

Sever's Disease

Information for patients

What is Sever's Disease?

Sever's Disease is a common cause of foot and heel pain in children and adolescents. It is not yet known exactly what causes Sever's but it is thought to be caused by repeated stress around the area where your calf muscles (Achilles tendon) attach to the heel bone. This can cause a pulling-type injury where the local bone and soft tissues can become inflamed and sore, especially during certain foot and ankle movements and activities. Pain is most commonly felt around the back of your heel, sometimes up into your calf a little and also sometimes down into the sole of your foot.

Who can get Sever's?

- Children and adolescents going through a large growth spurt.
- Children aged 8-13 with a greater incidence in boys.
- Children and adolescents who participate in repeated high intensity activity with higher impact such as hopping, jumping and change of direction.
- Higher incidence in athletes who specialise in only one sport early.

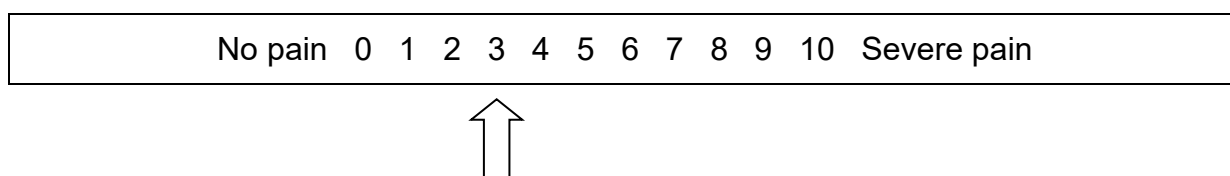
What are the most common symptoms?

- Heel pain either during or after participation in sports which typically eases with rest.
- Tenderness around your heel bone.
- Redness around your heel bone.
- Tightness of your leg muscles.
- Reduced calf strength.

Treatment advice

By following **all** of the advice below your knee pain should reduce;

- Reduce painful activities such as running and jumping until the pain settles - the amount you need to reduce will vary from person to person. It is very important to stay active though so please continue with activities which do not flare up your pain such as swimming or rock climbing. Continuing with sport at a lower level is not harmful in most cases as long as it does not cause an increase in your pain. In most people it actually helps you stay fitter and stronger.
- If you are sore, you can use some crushed ice in a damp towel or a heat pack. Place this on the painful area for 10 minutes. Please check your skin regularly during this time and have regular breaks. Repeat this application as needed.
- Using some heel cups or heel cushions in your shoes can really help some people. This helps your body absorb the impact of your movements, and can reduce the stress on your heel bone. These can typically be found on Amazon, Boots or in large supermarkets.
- Start the stretching and strengthening programme in this leaflet daily to improve your muscle strength and flexibility. A little discomfort whilst doing the exercises can be normal – as long as this settles after you have stopped doing the exercises then it is ok to keep going.
- It is important to remain involved with teams and clubs so if you are finding it is too sore to run and jump, try and find a role you can do whilst injured. To help with this you can use a pain-scale of 0-10 where 10 is severe pain and 0 is no pain at all. Your pain during your activities should not be greater than 3/10.



Please scan this QR code or visit the link below to watch the associated video to this leaflet. This will also guide you through some of the first exercises and teaches you what they should look like. The video shows some extra stretches which you might find helpful.

<https://vimeo.com/970009065>

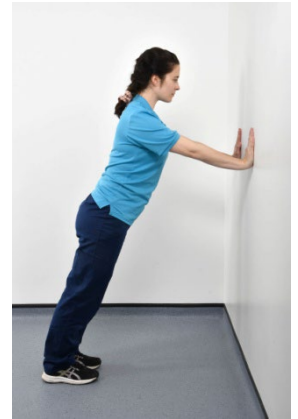


Initial stretching exercises;

Try and start working through the following exercises - it is safe to start trying these exercises right away. Try and do at least 2 of these exercises every day – most you can do whilst brushing your teeth so they should fit within your daily life. Hold stretches for at least 30seconds at a time, and repeat the exercise twice more.

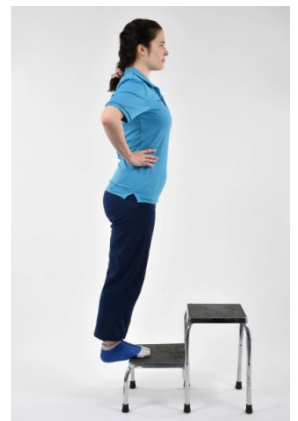
1. Double leg heel stretch at a wall:

Start by facing a wall, and take a large step back. Lean against the wall with both hands, whilst pushing your heels into the floor to feel a stretch up your calves. You may need to adjust how far away from the wall you are depending on how tight your muscles are. Think about bringing your pelvis forwards (so there is a straight line between your heels and shoulder) to give yourself the best stretch.



2. Double leg heel stretch on a step:

Stand tall with your heels hanging off the edge of a step or (bottom) stair, holding on to something for support. Keeping your knees straight, push your heels towards the floor so you feel a stretch up your calves.



3. Single leg heel stretch: straight and bent leg:

Holding onto a surface in front of you, place one leg forwards and one leg backwards. Keep your toes pointing forwards so you feel the stretch in the right place. Transfer your weight onto your front foot by bending your knee, and stretch your back heel towards the floor to feel a stretch up your calf. Hold for 30s. Then transfer your weight back onto your back leg by bending that knee, and you should feel a slightly different stretch up your back calf.

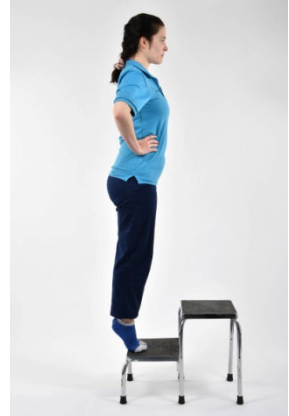


Exercises progressions

Start these exercises as soon as the above exercises are becoming easier, and you are thinking about restarting your activities again. These exercises are all strengthening exercises so try doing these for around a minute at a time to build up your muscles. Continue with the stretches above, particularly if you are still feeling it.

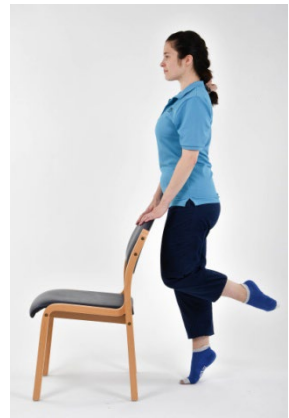
1. Double leg tip toes on a step:

Start in the stretch in exercise 2 above, and then rise onto the balls of your feet so you go onto your tip toes. Keep holding on to a banister/surface for balance. Then slowly lower your heels until you feel the stretch again. To make sure you are working the right muscles, you can place a wee ball or a pair of rolled up socks between your ankles to keep them together.



2. Single leg tip toes:

Stand behind a wall or a surface, and balance on one leg. Rise up on your tip toes on just one leg and slowly return your heel to the floor. The guideline is that you should be able to do just under double your age in single leg tip toes on each leg. If this gets easy, try doing in off the edge of the step like the exercise above but with only one leg.



3. Lunges:

Take a large step forwards and then bend both knees so you end up in the position like the photo. Then push back off the front foot to return to standing. You can do this holding on to something at first if you need help with balance.

You can do this exercise stepping forwards (forward lunge); keeping on stepping forwards with alternating legs (walking lunges); or taking a step back (backwards lunge). If you want a challenge, then hold the position at the bottom of the movement, and then rise onto your tip toes on your front leg before lowering the heel in a controlled way.



Return to sport journey

If you feel your strength and flexibility has improved, and you can now hop, skip, and jump without pain then you are probably ready to restart your sports. This often has to be a flexible process as some days you may feel better than others. Getting back to sport may take some time, and might involve ups and downs. You may need to ease into training sessions and just participate in some of the session initially until you have build your fitness back up.

- Always try and pace your return: restart one activity or training session a week
- Remember to always warm up and cool down
- Keep going with your stretches
- Inform your coaches that you may need to adapt the activity for a wee while whilst you get back to your normal. They should be able to help you.

It is ok to exercise when you still have a little bit of pain, but this discomfort should settle quickly after you finish exercising.

Managing physical activity levels

Managing the amount of high intensity exercise you participate in each week will allow your body to properly recover. These are the risk factors that can increase the likelihood of injury and bodily pains.



A useful guide is to:

- After holidays and injuries remember to build back up to normal levels of activity slowly.
- Limit high-intensity activity to no more than 4 sessions per week
- Try not to participate in high-intensity activities on 2 consecutive days.
- Plan recovery days so you are allowing your body to get stronger, adapt and repair.
- Try to limit your total number of hours of structured sports per week to no greater than your age.

Below is a useful table for you to manage what you are asking your body to do;

Training	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
PE							
School activities							
Out of school activities							

Further advice

If you have followed all of the advice above and you have not noticed any improvement in your symptoms within 6 weeks, you can contact the physiotherapy department on details below.

Physiotherapy Team
Therapies Department,
Royal Hospital for Children and Young People,
50 Little France Crescent
Edinburgh
EH16 4SA

Telephone 0131 312 1079