

Bwrdd Iechyd Prifysgol Betsi Cadwaladr University Health Board

## NEURODEVELOPMENTAL TEAM

## ACTIVITIES TO ASSIST IN THE DEVELOPMENT OF PROPRIOCEPTION FOR OLDER CHILDREN



Proprioception is the awareness of our body position in space. Tiny receptors located in the muscles joints and ligaments send messages to the brain as to whether the muscles are stretching or contracting, or if the joints are bent or straight. Proprioception provides us with information on where a particular body part is without the need for visual cues. The young person with reduced proprioception has difficulty interpreting the messages as the exact location of their head and limbs and can have difficulty planning their movement. They often can present as uncoordinated or clumsy.

- Trampolining: This is an excellent activity for the development of the Proprioceptive and Vestibular senses. However if the child become over stimulated or feels nauseous after this activity the activity needs to be time limited.
- Activities/hobbies: Encourage the young person to participate in activities and hobbies that assist in the development of proprioception i.e. horse riding, swimming, running, jumping, dancing, yoga, using a rowing machine or other gym equipment which is age appropriate etc.
- Encourage the young person to do some push-ups on the floor or against the wall or to attend exercise sessions at the Gym, run the school mile.
- Climbing is an excellent activity to develop proprioception as the young person will take their own body weight. Pulling on ropes, using a climbing wall, climbing nets and monkey bars are also excellent activities.
- Engage in activities which involve pulling, pushing or carrying heavy objects i.e. lying on the scooter board and pulling themselves along the floor with their arms, tug of war, pushing a heavy wheelbarrow, pushing a shopping trolley carrying or putting away shopping, wearing a heavy rucksack etc.
- Encourage the young person to throw and catch a ball or other items i.e. large therapy ball, water balloons, beanbags etc. beanbags can be thrown into a bucket, water balloons into a paddling pool etc.
- Bouncing on a therapy ball, this must be done with very careful supervision to ensure safety. The young person should be encouraged to adopt lots of different positions on the ball i.e. prone (lying with stomach over the ball), supine (leaning backwards), sitting etc.
- Provide a seated surface that allows movement and feedback i.e. move'n'sit or disk'n'sit cushions, therapy ball chairs, bean bags etc. This will allow Proprioceptive feedback when sitting and hopefully reduce the number of times child has to leave his chair.

- Tying some theraband or a bungee cord around the legs of the chair can also help to provide Proprioceptive feedback by allowing young person to move his legs against the band when seated.
- Wrapping the young person tightly in blankets, duvet or towel can also help to develop Proprioceptive input and can act as a calming strategy if distressed.
- Providing deep pressure massage, or try rolling an exercise ball or a vibrating/roller hand massager over the body when the young person is in lying position.
- Trial wearing a squeeze hoodie, squeeze vest, body armour or try using a body sox. (These are available from sensory equipment retailers and should be used as per manufactures instructions)
- Young people with proprioceptive difficulties should whenever possible be provided with regular movement breaks regularly throughout the day. Access to some of the above activities prior to the start of the school day or before the child sits for a long period can help him/her to self-regulate and sit to attend in class, complete homework etc..Sensory motor activities as listed above should whenever possible be incorporated into play and PE sessions.

The above are a number of suggested activities aimed at the development of proprioception. I am certain that you will develop lots of your own ideas to develop this sense.