

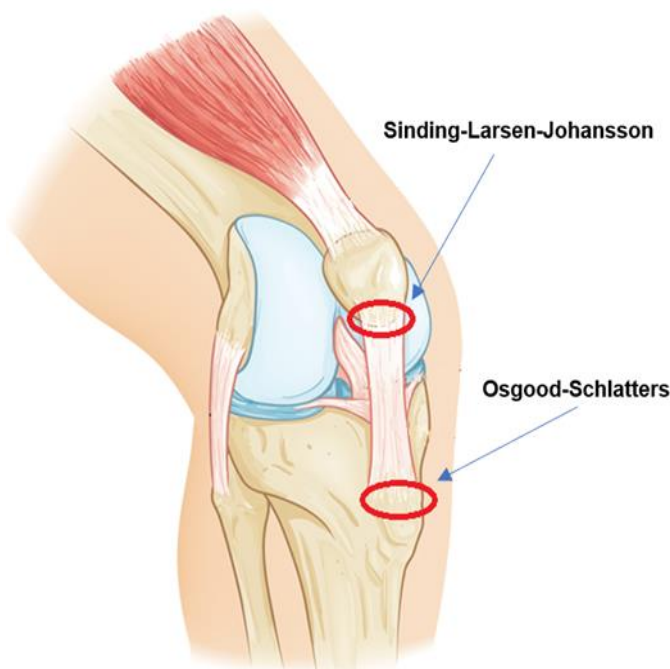
# Knee and Heel Apophysitis

## Patient Information

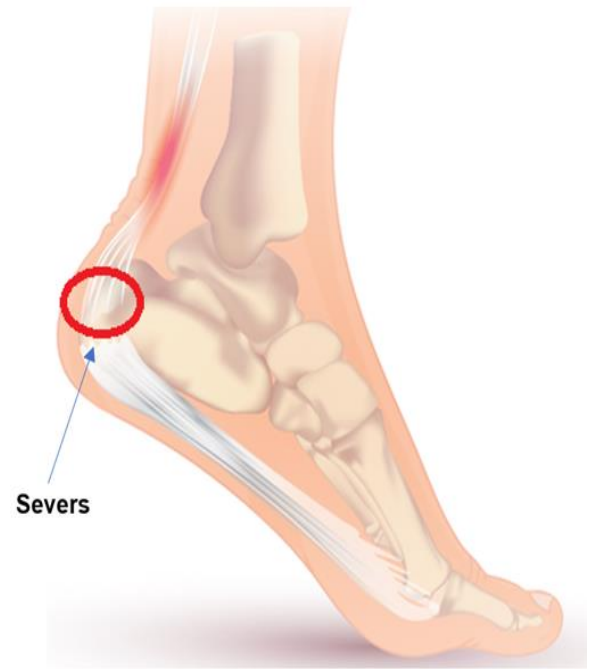
### Information for parents and young people

**Apophysitis** is a term that refers to pain and inflammation at an area of bone (apophysis) where a muscle tendon attaches in growing children.

Apophysitis can happen at two different places on the knee, commonly known as **Osgood-Schlatters** and **Sinding-Larsen-Johansson**. It can also affect the heel bone, this is called **Severs disease**.




<https://orthoinfo.aaos.org/en/diseases--conditions/common-knee-injuries/>



<https://www.injurymap.com/diagnoses/achilles-tendonitis>

Working in partnership  
Great Western Hospitals NHS Foundation Trust  
Royal United Hospitals Bath NHS Foundation Trust  
Salisbury NHS Foundation Trust

Follow Wiltshire Health and Care on social media:

 @WiltsHC\_NHS



Wiltshire Health and Care

[www.wiltshirehealthandcare.nhs.uk](http://www.wiltshirehealthandcare.nhs.uk)

Date of last review: September 2023

Document Ref: 301348

Printed on 15/11/2023 at 4:45 PM

## What are the symptoms?

### **Knee**

- Pain and swelling at the top of the shin bone below the kneecap (Osgood-schlatters).
- Pain and swelling at the bottom on the kneecap (Sinding-Larsen-Johannsson).
- Pain during sport and/high impact activity at the front of the knee/shin bone.
- A bony lump at the top of the shin bone which is sore to touch and with kneeling (Osgood-schlatters).

### **Heel**

- Pain or swelling at the back of the heel (Severs Disease).
- Severs disease may cause a child to limp or walk on their tip toes.

## What are the causes?

To understand what causes knee or heel apophysitis, it can help to understand more about how bones develop in children.

- An apophysis is a cartilaginous prominence that is next to a growth plate where a tendon inserts. As the skeleton matures, more bone is laid down and the growth plate disappears.
- We do not know the exact cause of knee or heel apophysitis. However, during periods of rapid growth, the tendon is stronger than the bony prominence (apophysis). Excessive forces through the tendon can cause pulling at this site resulting in inflammation and pain. This can be following repetitive high impact activities or a sudden increase in activity.
- As well as growth spurts, there are other factors that are thought to increase the risk of apophysitis or injury in sporty adolescents. These include: *too little recovery, training errors, lack of muscle strength, lack of sleep, stress, poor diet, and low levels of vitamin D.*

## **What is the treatment?**

A period of rest is usually advised to allow the symptoms to settle. Depending on the level of high impact exercise, activity modification may be recommended for weeks or months.

Other options which help include:

- Apply an ice pack to the painful area (follow instructions on the pack).
- Pain relief ( as advised by your GP or Pharmacist).
- Exercises to improve the strength in the legs and trunk can help reduce the stress on the knee.
- Stretches to help loosen up tight muscles which may be pulling on the traction site (only if pain free).
- Taping your knee or using a patella strap may help with pain and can be helpful during sport or high impact activity (Knee Apophysitis).
- Appropriate supportive footwear. A well cushioned heel can help with heel pain. Additionally, a gel heel cup to be worn in trainers when playing sports can help with heel pain.

## **What about Sport and other activities?**

For most cases, continuing with sport is not likely to cause long term problems, however higher impact activity may make pain worse. Keeping fit and active is advised, but activity may need to be modified. Pain should not be more than a 2 on a scale of 0-10 (0 is no pain and 10 is severe pain) during and for 1 hour after activity.

Children may need to adjust how much or how often they do their sport/activity. In some cases, they may need to change their type of training – for example, swimming or cycling instead of running. For further guidance on getting back into sport/activity, please discuss this with your physiotherapist.

## Will it get better?

- The good news is yes symptoms do get better!
- Symptoms will usually settle within a few months by following the advice and guidance outlined. In some instances, symptoms can reoccur if activity levels are not appropriately modified and/or during a future growth spurt.
- Some children who have Osgood Schlatter's may develop a permanent hard bony bump at the top of the shin as the inflammation heals.
- In most cases, once the bones stop growing the symptoms will also stop!

## Warning Signs

*If your child develops any of the following symptoms, you should seek medical assessment via your GP or 111 as soon as possible.*

- *Fever, unexplained weight loss, loss of appetite, pallor or night sweats*
- *Red, painful swollen joint*
- *Night pain that does not respond pain relief such as paracetamol and ibuprofen*
- *Sudden painful limp*

| References  |
|---|
| ACPC, 2015 'Osgood Schlatters Disease'  |
| Angela Jackson, 2022 'Lets talk about Osgood Schlatters Disease'                                |
| Midlothian Physiotherapy, 2015 'Traction Apophysitis or Growing pains and what to do about them |
| Poole Hospital NHS Trust, 2017 'Knee Apophysitis'   |

## Further Information

If you would like to seek the advice of a physiotherapist, there are a number of options within Wiltshire. Please speak to your GP practice about the ways you can be referred.

Alternatively, you can visit our website for further information on accessing our services;

<https://wiltshirehealthandcare.nhs.uk/physiotherapy/>

## **Safeguarding**

Wiltshire Health and Care (WHC) are committed to safeguarding and promoting the welfare of children, young people and adults at risk of abuse, including victims and survivors of domestic abuse. We expect all WHC staff to share this commitment and promote safeguarding by implementing WHC policies and procedures, act promptly on concerns and share information appropriately.

If you or your carer have any concerns regarding a child or adult's safety, please phone Wiltshire Safeguarding Team on 0300 456 0111 (Adult) or 0300 456 0108 (Child) (9am – 5pm Monday - Friday) or please call 999 if you feel they are in immediate danger.

## **Patient Advice and Liaison Service (PALS)**

If you have any questions, or concerns, suggestions or compliments about our service, please speak to a member of staff.

This information sheet is available in other languages and formats. If you would like a copy, please contact us on 0300 123 7797 and [whc.pals@nhs.net](mailto:whc.pals@nhs.net)

## **Patient and Public Involvement**

We value your opinions which will help us to further develop our services.

If you wish to provide feedback or get involved in our patient participation groups, please email the Patient and Public Involvement Officer at [ask.wiltshirehealthandcare@nhs.net](mailto:ask.wiltshirehealthandcare@nhs.net) or telephone 01249 454386.