

Osgood-Schlatter Disease

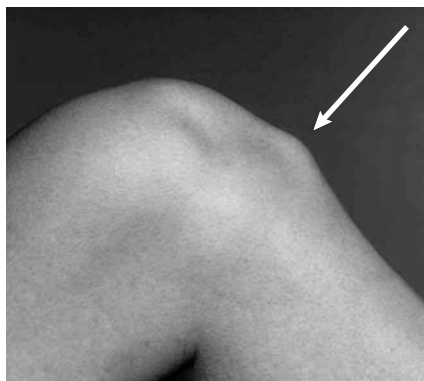


Figure 1. Pronounced tibial tuberosity

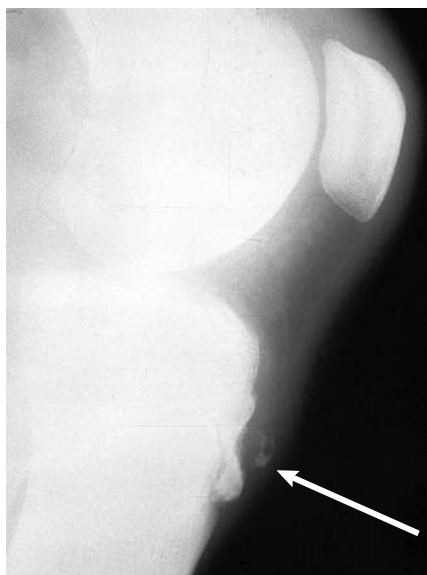


Figure 2. Separation of bone fragments caused by Osgood-Schlatter Disease

Osgood-Schlatter Disease is a common condition among adolescent athletes that was first described in 1903 by Osgood of Boston and Schlatter of Zurich. It usually occurs in adolescents between the ages of 11 and 15, with younger onset in girls than boys. A history of sports participation and a rapid growth spurt prior to the onset of symptoms is typical. Both knees are affected about 25% of the time.

The symptoms of this condition include pain and swelling at the tibial tuberosity. The tibia is the larger of the two long bones of the lower leg. The tibial tuberosity is the bump on the front of the tibia, just below the kneecap (patella). The patellar tendon attaches the quadriceps to this bump or tuberosity. (Fig. 1) In the adolescent, the tuberosity does not yet have bony attachment to the rest of the tibia. The mechanical attachment of the patellar tendon to the tuberosity is weak and occasionally causes separation of fragments of bone. (Fig.2)

Activities such as climbing stairs, running and deep knee bends involve the quadriceps and therefore put strain on the tuberosity, causing more pain.

When examined, there is often some swelling below the kneecap and

enlargement of the tuberosity. The area is tender when direct pressure is applied. Extending the knee against resistance or kneeling on the area causes pain.

The goal of treatment is to decrease stress and inflammation at the tubercle. Rest from activity or any decrease in athletic activity (especially jumping) will help. Anti-inflammatories can relieve mild pain with activity. Applying ice to the area for 10–20 minutes after activity is often helpful. Occasionally, it is necessary to completely rest the knee with a knee immobilizer or cast.

This condition may recur over a period of months or years. It usually stops at or before age eighteen or when the tuberosity fuses to the tibia and growth is nearly complete. It is highly unlikely to cause any permanent injury except for a bump over the tuberosity. With these conservative measures, most young athletes can continue to participate in sports activities and learn to control their symptoms.