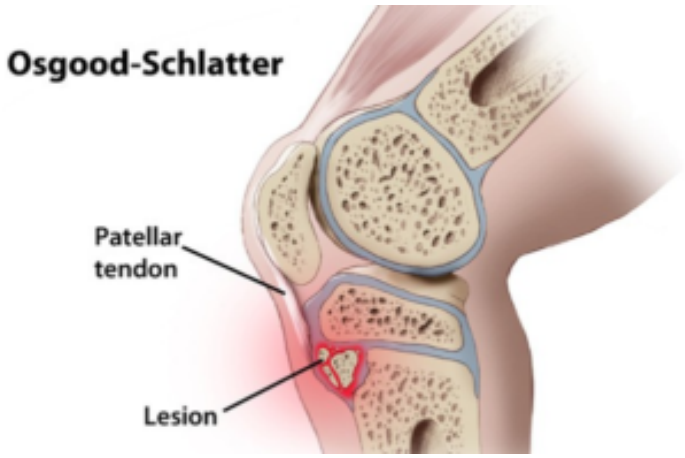
Osgood-Schlatter's Disease

Osgood Schlatter's disease is a knee injury which occurs during childhood. It is an overuse injury and occurs when a traction force on the tibial tuberosity, disrupts the immature bone. This results in pain and inflammation at the tibial tuberosity (the bony point on the lower leg below the knee), where the tendon from the patella (kneecap) attaches.

This condition commonly occurs during the adolescent growth spurt and with activities involving strong repetitive quadriceps contractions, such as in jumping, running, volleyball, basketball, soccer, gymnastics, dance, netball and ice skating.

During the growth spurt, bones can lengthen more rapidly than the muscles and tendons resulting in an increased "pull" at the muscles attachment sites. With these strong, repetitive muscle contractions, micro-fractures occur at the immature area, resulting in pain and tenderness.
In an attempt to strengthen the area, the body will lay down new bone, resulting in a thickened and prominent tibial tuberosity.
Other predisposing factors for the condition are:



- High level of physical activity (playing multiple sports and high training load).
- Weak or tight quadriceps due to growth spurt.
- Poor footwear or a recent change in footwear.
- Extremes of foot posture i.e. pronated.

You may feel some or all the following features:

- Local pain, swelling, and tenderness over the tibial tuberosity.
- Enlarged Tibial tuberosity in later stages, which looks like a lump that is tender.
- Pain during exercise (e.g., running, jumping) or with direct contact, such as in kneeling.
- Stairs, squatting and kneeling may be painful.
- Tightness of the quadriceps and hamstring muscles.
- Quadriceps weakness can be present in chronic cases.
- Bilateral symptoms, occur in 20-30% of cases.

Importantly, Osgood Schlatter's disease is self-limiting. Complete recovery can be expected with bony fusion and closure of the tibial growth plate. Discomfort in kneeling may occur in the long-term with patients who have enlarged lumps and symptoms may exist and fluctuate up to 2 years. This is greatly reduced with early physiotherapy assessment and treatment. About 90% of patients respond well to non-operative physiotherapy treatment, but symptoms may come and go for 12-24 months before complete resolution.

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The most important aspect of initial management of this condition is activity modification which may include eliminating a sport or restriction of high impact activities such as jumping and running. Taping, ice and orthotics may provide both pain relief and load reduction at the site of pain and injury. Massage and stretching of the quadriceps and hamstrings is useful, however, stretching should focus on light strength of long duration. As the condition settles a graduated strength and loading program should be implemented in conjunction with a gradual return to sport and exercise as pain allows.

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