



FINE MOTOR



MANAGEMENT OF HYPERMOBILITY IN SCHOOL-AGED CHILDREN

The following suggestions are for joint hypermobility as seen in functional tasks. Additional strategies might be needed for those identified with *Hypermobility Spectrum Disorder and Ehlers–Danlos syndromes*.

Introduction: Joint hypermobility describes joints that move beyond normal limits. Children who are hypermobile have too much movement in their joints. Their joints are extra flexible. In the past, the term “double-jointed” was used. Joint hypermobility can exist by itself or be a part of a more complex diagnosis. Hypermobility is something we are born with. It is a trait that may be passed along family lines.

If there is an underlying reason for joint hypermobility, you may wish to pursue this with your doctor. Therapy advice and recommendations will remain generally the same regardless of the reason for the hypermobility.

Joint hypermobility can occur in only a couple of joints (fewer than five) or can be more wide-spread (five or more joints).

The impacts of hypermobility may not be apparent right away. Symptoms may range from minor to more serious challenges, such as fatigue, pain, joint instability and dislocations, trouble keeping an upright sitting posture and/or poor co-ordination. Children may have two types of fatigue: specific joint or muscle fatigue because joints and muscles are working extra hard and/or general overall fatigue due to increased effort to perform tasks.

For many children with hypermobility, these challenges can affect daily activities. Hypermobility can make it hard for the child to learn how to hold and use a pencil, crayons, eating utensils, get dressed and take part in sports. Proactive and positive self-management can help a great deal with the goal of full participation in all activities.

1) Energy Management/Pacing:

For some children with hypermobility, energy is often a finite resource and it can be very difficult to “refill” their tanks quickly once emptied. Pacing is a great way to manage fatigue and ensure maximum productivity. The following are key strategies to consider to ensure best energy conservation through-out the day. The frequency, length, and types of activities should be adapted for each individual child. In general, it is important to maintain as normal a level of activity as possible, while avoiding overexertion.

Scheduling and Pacing:

- Plan daily activities to allow for a balance and variety of different types of activity and rest.
- Spread out difficult or demanding tasks over the day or week.
- Split activities into small achievable tasks.
- Use two sets of textbooks (one for home and one for school) to avoid transport.
- A small snack and a brisk walk or other type of exercise will often re-energize the body in order to continue with the day's activities.
- Alternatively a rest may be needed.

Rest Periods: As part of pacing, rest periods may be needed and can be added into the daily school routine. Rest advice might include:

- Be proactive in giving rests (e.g. give a rest break in the morning as well as in the afternoon) to ensure consistent energy throughout the day. Waiting until fatigue is obvious may result in lack of productivity and need for longer rests.
- Even a short rest period may have a large benefit.
- Offer a quiet space for resting, ideally away from noise and distractions.
- Provide comfortable supportive furniture for rest breaks such as a large bean bag chair, or children's arm chair. Encourage children to lay back when resting, ideally with feet up and head/neck supported.
- Encourage children to engage in quiet activities during rest periods such as listening to music.
- Teach children to self-monitor their fatigue and to self-advocate for the need for rests. To help children learn how to do this, begin by tracking their self-reported fatigue during the day in a chart format. Both the child and a school-team member can rate apparent fatigue and any differences can be discussed. Over time, trends may become obvious that can help inform the need for changes to the daily schedule.



Fatigue Rating Scale



1

No fatigue!

2



3

A little fatigued

4



5

Very fatigued!



2) Classroom Seating and Positioning:

Supportive seating is very important and allows the child to best concentrate on learning rather than focusing on sitting.

- Fit the chair first. Ensure that the child's feet are flat on the floor. Hips and knees should be at 90 degrees. Lower back should be supported by the back of the chair. Providing a smaller chair, footrest and/or back rest may be necessary if these criteria cannot be met.
- Once the chair has been fitted, ensure that the table top is adjusted so that the forearms are well supported with the elbows at 90 degrees - Ideally at approximately 2 inches above bent elbow height so that the child is able to bear weight through the forearms.
- Encourage the child to sit "all the way back" in the chair and lean forward slightly to sit close to the desk ("tummy touches table").
- Use of a slant board may be helpful as it provides forearm support and optimal wrist positioning for printing. A sloped work surface is easier on the neck position. Please see image below.
- Ensure forearms are well supported when typing and printing (e.g. push keyboard forward).
- Avoid sitting for extended periods of time. Get up and stretch every now and then.
- When standing, the work surface height should allow the child to work comfortably without stooping.
- During carpet time try a stadium chair, sitting on a chair or leaning against a wall or book case rather than sitting on the carpet/floor with no support.



3) Fine Motor and Other Accommodations:

- Trial use of a “pencil seat belt” to provide extra support and stability. (Use of a seatbelt is often accepted when a pencil grip is not.)



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<https://www.pinterest.ca/pin/391883605049746695/?lp=true>

https://www.fdm.ca/img/product/l%C2%A60307_1.jpg

- Trial use of pencil grips to help provide more support and cueing for a more dynamic pencil grasp with fingers in a rounded/curved position (to prevent hyperextension).



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- Consider use of softer lead (e.g. 6B or 8B) often available in the drafting or drawing section of stationary or craft stores. This results in a darker end product without having to exert as much pressure.
- For older children, consider using pens that are either “easy rollers” or felt tips.
- Try writing on a single vs stack of papers to see which is most comfortable and least fatiguing.
- When writing, rest every now and then to prevent joint pain.
- Consider use of a technology (typing or speech to text) if writing is causing pain or fatigue.
- Children may need accommodations, especially in the older grades. These might include alternate forms of assessment and extra time.
- Carry heavy objects close to the chest and carry them with the palm open, weight spread evenly over the forearms.
- Avoid loading joints in positions that cause discomfort or strain.
- Use a backpack with padded straps for carrying school books, worn symmetrically to spread weight evenly. Pack heavier items closest to the back of the bag.
- If children are struggling with dressing, fastenings, or holding cutlery, there are many adaptive strategies that may help, such as Velcro, or elastic laces. Building up the grips on handles can help with grip as well as other kitchen tool adaptations (e.g. jar openers).

4) Tips for parents:

- **Sleep:** Ensure your child is getting enough sleep to maximize energy and endurance during the day. Some children with hypermobility use more energy than their peers and may require more sleep. For tips on good sleep please see link below:
<https://www.choc.org/wp/wp-content/uploads/2016/04/Sleep-Hygiene-Children-Handout.pdf>
- **Physiotherapy:** Consult a physiotherapist to ensure that your child is getting the right amount of exercise and activity. It is important to strike a balance between getting the right amount of exercise to promote good sleep and fitness while not contributing to day-time fatigue. Therapy exercises may be offered that work on improving your child’s strength, posture, stability and endurance. The physiotherapist may recommend restricting contact sports or weight bearing activities on the arms or wrists, such as handstands, and cartwheels.
- **Relaxation techniques** may help in the management of pain, sleep problems, and stress or anxiety. Allow time for stretching or walking.

This resource has been developed by a team of occupational therapists at Sunny Hill Health Centre. The information included in this handout is based on current research and expert clinical opinion. Please contact your occupational therapist if you have any questions or concerns.



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