



*Sports Extra*

## ATHLETIC ADVISOR

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# Osgood Schlatter Disease

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## What is Osgood Schlatter disease (OSD)?

OSD is a painful condition that occurs in children, adolescents and young adults. It is one of the most common causes of knee pain in the adolescent, and tends to be a condition that overtime will resolve on its own. The exact cause is unknown, but it probably involves repetitive microavulsion (tiny pulling away from overuse) of the bony structure that protrudes from below the knee called the tibial tubercle.

This condition can cause pain microtears of muscle pulling away from bone due to overuse. Constant running/jumping and repetitive motions of the knee can cause OSD and overtime produce pain and swelling. Even rapid growth spurts can cause the thigh muscles (quadriceps) to put tension on the tendon of the knee, which eventually pulls on the tibial tuberosity.

## Who is affected?

The most common age groups for OSD are 13-14 for boys and 10-11 for girls. It is however more common in boys, particularly athletic boys. Pain seems to be the most common complaint and is usually made worse when running,

jumping, kneeling, squatting and going up/down the stairs. Although the pain generally occurs during activity, it generally remits with rest. Typically the patient cannot identify a traumatic cause. Many times, the knee pain is connected with a growth spurt. A growth spurt causes the muscular tendon to put strain on its bony insertion.

## How do you diagnose the condition?

This condition is mostly diagnosed in the office, from the patient's complaints (history) and a physical exam. Usually, the patient will have full knee range of motion with no swelling or instability and no signs of torn cartilage.

In addition to the findings in the office, the patient can also be sent for an X-ray of the knee. Sometimes, but usually not, a bone scan, CT scan or an MRI is warranted. The X-ray may be the most common initial test to be done and may show bony changes at the sight of the tibial tubercle. MRI scans in OSD patients can demonstrate any changes in the tendon of the patella and any of the soft tissue surrounding the tubercle.

## How do you treat this condition?

The patient can use ice for 20 minutes every two to four hours over the sight of tenderness. In addition to the ice, the patient can also use Ibuprofen for the pain relief as well as to reduce some of the inflammation surrounding the sight of irritation. A knee brace for added support may also help with this condition.

In severe cases where the patient has a high amount of pain, but refuses to rest the injury, a knee immobilizer or cast can be used. A procedure, called prolotherapy, has been very beneficial though this procedure requires multiple injections along the tibial tubercle where the patella tendon inserts. Surgery however, is rarely needed or used in a small percentage of patients who develop a painful ossicle that doesn't resolve even when the evidence of growth is gone.



## What relieves OSD?

Most patient's feel relief if they rest or limit their activity. The patient should avoid the activity that produces the pain. In addition to avoiding certain activities, stretching and strengthening excercises should be incorporated into his/her daily routine. The stretching excercises should be directed at the muscles of the thighs and hip (quadriceps, hamstrings and hip extensors) and will help to lessen the strain or tension on the tibial tubercle.

## What is the prognosis of recovery from OSD?

Generally the prognosis with this condition is excellent. It will generally take six to eight months for the condition to resolve, although in some instances the pain will be relieved when the patient stops growing (when the growth plate over the tibial tubercle closes).

