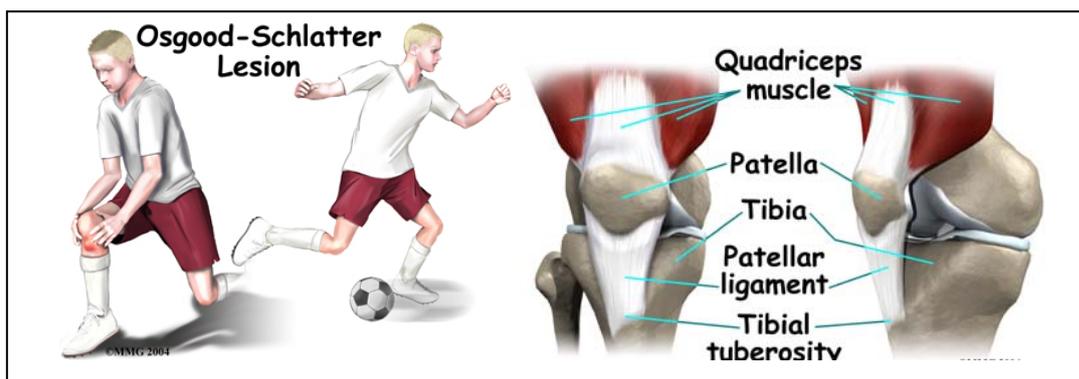




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## Osgood-Schlatter Lesion of the Knee



An Osgood-Schlatter lesion involves pain and swelling in the small bump of bone on the front of the tibia (shinbone), right below the kneecap.

It occurs in children and adolescents.[10-15 years]  
The problem used to happen mostly in boys

The problem affects the area where bone growth occurs.

Too much stress on the growing bone causes the pain and swelling.

The pain often worsens with activity and eases with rest. Fortunately, the condition is not serious. It is usually only temporary.

### **What part of the knee is affected?**

The Osgood-Schlatter lesion affects the tibial tuberosity.

The tibial tuberosity is the bump on the top of the tibia (shinbone) where the patellar tendon connects. Tendons connect muscles to bones.

The patellar tendon stretches over the top of the patella (kneecap). The patellar tendon connects the large quadriceps muscle on the front of the thigh to the tibial tuberosity.

As the quadriceps muscle works, it pulls on the patellar tendon and extends (straightens) the knee joint.

### **How did this problem develop?**

Osgood-Schlatter lesions fit in a category of bone development disorders known as osteochondroses. In normal development, specialized **bone growth centers** (called growth plates) change over time from cartilage to bone. The growth centers expand and finally unite. This is how bones grow in length and width. Bone growth centers are located throughout the body.

Children with bone development problems in one area are likely to develop similar problems elsewhere. For example, among young athletes with growth plate problems in the back of the heel (Sever's syndrome), about two-thirds also develop an Osgood-Schlatter lesion. Children who have an Osgood-

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Schlatter lesion also have a small chance of problems at the top of the patellar tendon, where it attaches to the bottom tip of the kneecap. This condition is known as Sinding-Larsen-Johansson disorder.

The main cause of Osgood-Schlatter lesions is too much tension in the patellar tendon. The tension can come from overuse from sports activity and from growth spurts. Usually both happen together. Both put extra stress on the tibial tuberosity.

During growth spurts, the tendon may not be able to keep up with the growth of the lower leg. The tendon becomes too short. It constantly pulls at the tibial tuberosity. Tension from sports activity comes from overuse.

### **What does an Osgood-Schlatter lesion feel like?**

The tibial tuberosity will probably be enlarged and painful.

It hurts when bumped.

It also hurts when pressure is put on it, such as when kneeling.

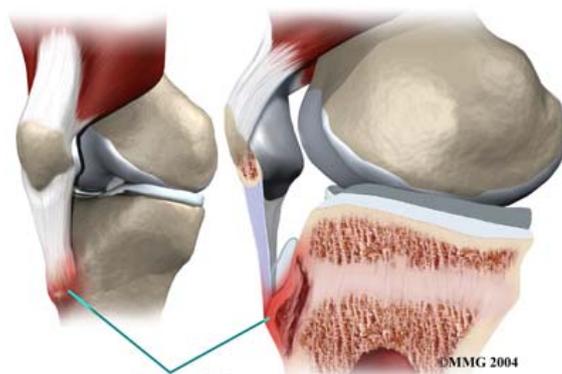
Activities like running, jumping, climbing, and kicking may hurt because of the tension of the patellar tendon pulling on the tibial tuberosity.

Symptoms generally go away gradually over a period of one to two years.

However, the condition may leave a permanent, painless bump below the knee.

A knee X-ray may show a raised area of irregular bone in the tibial tuberosity.

Most often it will show swelling in the soft tissues in front of the tibial tuberosity. In more severe cases, the X-ray may show small bony fragments that are separated from the rest of the tibial tuberosity.



**Osgood-Schlatter Lesion**

### **Treatment**

#### **Nonsurgical Treatment**

The passing of time may be all that is needed. It takes one to two years for the bone growth plates of the tibial tuberosity to grow together and form one solid bone. When this occurs, symptoms usually go away completely.

In some cases, the patient may need to stop sport activities for a short period. This gets the pain and inflammation under control. Usually patients don't need to avoid sports for a long time. It is unlikely that the bone will completely separate, so not all athletes need to completely avoid sports.

The doctor may prescribe anti-inflammatory medicine to help reduce swelling.

Physical therapists might use ice, heat, or ultrasound to control inflammation and pain.

A **variety** of pads, straps, and sleeves are available that can help keep pain to a minimum. For example, wearing a knee pad cushions the sore area while kneeling.

Cortisone injections haven't shown consistently good results for this condition. There is also a high risk that the cortisone will cause the patellar tendon to rupture.

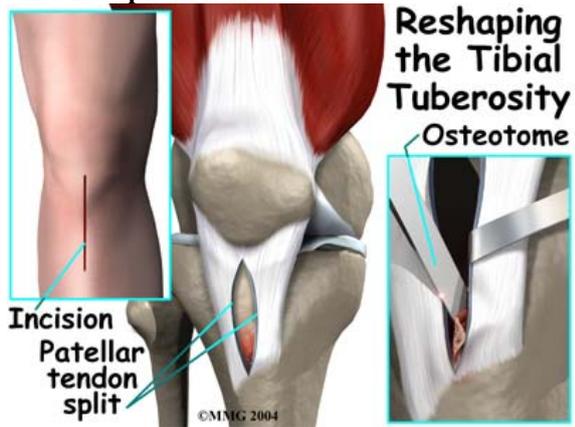
#### **Surgery**

Surgery is not considered unless bone growth is complete

When surgery is needed, the usual operation involves removing the raised area of the tibial tuberosity, the bursa, and irritated tissue nearby.

The surgeon makes a small incision down the front of the lower knee, just over the tibial tuberosity. The **patellar**

tendon is split in half.



### **What can be expected from treatment?**

With nonsurgical rehabilitation, the goal is to reduce pain and inflammation.

After surgery, daily activities can be resumed gradually.

The surgeon may recommend using crutches or a cane for awhile. Vigorous activities and exercise should be avoided for six weeks after surgery. Athletes should not take part in high-level sports