

Physiotherapy advice for children with Hypermobility

My child has hypermobile joints, what does this mean?

Joint Hypermobility is also referred to as ligamentous laxity.

What is a ligament?

Ligaments attach bones together and act to help stabilise the joints of the body. They are strong, non-extensive soft tissue bands. These bands limit the range of movement at a joint and prevent it from moving in the wrong direction. The joints in our fingers, thumbs, knees and ankles particularly rely on the stability that the ligaments provide.

What causes ligamentous laxity?

Ligamentous laxity often occurs because the connective tissue in the joints and ligaments are particularly loose and stretchy. This is because the protein fibres inside the connective tissue, called collagen, are altered. As a result the joints can extend further than normal. Ligament laxity often runs in families. This condition tends to improve especially after puberty.

What problems can occur?

Often ligamentous laxity does not cause any problems and can be advantageous, particularly with dancers and gymnasts, as being 'stretchy' is useful.

Not everyone with ligament laxity will experience these symptoms:

- **Fatigue and stamina:**

When there is laxity in joints, muscles have to work harder to control movement and posture. This causes the muscles to fatigue more easily and can make the child more tired.

- **Pain:**

Excessive joint movement (either in the wrong direction or in the right direction) can cause repetitive strain on the joint, resulting in pain. Some children with ligamentous laxity weight bear mainly through the inside of their feet (flat footed). Good supportive footwear will address this problem. Occasionally when muscles and ligaments are poorly aligned pain can occur.

- **Balance and co-ordination:**

Due to poorly aligned joints and lack of stability, balance and co-ordination can be affected. Children can sometimes take longer to develop skills such as standing on one leg, hopping and jumping. Muscle strength is essential to help provide the stability at the joints to help develop gross motor skills.

- **Posture:**

Ligamentous laxity can occasionally affect sitting and standing postures. Children often prefer to 'W' sitting (bottom between legs when knees bent).

- **Difficulty with fine motor activities:**

Due to reduced finger strength and stability, children may find difficulty with putting on socks, doing up buttons, laces, turning on and off taps and unscrewing lids, undoing lunch boxes etc. Handwriting may also be affected and children could



demonstrate with an altered pencil grasp. Writing stamina may also be affected and the child may complain of 'tired hands'. They may take longer to establish neat and efficient writing.

- Delayed motor skills:

Some babies and toddlers may be later to crawl, stand and walk due to lack of joint stability and muscle strength. These children can often lack in confidence and be fearful of movement until joint strength and stability has developed.



When walking is established it is not unusual for a child to demonstrate with flat feet, pigeon toes, knock-knees or a tendency to trip and fall.

This often improves spontaneously with time.



What can I do to help?

Gross Motor Activities:

It is important to build up and maintain muscle strength without causing stress on the joints. This will help to provide joint stability.

The following gross motor activities are particularly beneficial:



- Cycling, swimming and walking
- Playing in the park
- Soft play
- General exposure to gross motor activities e.g. ball games.

These activities can be incorporated into your daily routine. It might be possible to start cycling or walking to school, to a friends' house or using the park and ride instead of the car.

Little and often is better than prolonged periods of exercise.

Fine Motor Activities:



- Different width pens to improve hand position when writing and reduce pain. You can use an elastic band to widen a pen or pencil or shop brought pencil grips are available in most stationers. If the child is overusing certain muscles, and this is causing pain, they can benefit from stopping and stretching the fingers, which helps to improve blood flow.

- Playing with Lego, Play Dough, model making etc will increase finger strength.
- A sloped writing board and a sloped cushion to sit on can sometimes help improve a sitting position.

- When using computers, short rests and stretching whilst working helps.

It is important that children with lax ligaments are encouraged where possible to participate in the same activities as their friends, whilst taking into account the advice. Being as active as possible will help to keep muscles strong and therefore protect the joints

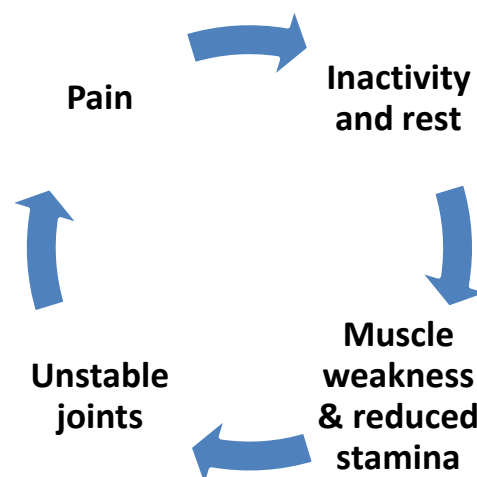
Caution!



Children with severe laxity should be extra cautious when using trampolines, as reduced joint stability may result in ankle and knee injuries. Hanging from equipment by the arms and jumping off apparatus could also cause too much strain on the ligaments. For younger children avoid swinging them by the hands. Instead support them under their shoulders whilst holding their hands.

Pain and exercise

Exercise is important in children who are experiencing pain, not just to develop muscle strength but to break the cycle of pain:



Keer Rosemary – Hypermobility Syndrome (2003 pg 41)

Some suggested Activities:

- Helping with the laundry – loading and unloading the washing machine.
- Tug-a-war games – pulling/pushing.
- Knee walking/knee football.

- Ball skills - start with using balloons and progress to light balls.
- Tummy lying – spending time on tummy reading, playing computer games, T.V
- Skate board – moving around on your tummy.
- Scooter – make sure you use both the right and left legs when propelling.
- Swimming.
- Cycling – leaflet available on request – “Learning to ride a bike”
- Washing and polishing the car.
- Wii fit board games. Ensure that your child is aligned correctly on the board, with weight evenly distributed bottom and tummy tucked in.

If have concerns about your child’s joint hypermobility please contact your health visitor, GP or physiotherapist.