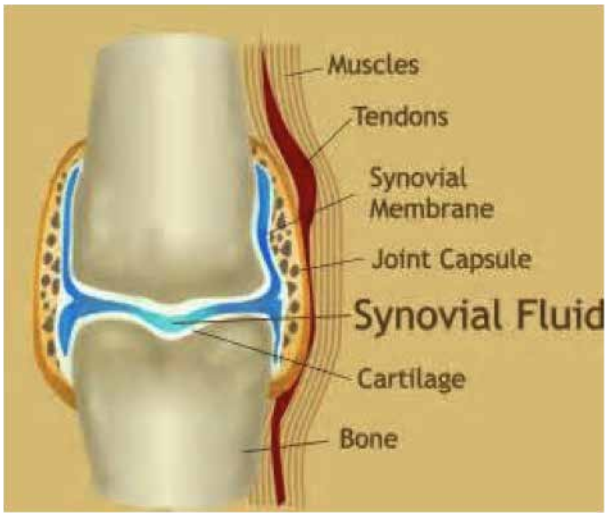
Advice for hypermobility

Children with hypermobile joints have too much movement in their joints. This can occur with just a couple of joints or all joints. A joint is the place on the body where two bones meet. All joints have a cavity containing a small amount of fluid which allows movement to happen. The attached tendons, muscles, ligaments and joint capsule hold the joint in its correct position. Looseness of these supporting structures allows a joint to have extra movement. Often even normal activities that put stress on loose joints will irritate them.



To illustrate how a joint works, think of a door hinge and a door stop. The hinge is like the joint and the door stop prevents the door from swinging too far and damaging the wall. Likewise a joint with supporting structures that are too loose or stretched will allow extra movement past the normal range of motion. This hyperextension can cause brief discomfort, swelling or pain in that area. Joints can also partially dislocate because of the loose supportive ligaments and joint structures.

For some children hypermobility can cause the symptoms described below. A growth spurt, lack of exercise, illness or an accident can sometimes increase these symptoms.

- Fatigue
  Children may complain of a general fatigue, because they are working very hard to maintain positions and move due to laxity in the joints. Children may also experience joint or muscle fatigue.
- Pain
  Children often experience joint pain, again because their joints and muscles are working harder to stabilise the joint and move throughout the day. Repetitive activities may cause pain due to muscle fatigue and should be paced and regular rest breaks scheduled.
- Poor coordination
  Children may appear less coordinated and have more accidents than their peers. Injuries to joints as a result of a fall, for example, may take longer to heal.
- Difficulty with activities
  Children may have difficulties with pencil grip, managing clothes fastenings or manipulating objects. They may be slower to complete activities than their peers.
- Knowing where joints are in space
  Children may have difficulties feeling where their bodies are without looking as the proprioceptive receptors which send this information to the brain are located in our joints.

Strategies

Joint protection

- Encourage the child to move each joint through its full range of motion at least once a day. This will help maintain freedom of movement in the joints. Keep movements slow as gentle, sudden jerking or bouncing can hurt joints.
- Learn to understand and respect any pain. Understand the difference between general discomfort and the pain from over using a joint. By noting the activity that stressed a joint you can help the child to learn to avoid repeating that movement.

- Encourage the child to be careful how they use their hands. Fingers are used in many day-to-day activities. Stressful positions and techniques may increase the risk of putting extra stress on joints. Most tasks can be performed in easier ways, which put less force on the joints.
- Avoid positions that push the other fingers towards the little finger. Finger motions should be in the direction of the thumb whenever possible. For example, don't brush crumbs off a table with your palm flat on the table. Instead, turn your hand so the little finger is resting on the table and the palm facing you. Then push the crumbs off the table.
- Avoid making a tight fist. Try to use larger handled objects rather than narrow ones, which will increase the tension through the hands and stress through the joints. For instance hair brushes, chunky pencils, fatter handled cutlery and an electric rather then standard toothbrush.
- Try not to pinch items between the thumb and fingers. Hold a book, plate or mug in the palms of the hands. If the child is reading for long periods use a book holder. Instead of a clutch style purse or bag select one with a shoulder strap or rucksack.
- If a child is carrying items, encourage them to make several small trips rather than carrying one very heavy item. When in secondary school it would be beneficial for young people to use a locker rather than carry all of their belongings.
- Avoid the child demonstrating the 'party trick' of over stretching their joints!

Good body mechanics

The way that you carry your body largely affects how much strain you put on your joints. Proper body mechanics allow you to use your body more efficiently and conserve energy.

- When sitting at a desk the child's feet should be flat on the floor, the thighs and forearms should be horizontal and the desk just below elbow height.
- During long periods of keyboard use consider using a chair with arms or wrist or forearm supports.
- An angled work surface is easier on the neck position.
- When standing the work surface height should enable the child to work comfortably without stooping.
- Increase the height of the chair to reduce stress on the hips and knees as the child gets up and down.
- To pick up items from the floor bend from the hips and knees or sit in a chair to reach down.
- Carry heavy objects close to the chest, supporting the weight on your forearms.
- Use a backpack with padded straps for carrying school books. This distributes weight evenly. Pack heavier items closest to the back of the bag.

Use the strongest joint available for the job:

- Save your weaker/more mobile joints for specific jobs that only they can accomplish. Throughout the day favour large joints. For example:
    - carry objects with the palms open distributing the weight evenly over the forearm
    - slide objects along a counter or workbench rather than lifting them
    - when opening cabinets, use a loop that can be pulled with the wrist or forearm to decrease stress on the fingers.

Avoid keeping joints in the same position for a prolonged period of time:

- Don't give joints a chance to become stiff, this can cause more discomfort, keep them moving.
- Gentle exercise and movement throughout the day, even if in pain will help.
- When writing or doing hand work release the grip every 5-10 minutes.
- On long car journeys get out of the car, stretch and move around at least every hour.
- Whilst watching TV get up and move around every half hour.
- Discourage the child from resting their head on their hands when sitting at the desk.

Balance periods of rest and activity during the day:

- Effectively managing the workload throughout the day can help avoid overworking joints.
- Encourage the child to work at a steady moderate pace and avoid rushing.
- Allow rest periods before the child becomes fatigued or sore.
- Alternate light and heavier work throughout the day.
- Take regular stretch breaks.

Pain management:

- Heat or ice: warm baths, hot water bottles or heat packs can help relax muscles. Ice can reduce swelling.
- Distraction techniques: focusing on pain will make it feel worse so help the child to keep their mind busy with activities to distract them.
- Visit the GP if the pain isn't manageable

Strengthen:

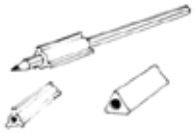
- Encourage regular low impact strengthening activities such as swimming, children's yoga or walking. These are all helpful to improve joint strength.
- Avoid inactivity.
- Being overweight can add extra stress on joints.

School:

- When the child is at their desk ensure that feet are flat on the floor, thighs and forearms are horizontal and the desk is just below elbow height.
- Using a desk slope can further improve wrist position for writing. If children appear to be slumping in their chair a foam wedge cushion may improve this. Encourage children to sit straighter as although it is hard work, slumping will cause pain.

- If sitting on the carpet or with crossed legs is hard work allow children to sit on a chair or bench. Discourage children sitting in a 'w sit' position on their knees with their bottom between on the floor (see picture).
- Children may need to move around a lot and rather than sitting still may fidget. This will reduce the risk of stiffening up and should be allowed.

- Writing may be hard work for children with hypermobile joints. Using chunky pens may help with grip and regular rest breaks are useful to reduce pain. Completing hand warm ups before handwriting may also help:
  - **pull** - at fingers gently
  - **praying position** - push hands together, holding hands close to chest



  - **monkey grip** - pull hands apart
  - **finger taps** - tap fingers on a table top. Can imitate sequences
  - **finger separation** - spread fingers as far apart as possible
  - **finger flicks** - on a table top, as if flicking something with each individual finger
  - **shake** hands to relax
  - pencil walks - holding the pencil with a tripod grip then walking fingers up the pencil shaft and back down again using writing hand only
  - pencil flick, holding the pencil with a tripod grip then flick the pencil forwards and upside down, then flick it back into tripod grip ready for writing
  - pencil pecks- hold the pencil with a tripod grasp, using small hand movements "peck" the pencil forwards and backwards
  - Blu Tack games (with writing hand to encourage pincer grasp); pulling blu tack into pieces using index finger and thumb only; making a "spiky snake" by rolling the blue tack into a snake shape then pinching spikes using thumb and index finger only; rolling into a ball then squashing the ball as flat as possible using thumb and index finger only.
- Have a plan to allow children to rest if they get over tired at school or in pain (having ice or a hot water bottle available may be useful.

PE:

- Unless told otherwise children should participate as much as they can in PE (the curriculum may need to be differentiated).
- This will help keep joints strong to reduce pain
- Make sure they always wear supportive sports shoes with cushioned soles rather than bare feet, if ankles and knees are equally mobile.
- Avoid unnecessary high impact sports if a child is experiencing discomfort.

Self-care:

- If children are struggling with dressing, fastenings or holding cutlery there are many adaptive strategies that may assist them such as Velcro or elastic laces. Using pipe lagging to build up the grips on handles can help. For further information refer to our other advice sheets on these areas.

One step at a time:

Remember, you don't have to make all of these changes at once. By gradually incorporating these methods into day-to-day activities it will be easier to stick with them. If children continue experiencing significant pain or have functional difficulties despite using the strategies above consistently please contact our advice email oxl-tr.otadvice@nhs.net

Further resources and information can be found at:

Desk slopes, cushions, pencil grips
www.specialdirect.com
www.taskmasteronline.co.uk
www.backinaction.co.uk

Adaptive cutlery or fastenings
www.homecraft-rolyan.com
www.nrs-uk.co.uk

Information on hypermobility
www.hypermobility.org
www.arthritisresearchuk.org

For further information please contact our advice
email oxl-tr.otadvice@nhs.net

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