

## Osgood-Schlatter and Sinding-Larsen-Johansson Disease

- Osgood Schlatter affects the area on top of the shinbone (tibia), where the tendon from the kneecap (patella) attaches. It is most common in 10 to 13 year old boys, and 11 to 14 year old girls.
- Sinding-Larsen affects the area at the bottom of the kneecap, where the tendon from the shin bone attaches. It most common in kids 9 to 12 years old.

Both are common and often get worse during growth spurts. They happen more often in kids who play sports. The pain normally goes away once the bones are done growing. It may last from a few months to two years.



### What causes it?

It is caused by overuse and physical stress. New bone forms as a soft bone called cartilage. It is not as strong as adult bones. The pull of the strong thigh (quadriceps) muscle irritates this soft bone on the top of the shin. Sometimes the tendon may pull a piece of bone off the shin. This is called an avulsion fracture.

### How does this affect me?

- Osgood-Schlatter. You may have pain over the top of the shin with.
- Sinding-Larsen-Johansson. The pain will be over the bottom of your knee

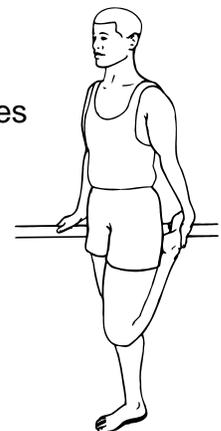
In both diseases the pain often gets worse with activity. It may limit your ability to participate fully in your sport. When left untreated, the pain may last all day long, and can even limit simple activities of daily life.

Often no tests are needed. X-rays are sometimes done.

### How are these conditions treated?

It is treated by stopping or limiting activity that causes pain. Stretching exercises for the legs, especially the quadriceps muscles may help.

1. Stretch both legs twice.
2. Hold each stretch for about 30 seconds.
3. Do not bounce while stretching.
4. Stretching should not cause pain.
5. Stretch 3 to 5 times a day.



## Treatment (continued)

### Quadriceps Stretch

Hold onto a table or chair for support. Bend your leg at the knee, and pull towards your buttocks. You should feel a gentle stretch in the front of your thigh. Keep your back straight and your knees together.

### Hamstring Stretch

Put your foot on an elevated object. It should be lower than your waist. Gently lean forward until you feel the stretch in the muscle in the back of your thigh (hamstring).



### Icing the knee after activity can help reduce inflammation and pain. Here's how icing the knee is done.

1. Sit down on a chair or couch and put your knee up in a relaxed position.
  2. Take a ready made ice pack, plastic bag full of ice or a package of frozen peas or corn and cover it with a light towel or cloth.
  3. Put it on the area of the knee that is hurting.
  4. Keep it on for 10 to 15 minutes.
  5. Put the cold pack back in the freezer.
  6. **Do not eat** the frozen vegetables once they are used for icing.
- Ibuprofen or other anti-inflammatory medicines may help.
  - Use padding for the knee to cover the irritated area. This may help when you return to sports.
  - Strengthening and balance exercises can be done once pain is decreased. This may limit future painful episodes.
  - It often helps to cross train or do activities that do not require running or jumping, like swimming or biking.

### When can I return to activity?

Most young athletes can play through a little bit of pain without doing any damage. Playing through moderate or severe pain can make the problem worse and harder to treat. Severe pain also changes the way you use your leg muscles. This can increase the risk for more leg injuries. Your doctor will help decide when and how you can get safely back up to full activity.

### What follow-up care might be needed?

Follow up is not often needed. You may need to be seen again if you have severe pain and limited function.

**ALERT:** Call your doctor, nurse, or clinic if you have any questions or concerns or if you have:

- Pain that steady or worse and is not helped by pain medicine.
- More swelling or bruising.
- A harder time walking or running.
- Special health care needs that were not covered by this information.

**This teaching sheet is meant to help with your care. It does not take the place of medical care. Talk with your healthcare provider for diagnosis, treatment, and follow-up.**