



## Medicine for Managers

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# Osgood Schlatter's Disease

Most people haven't heard of this condition, but it is relatively common and can be a significant cause of pain at the front of the knee in skeletally immature athletes and other young people. The pain develops insidiously and is associated with the tendon which joins the kneecap to the shinbone, at the point called the tibial tuberosity. It is often a consequence of running and jumping. It is self limiting and most commonly resolves within two years.

The disease is caused by irritation of the bone growth plates. In the developing adolescent,

Bones grow at each end near the joints and this area is called the **growth plate**.

The tibial tubercle is one such growth area. The growing area is made of cartilage, not bone.

That adolescent growth may exceed the ability of muscle and tendon to stretch sufficiently to maintain flexibility resulting in increased tension across the area.

The result is that the growth plate begins to hurt and swell. Specifically, when straightening the knee, the quadriceps muscle in the thigh

pulls on the patella which pulls on the tibial growth area causing the symptoms to arise.

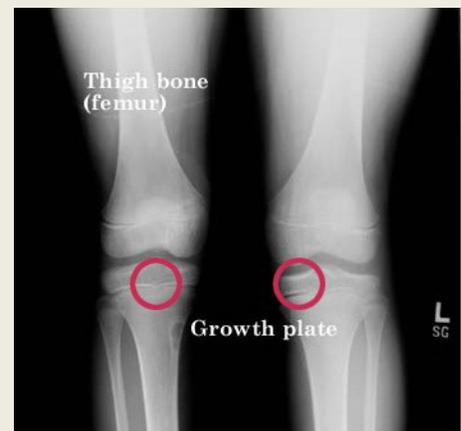
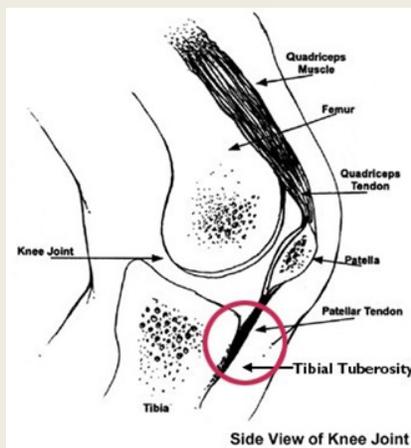
### **Clinical Features**

8 to 15 year-old children will typically present with pain at the front of the knee which may or may not be accompanied by swelling. It is typically of insidious onset and there is no specific injury.

The pain is aggravated particularly by running and jumping.

The tibial tubercle may be enlarged.

Almost all patients



in whom the diagnosis is made have tenderness over the tibial tubercle.

The classic finding on examination is the production of pain when the young person is asked to bend the knee and then to try to straighten it whilst the examiner resists the movement by holding the lower leg.

Osgood-Schlatter is one of the most common causes of anterior knee pain.

It coincides with the adolescent growth spurt between about 10 and 15 for boys and 8 to 13 for girls.

It is more common in boys than girls.

The overall incidence is nearly 10%, occurring more commonly in males than females. Some reports say it is three times as common or more in boys.

Symptoms may occur in both knees in between one fifth and one third of those individuals suffering pain.

It is suspected that in fact only a proportion of young people with the disease are identified because mild pain or stiffness may not be reported to a medical practitioner.

It is estimated that resolution occurs in 90% of those with pain in between 12 and 24 months. In the remaining 10% symptoms may persist to adulthood.

## Diagnosis

A diagnosis is usually made on the history and clinical findings and recourse to radiography is not usually necessary.

Only in those cases where the characteristics are not typical of the condition, or where there is a history of trauma, may plain radiographs to be taken to exclude fracture, infection or a tumour of the bone.



## Treatment

In general treatment involves rest, although the evidence to suggest that complete rest does in fact speed up resolution is questionable.

Certainly, activity restriction does accelerate recovery. Non-steroidal anti-inflammatory drugs and ice packs can be used to relieve the pain. Only in the more severe cases would any period of knee immobilisation be considered.

In those patients where pain is experienced into adulthood might surgery be considered. However, many hold the view that surgery does not improve prognosis but may increase the complications. Surgery is never undertaken on a growing athlete because the growth plate may be damaged.

The disease was first described by Dr Robert Bayley Osgood and Dr Carl Schlatter in 1903.

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