

Sensory training script 7

Part Seven: Proprioception

Slide one

Welcome to part seven of the Derbyshire Healthcare NHS Foundation Trust's Community Paediatric Occupational Therapy team's Sensory Training for Parents and Carers.

Slide 2

Proprioception is the first of our additional senses.

Slide 3:

The proprioception receptors are located in joints and muscles. This sense tells us constantly what our bodies are doing and where each limb is in relation to our whole.

This sense is the 'you are here' point on the map, and enables us to understand how we are moving.

This sense also enables us to learn new motor skills, to refine and develop skills so that we can do any chosen activity. Feedback from our movements enables us to grade the amount of force, the speed and the duration of movements and in turn this enable us to be highly effective in doing skilled activity. Proprioception enables us to put our socks on, and to feed ourselves.

Slide 4:

'Heavy work' – using our muscles in a regular, predictable manner acts to calm our sensory systems, and can be used to calm us or to prepare us to cope better with challenging experiences and sensory situations. (show)

'Heavy work' – can be any activity that means we use muscle strength in a sustained way, this can include daily chores, such as making a bed, vacuuming, or carrying a heavy bag, to play activities such as bouncing on a trampoline, hanging off of playground bars, scooting on a scooter, row-the-boat type action games or using gym equipment like weights, theraband or punch-bags.(show)

Slide 5: prone photo

Here we see the son, positioned over the gym ball, he is taking his bodyweight through his hands whilst moving the jigsaw pieces, he has to shift his weight when he swaps hands, this gives lots of proprioceptive feedback through his hands, elbows, the large shoulder joints and muscles and through his back and neck. All of this feedback acts to organise and calm him, making it easier for him to do the task, and helping him to maintain his concentration and engagement. Note when using this activity to calm movement or rolling over the ball is kept to the minimum, it is important that this is a power activity, as this gives the strongest feedback through the proprioceptive system.

Slide 6:

'Heavy work' can be used throughout your child's day, both at home and in school.

For the walk to school provide a rucksack that weighs 10% of your child's body weight – you can fill milk containers with water, marking the sides to show the fill-level to make this easy to do. Your child can carry the bag to and from school. This weight should only be carried by your child for 20 minutes, but if it is water in containers, you can throw this away. It is important to allow your child a break, without the weight for a minimum of 20 minutes. You can fill the containers again when needed and ask your child to carry them again for another 20 minutes. These timings mean that your child doesn't get used to the sensory feedback, and makes sure that the weight always impacts to help your child.

Your child can help push the trolley in the supermarket, or carry the shopping home.

Slide 7:

In school:

School can use the rucksack, but they can also have a box or a bag that needs to be moved around school as an important task, for example the child can be the school secretary's monitor, and throughout the day carries a box to or from the school office to the class room, the box should weigh 10% of the child's body weight, this regular loading will help maintain the child in a 'just right' calm state.

The child can also help put resources out in the class room or gym, helping to move tables, mats or resources.

They can hold the heavy school doors open for their class mates when they move around the school.

Using climbing walls, drumming, cycling, digging or sweeping can also be effective ways of giving the child 'heavy work'.

Drinking through a sports bottle or straw, or drinking thicker liquids like milk shakes or juiced fruit and vegetables are calming.

Slide 8:

See the Touch/tactile section as many of the techniques described there also give proprioceptive feedback and should be used in the same way.

Use the following:

- **Outlining**
- **Squash**
- **Side by side squash**
- **Cushion squash**

Slide 9: End of Part Seven

This is the end of Part Seven, Proprioception. Please go to Part Eight Vestibular. If you do not need any other sensory information please go to the sensory day section of this training, there are two options one for Early Years and Primary aged children and one for Secondary aged children. At the end of these sections you will be given information about how to access a follow up session.