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Joint Hypermobility in Children and Young People

Paediatric Department



Joint Hypermobility in Children and Young People

What is joint hypermobility?

All joints have a normal range of movement. Hypermobility occurs when joints have a range of movement that is greater than normal. Hypermobility can occur in one or more joints.

5% – 15 % of school children in the UK are hypermobile. It is more common in females than males and in certain ethnic groups such as Asians and Africans compared to Caucasians.

Joint hypermobility is also known as “double-jointedness”, “floppy joints” or “joint hyperlaxity”.

What causes joint hypermobility?

The cause is congenital (present from birth) and tends to run in families.

Hypermobility arises from a problem with one of the connective tissue proteins called collagen. Collagen is found in several places in the body including the skin, joint capsules, tendons, ligaments, blood vessels, bone, lungs, gut, and nerve endings. It is one of the proteins that give the tissues their natural toughness. There are three types of collagen - I, II and III. Type I is tougher and found mainly in the skin, ligaments and bone and type III is thin and elastic, occurring mainly in the lungs, skin, blood vessels. Children and young people with joint hypermobility have greater amounts of type III collagen compared to type I. This makes their body tissues less robust and hence less able to stand up to the physical strains of everyday life.

As children and young people get older their joints naturally stiffen and become more stable and many of these symptoms disappear in adulthood once growing stops.

Further Reading:

Joint Hypermobility, An Information Booklet, Arthritis Research UK
www.arthritisresearchuk.org

Grahame R, Pain & the Hypermobility Syndrome,
The Hypermobility Syndrome Association
www.hypermobility.org/painandhms.php

Pain syndromes
www.pinto.it/pediatric_rheumatology/information/UK/12.htm

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Further Information

We endeavour to provide an excellent service at all times, but should you have any concerns please, in the first instance, raise these with the Matron, Senior Nurse or Manager on duty.

If they cannot resolve your concern, please contact our Patient Experience Team on 01932 723553 or email asp-tr.patient.advice@nhs.net. If you remain concerned, the team can also advise upon how to make a formal complaint.

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On the whole medication tends to be of little use but in cases of persistent pain anti-inflammatories such as Ibuprofen or Naproxen are prescribed.

Referral to a Podiatrist may be required in those with difficulty walking, and some may need insoles.

Occupational therapy may be necessary to help with hand function particularly in those with handwriting difficulties.

Psychological support may be required for children and young people with chronic pain and chronic fatigue.

Is there any general advice for children and young people with joint hypermobility?

Use good supportive footwear which supports the ankle joint as this will help with walking and balance.

School-age children may need to reduce their participation in high impact sports (such as trampolining) and contact sports as these activities are more stressful to joints.

Not all pain is bad. The natural reaction when in pain is to move and exercise less, however this means joints get stiffer and more painful, and after a short time muscles start to weaken. Therefore it is important to keep as flexible as one can and do exercises as regularly as possible. Think very carefully before having joint surgery to “fix” tendons or ligaments in an attempt to make them stronger, as some individuals with hypermobility tend to heal poorly and take a long time to heal, and surgery may make symptoms worse.

What is Benign Joint Hypermobility Syndrome?

Most children and young people with joint hypermobility experience no problems and lead a normal life. Benign Joint Hypermobility Syndrome (BJHS) refers to the presence of symptoms related to hypermobility which affect the quality of daily life. Symptoms are not directly related to the number of joints affected. Low muscle tone and flat feet are common in hypermobile children and young people. As a result their muscles have to work twice as hard to keep their joints stable and this may lead to muscle and joint pain and fatigue. Symptoms may become worse during growth spurts and puberty as hamstrings and other soft tissues tighten more quickly than normal in the growing hypermobile individual.

Children and young people with BJHS may frequently experience some of the following:

- Pain in muscles / joints especially in the legs towards the end of the day particularly after physical activity (also known as growing pains)
- Pain in both legs which disturbs sleep which may be severe but is short lived
- Poor balance, co-ordination or clumsiness due to impaired joint proprioception (awareness of the joint position)
- Easy bruising
- Difficulty using stairs
- Difficulty coping with walking normal distances, asking to be carried or use a buggy on family outings
- Hand and arm pain on prolonged handwriting due to abnormal pen grip
- Joint stiffness especially in the legs and spine, particularly during growth spurts and puberty

- Clicky joints

Other less frequent complaints are:

- Delayed onset walking
- Increased sensitivity to pain
- Difficulties doing buttons, laces, and using eating utensils
- Joint dislocations / instability
- Sprains / strains / pulled tendons / ruptured ligaments
- Recurrent joint swelling / inflammation - but if present does not mean that the child or young person has arthritis
- Widespread chronic muscle and joint pain, fatigue, leading to Chronic Pain Syndrome – fortunately this is very rare

Other associated features:

- Gastro-oesophageal reflux
- Constipation
- Dizzy spells on sitting or standing up

Joint hypermobility associated with other conditions

Very rarely joint hypermobility can occur as part of another connective tissue or bone disease such as Ehlers Danlos Syndrome, Marfan's Syndrome and Osteogenesis Imperfecta.

A type of Ehlers Danlos Syndrome Type III is loosely called BJHS as it has similar symptoms and examination findings but studies are undergoing to determine whether these conditions are actually the same.

Are there any benefits to being hypermobile?

Hypermobility may be an asset to some children who are often very good at dance, ballet, gymnastics, and acrobatics.

How is joint hypermobility diagnosed?

Diagnosis is based on history and physical examination. Blood tests or X-rays are not required to make the diagnosis.

How is Benign Joint Hypermobility Syndrome treated?

It is important to remember that hypermobility is not a disease and is not a form of arthritis.

Physiotherapy is the main treatment which includes advice on posture, stretching without stressing joints, muscle strengthening, increasing core stability, improving balance and joint proprioception.

Children and young people are advised to do daily exercises in order to help keep their joints moving in a healthy range and avoid symptoms. Hamstring stretches are particularly important. Swimming and cycling are recommended as they are non-weight bearing exercises and so are less stressful on the joints. Walking particularly in the sand and uphill are good for calf muscle power and stamina.

If children and young people have been doing a lot of activity during the day they should be encouraged to have a warm bath before bed as this helps relax their muscles.

Night pain symptoms can be treated with local heat therapy and massage. Paracetamol may be used if the pain is severe.