



## Guideline for Heavy Work Activities

Heavy work refers to proprioceptive input. The definition of proprioception is the awareness of posture, movement, and changes in equilibrium and the knowledge of position, weight, and resistance of objects as they relate to the body. “Heavy work is a term that applies to any activity that engages the muscles and joints of the proprioceptive system. Stimulating proprioception can generate calming messages to the brain. Tasks that create greater proprioceptive stimulation have the biggest effect on behavior. Heavy work tends to lower arousal levels and reduce cumulative effects so that the child is prepared for the next sensory surprise (Miller, 2006). Kids with Sensory Processing Disorder sometimes seek out excessive proprioceptive input when they are looking for a way to calm and organize their nervous system. They may seem disruptive, full of excessive energy, or even unsafe. They might purposefully crash into things (or you), jump off of things, or seem in constant motion. These are the children we want to target with heavy work activities!

To experience the calming effect, these activities need to be performed for 5-15 minutes. Slow, steady resistance that requires effort to be exerted against the muscles and joints is required. Most proprioceptive activities are calming and should be imposed if a child is over-aroused (decreased attention, moving around the room with little or no purpose, unable to follow simple and familiar directions, self abusive behaviors, and self stimulating behaviors). Proprioceptive input can also be excitatory such as fast bouncing on a ball or trampoline. We want to avoid these fast, “jerky” motions that will tend to gear up the nervous system when we are trying to calm it. It’s important to pay attention to your child’s specific reaction. What works for one child, might not work for yours! Keep track of which activities seem to work best, as well as which activities they seem to prefer. You will generally notice an increase in eye contact as the child calms and becomes more focused. Whatever you choose to do, making it fun makes all the difference! Take a deep breath, smile, and be calm and patient. Your attitude is often contagious and truly makes a difference in their ability to calm.

### Some points

- Choose a calming activity and use it before and after a stressful event. Letting your child help choose this activity can ease the stress even more.

- Get to know your child's signs of stress. These might include a change in the amount of talk or eye contact, withdrawal, self-hurting or risk-taking, sweating, or self-stimulation.
- Finish all self-care and hygiene routines at least one hour before bedtime, leaving time for your child to calm down.
- Give a warm bath, but be mindful of soap scents, which may be alerting. Try putting a towel in the dryer during the bath, then use it while still warm. Use firm pressure when drying with the towel.
- If your child is playing very actively, join in and play along, gradually slowing it down. For example, if play wrestling, let your child set the pace for a while, then gradually use firmer, steadier touch to calm things down.
- Play with resistive media such as Play-doh®, clay, sand, dry rice, or beans.

Heavy work activities are used to increase attention, decrease sensory defensiveness and modulate arousal.

These activities provide proprioceptive input to help organize the sensory system. It also helps children to become more aware of their bodies and where they are in space. "Children who demonstrate high arousal can be treated with the use of heavy work activities, such as movement against weight and resistance. The therapist can use deep touch pressure, with activities such as hugging, massage, or squeezing between objects, which may be calming for some children. Decreasing light touch can also decrease arousal.

Reducing other sensory stimuli such as visual clutter, bright lights, and simultaneous auditory stimuli also tend to have a modulating effect on the processing of light touch" (Schaaf et al. 2010)

## **SENSORY CALMING TECHNIQUES**

The following activities can be used to calm/relax your child. Appropriate times to use these activities may be prior to transitions, stressful experiences, bedtime, or when your child is overly excited. In general, the desired response is relaxation, but not extreme drowsiness.

### **Visual**

- Lighting: low or dim; avoid bright or flashing lights.
- Reading to child is often calming.
- Use a room with few visual distractions: walls and objects in neutral (e.g., beige) or cool colors (light blue, lavender or green) are more calming than those in warm, vibrant colors.
- Some children need to be allowed to wear sunglasses.

### **Auditory**

- People interacting with child should utilize calm voices with low, even tones.
- Use of music: generally quiet or melodic (e.g., environmental sounds, classical, new age) is calming. However, you may want to observe the child for their preferred taste in music.
- White noise from radio static, vacuum cleaner, hairdryer, etc. may calm some children.
- Minimize auditory distractions
- Consider use of headphones

### **Touch**

- In general, firm pressure is more calming than light pressure touch (e.g., deep pressure massage, or slowly rolling a therapy ball on the child's back who is lying on his stomach on the floor).
- Avoid unexpected touch; communicate to the child before touching; if possible avoid touching the child from behind.

### **Touch/Pressure**

- Joint compression can be settling. Sustained, light joint compression can be achieved by placing your hand on the child's shoulders and adding a small amount of pressure. For some children, it may

be necessary to increase the amount of pressure. It is essential that the joints are in correct alignment for this type of input, i.e., sitting up straight with the head in neutral. (Consult with an OT prior to attempting)

### **Temperature**

- Neutral warmth can be achieved by rolling up in a blanket or sitting/lying in a sleeping bag or blanket sleeper (e.g., when watching TV). This can sometimes be achieved by sitting in a beanbag chair or on a waterbed.
- Taking a warm bath may be helpful

### **Movement**

- In general, movement which is slow, rhythmical and repetitive is relaxing; slow rocking in a rocking chair, gentle swinging in a hammock or on a glider swing, sitting/lying on a water bed, lying prone over a large therapy ball while being rocked side to side or forward and back.

### **References**

Miller, L. J. (2006). *Sensational kids*. New York, New York: Penguin` Group.

Schaaf, R. C., Schoen, S. A., Roley, S. S., Lane, S. J., Koomar, J., & May-Benson, T. A. (2010). A frame of reference for sensory integration. In P. Kramer & J. Hinojosa (Eds.), *Frames of reference for pediatric occupational therapy 3<sup>rd</sup> edition* (pp. 99-186). Baltimore, Maryland: Lippincott Williams & Wilkins.

### **Websites**

<http://www.sensory-processing-disorder.com/>

<http://www.spdbloggernetwork.com/2012/09/12/proprioception-and-calming-techniques/>

<http://www.spdfoundation.net/about-sensory-processing-disorder.html>

### **Books on sensory processing disorder**

[http://www.amazon.com/Out---Sync-Child-Carol-](http://www.amazon.com/Out---Sync-Child-Carol-Kranowitz/dp/0399531653/ref=sr_1_3?ie=UTF8&qid=1373574837&sr=8-3&keywords=sensory+processing+disorder)

[Kranowitz/dp/0399531653/ref=sr\\_1\\_3?ie=UTF8&qid=1373574837&sr=8-3&keywords=sensory+processing+disorder](http://www.amazon.com/Out---Sync-Child-Carol-Kranowitz/dp/0399531653/ref=sr_1_3?ie=UTF8&qid=1373574837&sr=8-3&keywords=sensory+processing+disorder)

[http://www.amazon.com/Raising-Sensory-Smart-Child-](http://www.amazon.com/Raising-Sensory-Smart-Child-SensoryProcessing/dp/0143115340/ref=sr_1_5?ie=UTF8&qid=1373574867&sr=8-5&keywords=sensory+processing+disorder)

[SensoryProcessing/dp/0143115340/ref=sr\\_1\\_5?ie=UTF8&qid=1373574867&sr=8-5&keywords=sensory+processing+disorder](http://www.amazon.com/Raising-Sensory-Smart-Child-SensoryProcessing/dp/0143115340/ref=sr_1_5?ie=UTF8&qid=1373574867&sr=8-5&keywords=sensory+processing+disorder)

[http://www.amazon.com/Sensational-Kids-Children-Processing-](http://www.amazon.com/Sensational-Kids-Children-Processing-Disorder/dp/0399533079/ref=sr_1_7?ie=UTF8&qid=1373574898&sr=8-7&keywords=sensory+processing+disorder)

[Disorder/dp/0399533079/ref=sr\\_1\\_7?ie=UTF8&qid=1373574898&sr=8-7&keywords=sensory+processing+disorder](http://www.amazon.com/Sensational-Kids-Children-Processing-Disorder/dp/0399533079/ref=sr_1_7?ie=UTF8&qid=1373574898&sr=8-7&keywords=sensory+processing+disorder) (my favorite!)