

LET'S TALK ABOUT SEVER'S

HOW TO RETURN TO SPORT
& PLAY



Angela Jackson

PHYSIOTHERAPY

WHAT IS SEVER'S?

It is not yet known exactly what causes Sever's Disease. However, in sporty children, during rapid growth spurts, tension increases in the muscles in the calf at the point where they attach to the heel bone. A sudden spike in repetitive activities such as running and jumping activities can cause a traction type injury where the tendon attaches to the growth plate. The local bone and soft tissues can become inflamed and sore especially when these become compressed during certain foot and ankle movements.



IT IS NOT A DISEASE DESPITE THE NAME!

WHO GETS SEVER'S ?

1. Boys > girls
2. Boys between 8 to 10 years old
3. Girls between 10 and 12 years old
4. Greater in active kids
5. Can occur in both feet
6. Children who participate in repeated high intensity and higher volumes of hopping, jumping, running
7. It may be linked to children with flat feet and tight calf muscles

WHAT ARE THE SYMPTOMS?

1. Pain in the heel on running, jumping, hopping
2. Typically eases with rest
3. Worse with activity
3. Tenderness on pressure of the heel bone

X-rays are not usually needed to make the diagnosis

WHY DO SOME KIDS GET INJURED?

Doing high volumes of sport does not necessarily cause injuries. Sudden spikes in activity or adding new activities may place more stress on young tissues than they can adapt to at that time. This may happen after a holiday, an injury or during sports camps and competitions.

It is not just doing too much too soon, that causes injuries. Other factors such as not getting enough rest and recovery, too little sleep, being stressed or poor nutrition that can also contribute to the risk of injury. Specialising in just one sport all year round can also increase injury risk, so try to vary what you do.



HOW CAN I REDUCE MY PAIN?



Taking a short break from high impact activities such as jumping and running for 2-4 weeks can help. If you are still experiencing pain it may be that you are doing too much and need to do less strenuous activity until it settles. Do not take pain medication to mask the pain. Massage to the calf muscles and applying ice for 10-15 minutes may help to ease the symptoms. Using a shock absorbing heel pad may help too. The best way to improve symptoms is to modify what you are doing and get stronger.

CAN I PLAY WITH PAIN?

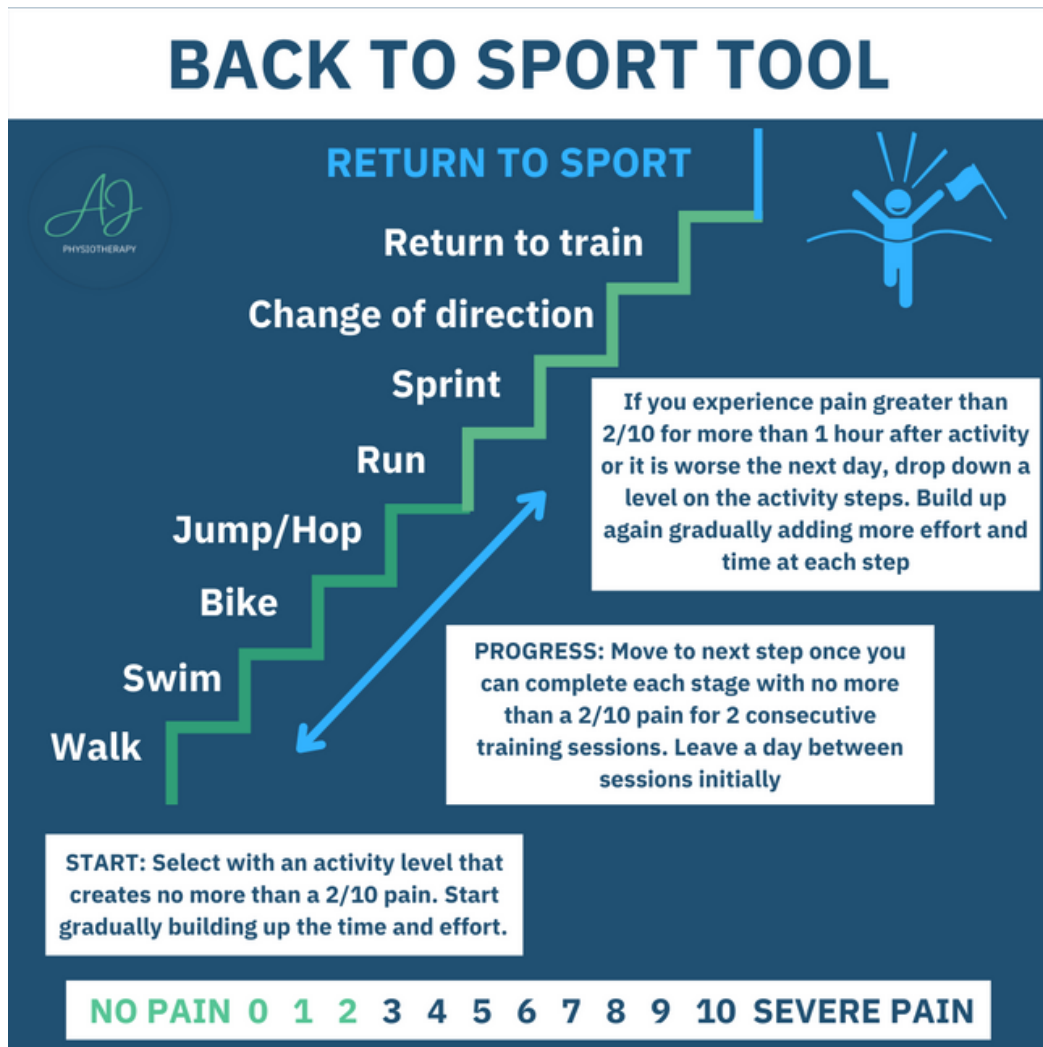
Continuing to play sport is not harmful in most cases and actually helps to keep you fitter and stronger, providing it does not cause an increase in pain. It is important to stay involved with your team or club so try to find a role you can do whilst injured. Using a pain scale of 0-10 (where 10 is severe pain and 0 is no pain), assess your pain level during and after activities. The pain on activity should not be at a level greater than 2/10.

NO PAIN 0 1 2 3 4 5 6 7 8 9 10 SEVERE PAIN

To help the symptoms settle, you may need to reduce what you are doing and try doing some different types of training such as swimming or cycling instead of running.

HOW DO I GET BACK TO SPORT?

When starting to add running back in to your programme, start with lower effort levels, gradually making the activity more intense before moving to the next step. Stay light on your feet. Once you can run pain free and change direction start to return to light training (50% effort) for up to 30 minutes and assess whether it causes a flare up in pain. Gradually add back in more activities every other day observing the reaction of your heel pain. Once you can train pain free for 2 weeks start to add back in competition and matches.



WHAT IF MY PAIN FLARES UP?

If you experience pain of greater than 2/10 for more than 1 hour after activity or it is worse the next day, drop down a level on the activity steps for 2 consecutive sessions and then build up again gradually adding more effort and time. You don't have to stop everything if the pain recurs, just find a level that is more tolerable and then begin to build up again.

STRONGER ATHLETES GET FEWER INJURIES

Stronger athletes have been shown to develop fewer injuries and be able to tolerate greater changes in sport volume and intensity. Children who get Sever's often develop weaker muscles due to the pain they experience and through not being able to do as much exercise. Doing exercises set by your therapist to strengthen the muscles in the calf, hamstrings, quadriceps and trunk muscles will build up your strength so that your body can tolerate more. They should not be painful during or after you complete them.

Some muscles may feel tight when you are growing. Doing some daily stretches for the calf, hamstrings, hips and big toe joints may improve this.

Every individual is different. The type of exercises may differ between each person so it is recommended to see a health professional to learn which exercises are right for you.

RE-EDUCATE THE RUNNING TECHNIQUE

Some children run in a way that places more pressure on the heel. If the child impacts the ground with the heel first and the foot landing ahead of the body, it can cause more irritation in the tissues around the heel. Other children are very heavy footed.

Some children can adapt their running technique by simple cues such as "cycle your legs round so your foot lands under your hip" or "run light". Increasing the step count per minute can also help. Using a metronome at a beat faster rate than they currently run can help them reduce the time that are on the ground and the amount of impact.



HOW DO I PREVENT THE PAIN COMING BACK?

If you do not change the factors that contributed to you developing heel pain, it is likely that the pain will recur. Your symptoms may recur during a further growth spurt too so measure yourself each month to track the changes. Growth $>7\text{cm}$ in a year is associated with injury risk.



TRACK HOW MUCH YOU DO

RECORD: all the activity in school/club you do in a week in miles or minutes of activity. If your pain is severe, track the number of steps in a day on your phone.

CALCULATE: the average volume of activity in the last 4 weeks.

PROGRESS: add 10% to the average activity performed in the last 4 weeks gradually building up what you do and adding back in more sports. Not all sessions are equal so be aware of more intense sessions which may place greater strain on your body and require more fuel and recovery. Some athletes can tolerate greater changes in weekly load so take time to work out what works best for you.

Aim to limit your total number of hours of structured sports per week to no greater than that of your age.

PLAN THE RECOVERY DAYS

Identify potential bottlenecks which might create a “spike” in activity such as starting a new season, competitions and training camps. Build up slowly to allow your body to adapt. Recovery days and sleep are when our body gets stronger and repair any niggles from the day before. Plan in recovery days to maintain wellness and fitness. Adjust your training load during times like illness and during stressful events like exams so you can recover mentally as well as physically.

Prioritise sleep: High quality sleep is key to injury prevention, skill development and wellness. Get in to good sleep habits, making sure you get at least 8 hours sleep a night (younger children may need more). Putting pressure on yourself and being stressed are also linked to injury so try and make time for fun and friends.

EAT FOR ENERGY AND REPAIR



Make sure you eat a balanced diet including good protein sources for building muscles and repairing injured tissues. Don't skip breakfast and try to include protein such as eggs. If you are often hungry, increase your energy intake especially during growth spurts as this improves performance but protects you from injury too. Many children require a Vit D supplement to improve bone health.

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