

Osgood Schlatter Disease



Information Booklet for Patients

What is Osgood Schlatters?

Osgood Schlatter's Disease (OSD) is a common cause of knee pain in children and adolescents. It is not yet known exactly what causes OSD but it is thought to be caused by repeated stress of your large thigh muscle tendon where it attaches to the top of your shin bone below your kneecap. Often this occurs in sporty adolescents or during a rapid growth spurt. This stress results in this area becoming inflamed and painful. At times a hard, bony bump may appear in this area. This is generated as healing occurs and new bone is created.

Who gets Osgood Schlatter's?

- Children and adolescents going through a large growth spurt.
- Children aged 9-15 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?

- Knee pain either during or after participation in sports which typically eases with rest.
- Swelling or a bump at the top of you shin bone which can be tender to touch.
- Reduced knee strength.
- Tightness of your leg muscles.

These symptoms usually come on gradually and can appear in one or both of your knees.

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.
- 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. 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. 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.

No pain	0	1	2	3	4	5	6	7	8	9	10	Severe pain
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Please scan this QR code 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.



Initial stretching exercises;

Try and start working through the following exercises– it is safe to start trying these exercises right away on your sore leg. Try and do the stretches every day to start with until you notice your muscles getting longer. Hold stretches for at least 30seconds at a time, and repeat the exercise twice more. If both knees are sore, do the exercises on both legs.

1. Front thigh stretch:

Start by lying face down. Bend your sore knee back and place a hand around your ankle. Pull your heel slowly towards your bottom until you feel the stretch down the front of your leg (your quad muscle). The goal is that your heel should be able to rest upon your glute muscle easily.



2. Back of leg stretch:

Start by lying on your back, and lifting your sore leg towards your chest. Place your hands behind your thighs as shown. Gently straighten the knee until you feel a stretch behind the leg (your hamstring muscle). The goal is that your top leg points straight to the ceiling – with no knee bend.



3. Bottom and side leg stretch:

Start by kneeling down, and then extend one leg behind you and lean your weight on your front leg. Keep your front knee bent so you should feel the stretch along your bottom (glutes) and up your front leg.

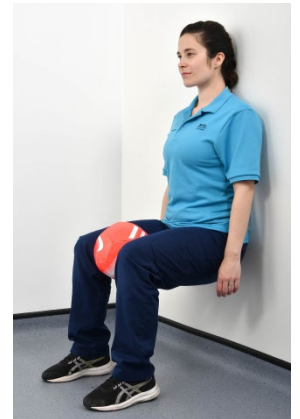


Exercises progressions:

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. Wall slides:

Start by standing with your back against a wall, and your feet planted around 45 degrees in front of you. Slide down the wall until you reach the bottom (where your knees are bent at 90 degrees) and then push through your heels to slide up the wall. This should be less sore than a normal squat. Make sure your knees don't collapse inwards or outwards, but keep facing forwards over your toes. It may be easier for you to place a ball in-between your knees and gently squeeze this during the movement. Aim to build up to at least 20 wall slides in one go.



2. Double leg bridging:

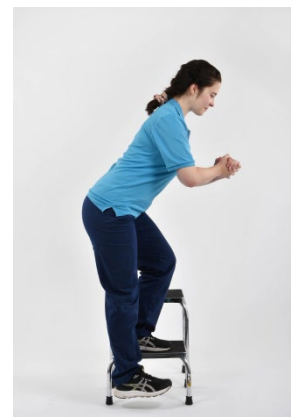
Start by lying on your back with both knees bent. Squeeze your buttocks together and lift your bottom off the floor by pushing through your heels. Ensure there is a straight line between your shoulder and your knees, and hold for a few seconds. Return to starting position and repeat. Aim to do at least 20 bridges in one go.



If this gets easy, then you can move onto more challenging bridges: lifting up each leg in turn at the top, or starting with one leg up so you are only pushing through one leg.

3. Step up and downs sideways:

You can use a bottom stair, or a mini stool (if stable and safe) for this. Please make sure there is something for you to hold on to if you want. Turn round so only your sore leg is on the step, and your other foot is hovering off the ground. Bend your standing leg so your hovering foot lowers towards the floor, and then push through your leg to stand tall again. Try not to place your hovering foot on the floor.



Return to sport journey

If you feel your strength and flexibility has improved, your pain has reduced, 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 your knee may feel better than others. Getting back to sport may take some time, and might involve ups and downs. The body often takes a little time to build back up to normal levels of activity after being injured and it is important to build up slowly to allow your body to strengthen and adapt. Start with some walking, swimming, cycling and then gentle running. 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. Remember, after holidays and injuries remember to build back up to normal levels of activity slowly and in a sensible, paced way.

A useful guide is to limit high-intensity activity to no more than 4 sessions per week and to try not to participate in high-intensity activities on 2 consecutive days. By planning recovery days you are allowing your body to get stronger, adapt and repair. Getting high quality sleep is also a key factor in this.

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