What is it?
Osgood-Schlatter disease refers to a condition occurring during adolescence that causes pain, swelling and soreness on an area of the upper shinbone, just below the knee, called the tibial tuberosity. The condition commonly occurs during the period of adolescent growth spurt where the tibial tuberosity is vulnerable to overuse in an active teenager who is involved in a lot of running and jumping activities. The quadriceps’ (muscles of the front of the thigh) tendon attaches to the tibial tuberosity and with repetitive activity can cause traction of this growth center and cause inflammation to the upper shinbone. Osgood-Schlatter disease is caused by repetitive activities in growing teenagers who do not allow enough time in between activities to allow the inflammation that occurs at the tibial tuberosity to heal.

Symptoms
- The main symptom of Osgood-Schlatter disease is pain at the bump below the knee with activity or after a fall.
- There may be swelling and enlargement of this bump on the upper shinbone.
- Forceful contraction of the thigh muscle can also cause pain.
- One or both knees may be affected.
- The bump on the shinbone may be very tender.

Sports Medicine Evaluation and Treatment
The diagnosis of Osgood-Schlatter disease is typically made by history, physical examination and at times, x-rays of the knee, if deemed necessary by the sports medicine physician.

Treatment:
- The primary focus of treatment is to control the pain as well as tension of the thigh muscle tendon where it attaches to the upper shinbone.
- In severe cases, young athletes may need to have a period of rest from their sport.
- Activity modification, ice and non-steroidal anti-inflammatory drugs (NSAIDs) may also help with pain and swelling.
- A strap placed between the bump and the kneecap may help reduce tension of the tendon on the upper shinbone attachment site.
- Improving the flexibility of the thigh and hamstring muscles.
Injury Prevention

- Early recognition of the symptoms of Osgood-Schlatter disease by young athletes, coaches and parents can allow early intervention to prevent severe inflammation.
- Young athletes should not try to push through this pain should they start experiencing it.
- Referral to a sports medicine physician can offer the best opportunity for education, intervention and monitoring for the young athlete.

Return to Play

- Prior to starting sports-specific activity, the athlete should have a pain-free single leg squat.
- There should be minimal pain with squatting, jumping and then a progression through sports-specific movements prior to full return to sport.
- If the athlete experiences pain or limping during this sequence, he/she should continue the treatment and attempt a return to sports after a discussion with the sports medicine physician.

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References