outside of the leg you are stretching.
3. Make sure that your hips/pelvis are also facing the leg you are stretching.
4. Slide your hands down the outside of your leg.
5. Lead with your chest/breast bone. Keep your chest upright and back straight. Do not hunch over at the shoulders. Keep your toes pointing up.
6. You should feel a stretch in the back of your thigh.
7. Hold this position for _____ seconds.
8. Repeat exercise _____ times, _____ times per day.



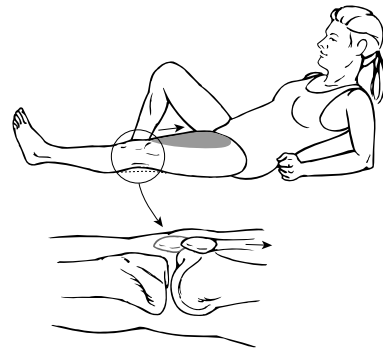
FLEXIBILITY • Hamstrings/Adductors, V-Sit

1. Sit on the floor with your legs spread as wide as possible in front of you. Your knees must be straight.
2. Lean over one leg with both hands. Keep your chest upright and reach for your toes. (Position A)
3. Hold this position for _____ seconds. Relax and return to your starting position.
4. Now reach forward between your legs. (Position B)
5. Repeat for Position C.
6. Repeat exercise _____ times, _____ times per day.

> STRENGTHENING EXERCISES • Prepatellar Bursitis

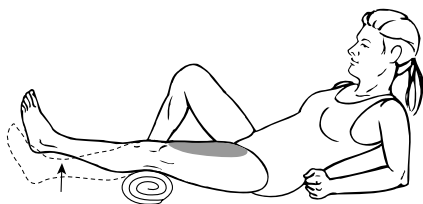
These are some of the *initial* exercises you may start your rehabilitation program with until you see your physician, physical therapist, or athletic trainer again or until your symptoms are resolved. Please remember:

- Strong muscles with good endurance tolerate stress better.
- Do the exercises as *initially* prescribed by your physician, physical therapist, or athletic trainer. Progress slowly with each exercise, gradually increasing the number of repetitions and weight used under their guidance.



STRENGTH • Quadriceps, Isometrics

1. Lie flat or sit with your leg straight.
2. Tighten the muscle in the front of your thigh as much as you can, pushing the back of your knee flat against the floor. This will pull your kneecap up your thigh, toward your hip.
3. Hold the muscle tight for _____ seconds.
4. Repeat this exercise _____ times, _____ times per day.

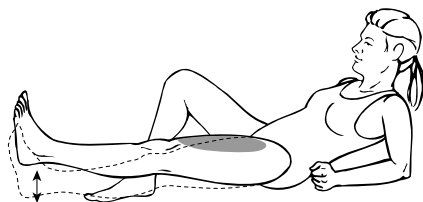


STRENGTH • Quadriceps, Short Arcs

1. Lie flat or sit with your leg straight.
2. Place a _____ inch roll under your knee, allowing it to bend.
3. Tighten the muscle in the front of your knee as much as you can, and lift your heel off the floor.
4. Hold this position for _____ seconds.
5. Repeat exercise _____ times, _____ times per day.

Additional Weights: OK TO USE DO NOT USE!!!

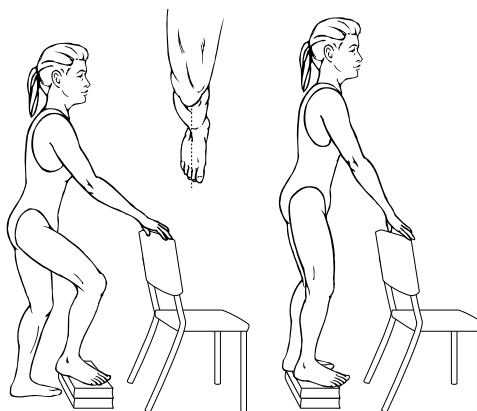
If okay'd by your physician, physical therapist, or athletic trainer, a _____ pound weight may be placed around your ankle for additional weight.



STRENGTH • Quadriceps, 7 Count

The quality of the muscle contraction in this exercise is what counts the most, not just the ability to lift your leg!

1. Tighten the muscle in front of your thigh as much as you can, pushing the back of your knee flat against the floor.
2. Tighten this muscle **harder**.
3. Lift your leg/heel 4 to 6 inches off the floor.
4. Tighten this muscle **harder again**.
5. Lower your leg/heel back to the floor. Keep the muscle in front of your thigh as tight as possible.
6. Tighten this muscle **harder again**.
7. Relax.
8. Repeat exercise _____ times, _____ times per day.



STRENGTH • Quadriceps, Step-Ups

1. Use a step or books.
2. Place your foot on the step or books approximately _____ inches in height. Make sure that your kneecap is in line with the tip of your shoe or your second toe.
3. Hold on to a hand rail, chair, wall, or another object for balance if needed.
4. Slowly step up and down. Make sure that the kneecap is always in line with the tip of your shoe or your second toe. Lightly touch the heel of the opposite leg to the floor and return to the starting position.
5. Repeat exercise _____ times, _____ times per day.

Notes:

(Up to 4400 characters only)

Notes and suggestions