



Osgood Schlatter Disease (OSD)

WHAT IS IT?

Swelling and irritation of the growth plate found atop the shin bone. One or both knees may be affected.

**A growth plate is a layer of cartilage near the end of a bone, where new bone formation happens. It is weaker and more susceptible to injury than the rest of the bone.*

RISK FACTORS

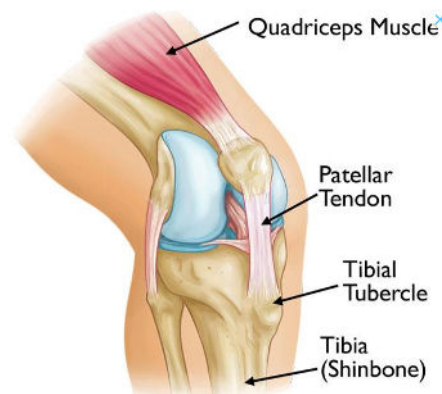
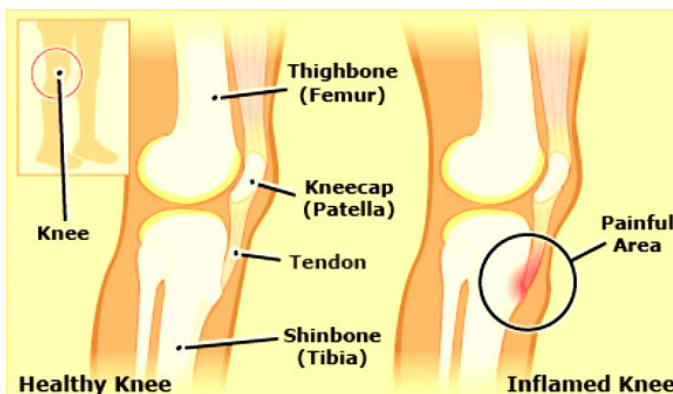
- late childhood and early adolescence (9-14 years).
- more common in boys
- often seen in active children engaging in sports requiring frequent running and jumping (soccer, basketball, gymnastics)
- Recent growth spurt

WHAT CAUSES IT?

When a child is active, the quadriceps muscles pull on the patellar tendon which, in turn, pulls on the tibial tubercle. This repetitive traction on the tibial tubercle may cause it to become a pronounced bump.

SIGNS AND SYMPTOMS

- Pain brought on by running, jumping, going up/down stairs
- swelling around the top of the shin bone
- A pronounced bump over the tibial tubercle
- Pain with kneeling
- Pain with complete knee bending



HOW IS IT DIAGNOSED?

Your child's healthcare provider will ask questions regarding your child's symptoms and current physical activities. They will conduct a thorough examination of the knee to determine the cause of the pain. This will include applying pressure to the tibial tubercle and testing knee range of motion.

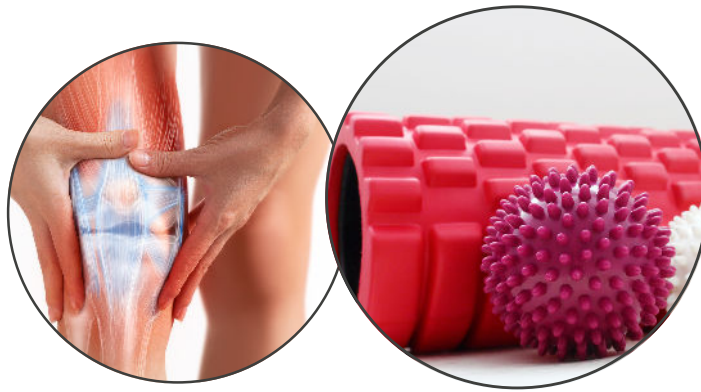
Your child's doctor may sometimes order an X-ray image of your child's knee to help confirm the diagnosis or rule out any other problems.

HOW CAN PHYSIO HELP?

Kids with OSD tend to overuse their quadricep muscles to compensate for other weak muscles. A physiotherapist can support by performing muscle strength assessments. In addition, they may also ask your child to walk, run, jump, or kneel to assess movement patterns.

*Early management (painful acute phase)

Your child's doctor may prescribe medications and ice pack applications to reduce the pain and swelling. They may also recommend exercises to strengthen the appropriate muscles and relax the quadricep muscle via stretching, foam rolling, massaging, etc. During this phase, it is recommended to take relative rest (i.e. taking a break from high-intensity activities such as sports, running, and jumping). This will decrease the demand on the quadricep muscle, allowing it to heal.



*Later management (when pain-free)

- Stretching routine to lengthen quadriceps and limit the recurrence of OSD.
- Appropriate strengthening and loading exercises for the knee.
- Education about correct mechanics for activities to reduce overuse of the quadriceps (walking, running, jumping, squatting, lunges, sport specific)
- Sport-specific training to ensure safe return to sport- such as equal strength and motion in both legs with no muscle compensations.

*Prognosis

- With an appropriate rest period and gradual loading, pain can subside within a few months.
- As the growth plate remains open, pain may come and go. Once closed (between 13-18 years) the pain is likely to stop.

HELPFUL TIPS

- Wear shock-absorbing sneakers/cleats that fit your child's feet.
- Wear protective kneepads, especially for contact
- Warm up and cool down exercises before and after sports.



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