

## CAUSES

- Osgood Schlatter disease is a common cause of pain in the front of knee in children and adolescents. It results in **inflammation** of the **growth plate** at the proximal tibia (upper shin bone).
- **Repetitive** stress, **increased exercise** intensity, change in exercise activity and **growth spurts** are common contributors to the onset Osgood Schlatter Disease.
- Increased load through the quadriceps muscle can put increased tension on the attachment of the patella tendon on the tibia.
- During childhood the growth plate of the tibia is not fully fused and therefore the patella tendon can irritate this growth plate resulting in inflammation at the knee.

## SIGNS & SYMPTOMS

- **Pain** and tenderness at the top of the shin bone, just below the knee cap.
- **Palpable bump** at the **top** of the **shin bone**, **below** the **knee cap**.
- Pain **aggravated** by weight bearing exercises such as **running** and **jumping**.
- Usually occurs during ages of growth between **9-15yrs old** and more commonly in boys.

## WHAT ELSE COULD IT BE?

- Patellofemoral pain syndrome
- Hoffa's fat pad irritation
- Sinding-Larsen-Johannson syndrome
- Referred pain from hip

## ASSESSMENT & OUTCOME MEASURES

- Subjective examination addressing **mechanism of injury**, current & previous activity levels, aggravating positions and 24hr pain.
- Assessment of **knee & hip range** of movement.
- **Palpation of knee** & surrounding structures.
- Assessment of **lower limb strength & flexibility**.
- Assessment of sporting **footwear**.



## MANAGEMENT

- **Education** and advice regarding load management. This will be dependent on the child's current function and pain levels. Often a period of offloading is required in the early stages if highly irritable.
- Osgood-Schlatter disease is a self-limiting injury and will improve when full skeletal maturity is achieved, however it is important your child is able to stay active whilst managing the injury.
- **Manual therapy** to help improve pain, knee range of motion and decrease muscle tightness.
- Progressive **rehabilitation** targeting lower limb and trunk control, strength and flexibility.
- Review of **foot biomechanics** and footwear. Referral to Sports Podiatrist if warranted.

Cairns G., Owen T., Kluzek S., Thurley N., Holden S., Rathleff M.S., Dean B.J.F. (2018). Therapeutic interventions in children and adolescents with patellar tendon related pain: a systematic review. *BMJ Open Sport Exerc Med*; 4(1).

Rathleff M.S., Winiarski L., Krommes K., Graven-Nielsen T., Holmich P., Olesen J.L., Holden S., Thorborg K. (2020). Activity modification and knee strengthening for Osgood-Schlatter Disease: a prospective cohort study. *Orthopaedic Journal of Sports Medicine*; 8(4).

## MOVEMENT IS OUR MEDICINE