

Traction Apophysitis

An Apophysis is a growth plate in the growing skeleton situated where muscles attach to bones. A Traction Apophysitis (TA) occurs after adolescent growth spurts, whereby the long bones grow rapidly. The muscles are unable to adapt so quickly to this lengthening of the bones, and as a result they tighten and increase shear force or traction across the apophysis. TA is a condition that affects adolescents between the ages of 8-15, most commonly in the 10-14 year old age group and occurs more frequently in males.

Those affected are often involved in multiple sports, so overuse and inadequate rest periods between training and playing also have a role in the irritation of the apophysis.

The three most common traction apophysitis seen in the adolescent are;

1. Osgood-Schlatters Disease

This is a traction apophysitis of shin bone (tibia) where the patella tendon attaches just below the knee. A very obvious bump may start to form which is a calcification of the attachment site, and is permanent.



2. Sindig-Larsen Johansson Syndrome

This is a traction apophysitis of the bottom of the patella where the patella tendon attaches, and is much less common than Osgood-Schlatters disease. It is tender right on the tip of the patella rather than on the shin bone or in the middle of the tendon.

3. Sever's Disease

This is a traction apophysitis of the Achilles tendon where it attaches to the heel bone (calcaneus). Patients will be tender and sore along the back of their heel.

Sever's Disease



These conditions are **NOT** a disease; they are self-limiting and respond over time to modified activity.

Treatment involves symptomatic relief with ice and massage, activity modification, but should never involve stretching in the acute phase as this will increase the stress on the growth plate. How long activity needs to be altered for will depend on the severity of symptoms and duration of the growth spurt.