

## Childhood musculoskeletal growth pain: physiotherapy can help

It is important to distinguish musculoskeletal pain in children from classic idiopathic 'growing pains'. Children and adolescents often complain of pain and it can be confusing for parents and health professionals to distinguish between the various types of pain. Idiopathic growth pain is usually seen between the ages of three and twelve. It is often a vague intermittent pain mainly down the muscles of the legs. It is frequently present at night time and not specific to any joint or muscle. Childhood growth pain tends to run in families and affects 30% of children. Generally children will grow out of this. Interestingly, it is commonly seen in children with biomechanical issues such as poor posture and flat feet. This suggests that there is a possible relationship between growth pain and biomechanical faults.

Childhood musculoskeletal pain is quite area specific. This usually occurs after a period of rapid growth. It may be aggravated by sporting activities or poor posture brought on by long periods of study for example. There are usually biomechanical factors involved, which may include muscle tightness. It is generally seen between the ages of eleven and upwards until the growth phase has finished. This can be as late as seventeen for females and twenty one for males.

Subjectively, these clients can complain of sore feet, heels, Achilles tendons, knees, shins, shoulders, hips, neck or back pain. Onset usually occurs without any significant event and is intermittent. Growth spurts may have occurred recently and may be picked up by enquiring about appetite, sleeping /fatigue patterns, changes in height and shoe size. Pain can be aggravated by specific events such as running, standing or sitting. Persistence as a health practitioner is needed to get a good subjective history from the patient. The author puts this down to lack of body awareness and coordination during this phase of life. The body is rapidly changing and clients often appear gangly and not quite comfortable in their body.



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They can also be quite self-conscious and posture may reflect this. It can further be difficult to assess these clients adequately due to their embarrassment. Asking the client to wear a swimming costume, or crop top and shorts may help the assessment. It is also important to get a thorough history of the activity the child participates in during the subjective assessment. This will give an indication of which muscle groups are getting heavily used and the ones that will need more focused work.

There are a range of conditions to consider with adolescent clients. Some of the most commonly seen complaints are:

- plantar fasciitis
- Sever's disease
- Osgood-Schlatter's disease
- patella femoral issues
- groin strains
- scoliosis
- swimmers shoulder
- postural dysfunctions.

Biomechanically there are often significant changes that acute observation and testing will pick up. These might include but are not limited to:

- pronation of the feet
- tibial rotation
- squinting patellae
- valgus knees
- hyperextension of the knees
- tight musculature
- increased or flattened lumbar curve
- increased thoracic kyphosis
- hip and shoulder height differences
- protracted chin position
- poor lumbo-pelvic stability.

Once diagnosis has been established, it is vital that the client is educated regarding what is occurring and why. Compliance of exercise prescription can be difficult with this age group, so support and education of the family is important for recovery. Most often treatment consists of advice and specific exercises to reduce the biomechanical factors causing the pain. However other interventions such

as soft orthotics, taping, bracing, acupuncture, electrical modalities, and joint mobilisations can also be helpful. Body awareness and coordination exercises may assist in reduction of pain.

If treatment has been specific to what was found on assessment, recovery should be relatively rapid. Sometimes flare ups will occur with future growth spurts. Intermittent reviews are appropriate to monitor this. The risk is, as pain reduces so will compliance with exercise. Old postural habits may return, causing flare ups. If pain does not settle with treatment further investigations/opinions need to be sought to ascertain the reason for this referral to physiotherapists who have some experience with these types of conditions is recommended.



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## Childhood musculoskeletal growth pain

**Growing pains are common among children. As many as one in five children experience some degree of this real, but quite harmless muscular pain during early years.**



Growing pains are most prominent between the ages of three to five and eight to eleven. The most common complaints include limb pain that has started for no real reason. Sometimes pain may occur after exercise, but this is not always the case as children often experience just as much

discomfort without any physical activity. In most cases, growing pain usually ceases by mid-adolescence.

### Symptoms

Most children tend to experience pain in the legs, particularly the thighs, calves and behind the knee. Arm pain is far less common and pain does not tend to change with movement. Pain episodes can occur as frequently as nightly through to weekly or monthly. Complaints of pain are most common in the late afternoon and evening and can often affect the child's sleep with pain usually gone by morning. Normal daily activity is typically unaffected, with pain during the day being fairly uncommon. Children may also experience other forms of discomfort such as headaches or abdominal pain during an episode of growing pain.



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### What can you do?

The diagnosis of growing pain is one of elimination. Growing pain will not normally stop your child from walking or running and will not make them feel unwell. If they are limping, avoiding activity, are generally unwell or have pain in only one limb or joint it is possible that they may have a more serious injury or illness that should be investigated.

Although there is no 'cure' for growing pain, managing the short term discomfort is relatively easy with the following simple strategies:

- reassure your child that the pain will go away and that they will feel normal by morning
- a warm heat pack or warm bath can ease the discomfort by relaxing affected muscles
- gently massaging the painful area can relax the child and help with the pain
- simple analgesics such as paracetamol can also help.

### What can physiotherapy do?

Some specific musculoskeletal conditions that occur during growth spurts include Osgood-Schlatter's disease in the knee and Sever's disease in the heel. There are some other more serious conditions that can mimic the symptoms of growing pain, such as infections, viruses and juvenile arthritis. It is therefore important to have your child assessed by a physiotherapist to rule these out.

Once your child has been cleared of other conditions and a diagnosis of growing pain has been made, a physiotherapist can assist with managing your child's pain while eliminating other pain factors:

- *Analysing child biomechanics:* If your child sits, stands, walks or runs awkwardly, they may be placing unnecessary stress on their muscles. By identifying characteristics such as tight muscles, flat feet and knock knees, your physiotherapist can tailor a treatment plan. This may include massage, stretching, strengthening and advice about appropriate footwear which will help minimise the load placed on already painful areas.
- *Muscle fatigue:* If there is a close relationship between extra activity and complaints of pain, your physiotherapist can formulate a strategy to prevent 'overdoing it' during the day. This might include short rest breaks or activities like reading and drawing between more intense sporting activities.
- *Emotional distress:* There can sometimes be a psychological component to growing pain. A physiotherapist can reassure you and your child that the pain will ease and there will be no lasting damage caused by the pain.

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