

## Osgood Schlatters - Apophysis Condition

tips for best management

Osgood-Schlatter's condition is an overload injury at the tibial tuberosity involving the apophysis & patella tendon complex.

**1. presentation:** Athletic children aged 8-15 years complaining of anterior knee pain which is exacerbated by sports involving running, jumping or kicking.<sup>2</sup> It is more common in boys & in 20-30% it's presentation is bilateral.<sup>1-3</sup>

### 2. objective signs for diagnosis:



- **palpation:** tenderness will always be localised to the tibial tuberosity and in the later stages a bony prominence of the tibial tubercle may be present.<sup>1</sup>

- **resisted isometric muscle testing:** Pain will be reproduced with resisted knee extension from a position of end of range knee flexion.<sup>3</sup>

- **Imaging** (plain x-ray) is recommended when the pain is severe or persistent and/or with a history of trauma<sup>2</sup> to exclude malignancies, fractures or differential diagnosis in the event of atypical examination.<sup>1</sup>



### 3. treatment should commence with activity modification:

The key to management and full recovery is activity modification with alternative non-aggravating activities (e.g. swimming) and appropriate reduction in aggravating load.<sup>2</sup> It is important that activity is only reduced enough to allow symptoms to settle and not to cease activity completely. Complete rest will slow the reloading phase of returning to full activity.

Symmetry in movement patterns and strength should always be assessed and treated where appropriate once loading is managed.<sup>2</sup>

Symptom relief is achieved with isometric muscle contractions, iceing, using a foam roller to reduce neuromuscular tone (rather than stretching) and taping if symptom relief is demonstrated.

Once symptoms are settled a gradual increase in intensity and duration of sport/athletic activity is then strongly recommended.<sup>3</sup>

**4. prognosis:** Prognosis for full recovery is excellent and coincides with the maturation and closing of the growth plate.<sup>4</sup>

*Foam rollers are excellent for reducing excess muscle tension without a taking the joint into a painful range.*



## Case Study

A 14 year old boy presented to *Ocean View Physiotherapy* with right anterior knee pain. The onset of pain coincided with the start of representative basketball training that added to his school basketball load.

On examination pain was reproduced with palpation of the tibial tuberosity and resisted knee extension. Quadriceps range was limited due to pain and increased neuromuscular tone. A diagnosis of Osgood Schlatters was made.

Treatment began with activity modification and education on self management (symptom and load management).

The patient chose to prioritise his representative basketball sessions and therefore club basketball training, school PE and lunchtime sport were removed from his weekly sports activity. Manual therapy consisted of dry needling and deep tissue massage to reduce neuromuscular tone. Taping was also used as this reduced symptoms in squatting. At home he used a foam roller to reduce neuromuscular tone and ice for pain relief if required.

At the next review his symptoms had significantly reduced and a plan for ongoing management was made. The patient gradually returned to club training followed by return to lunch time sport as this was his lowest priority. He made a full recovery in four months.



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### references:

1. Gholve PA, Scher DM, Khakharia S, et al. Osgood Schlatter syndrome. *Current Opinion in Pediatrics*. 2007;19:44-50
2. Golant A & Rosen J. *BMJ Best Practice – Osgood Schlatter's Disease. British Medical Journal. Best Practice Guidelines, 2015.*
3. Frank JB, Jarit GJ, Bravman JT, et al. Lower extremity injuries in the skeletally immature athlete. *Journal of the American Academy of Orthopaedic Surgeons*. 2007;15:356-366.
4. Pihlajamäki HK, Mattila VM, Parviainen M, et al. Long-term outcome of surgical treatment of unresolved Osgood-Schlatter disease in young men. *Journal of Bone Joint Surgery America*. 2009;91:2350-2358.