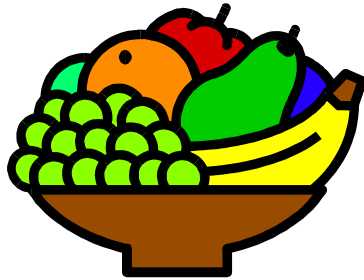


Oral support is often needed to enhance endurance and quality of performance during the development of eye hand skills. This type of support should be available especially in the preschool and elementary stages. Items can include both food/drink, and non-food items and can readily be supplied by the children's families.



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## Sensori-Motor Organizers

### Deep Proprioceptive Input And Oral Motor Stimulation

#### *Theoretical framework:*

When we create activities that incorporate enhanced sensory input, we consider the characteristics of the type of sensory input as well as one's responses to it. When we are addressing sensory modulation, we typically use deep pressure because it is typically calming. We want to avoid light or unexpected touch because it is often interpreted as alerting, noxious, or painful. When we introduce oral motor stimulation, again we want to consider the type of stimulation, and we want to recognize the pre-eminence the central nervous system places upon stimulation in and around the mouth. Typically, sustained stimulation in the oral cavity tends to result in sustained organizing impact upon the state of the nervous system. The qualities to be enhanced will often include intensity, frequency, duration, and rhythm of specific types of sensory input.

#### Deep Pressure:

Deep pressure and proprioception continue to be important therapeutic tools in intervention. This type of sensory input can be provided through a number of media, including:

- Textured coverings
- textured mitts for brushing or scrubbing large areas of skin
- Large containers of plastic bubble balls in which one submerges and moves around
- Boxes filled with dried beans, rice, or lentils
- Large pillows, bean bag chairs, and mats for burrowing
- The Wilbarger Protocol
- Wearing weighted wearables
- Heavy objects for pushing or pulling
- Resistive substances for sucking through a straw  
(sour substances seem particularly organizing)

## Guidelines for Enhancing Deep Proprioceptive Input

- Proprioception is generally the most organizing type of sensation, individuals are rarely sensitive to it. When an individual is sensitive to tactile stimulation, combining deep pressure with proprioception may be successful
- Whenever possible, it is usually best when the individual can provide the deep proprioceptive input to themselves
- Usually, it is not necessary to provide enhanced sensation to the entire body. Applying input to zones of the body (i.e. arms and legs, ankles, waist, shoulders, head/neck) is generally considered sufficient as this type of sustained input typically has a central inhibitory effect.
- Individuals often find that quiet enclosed spaces (i.e. indoor tents, a large empty box, a pillow lined corner) are the best places to receive deep proprioceptive input

### Notes on application of deep proprioceptive input

School based therapists increasingly are using weighted vests as an intervention strategy for children with conditions that affect sensory modulation and attention span, such as autism and ADHD. Weighted vests are used as a means of applying deep pressure, which tends to decrease purposeless hyperactivity and increases functional attention to tasks. How heavy should the vest be? Weighted vests should be 10% of the total body weight for efficacy. How long should they be worn? At least 20 minutes and up to 2 hours is the typically recommended duration needed for effective sensory motor response.

Temple Grandin related her experience of severe anxiety and how deep pressure ultimately helped her reduce the anxiety's debilitating effects by reducing overall arousal and by facilitating attention and awareness. In studies done with children with autism, deep pressure has been found to have a calming effect.



## Oral Motor Stimulation

### *Theoretical framework:*

The coordination of sucking, swallowing, and breathing is theorized to form a foundation for regulating arousal and developing of postural, ocular motor, and praxis skills. Although coordinated sucking, swallowing, and breathing are the first skills of a newborn, many individuals with sensory integration dysfunction have difficulty with these skills.

When oral motor stimulation is used to improve arousal and the overall state of the nervous system, intervention is guided and graded. Activities include:

- Resistive sucking
  - ◇ Sucking food from a spoon
  - ◇ Sucking tart ice pops
  - ◇ Sucking sour push pops
  - ◇ Sucking thick fluids through a large straw (e.g. slurpee)
- Resistive blowing
  - ◇ Blowing through a straw into a bubble solution
  - ◇ Graded whistles
  - ◇ Musical blow toys (e.g. harmonica, kazoo)
- Biting, crunching, and chewing
  - ◇ Tugging on dried fruit, or licorice whips
  - ◇ Crunching on crisp, fresh vegetables
  - ◇ Chewing on sticky textured foods such as peanut butter, taffy
- Finally, licking is introduced

Many common strategies used to help regulate state of arousal involve the mouth. This is very obvious in the infant who uses sucking at the breast, pacifier or bottle as a way to change his state to fall asleep, or a toddler who sucks his thumb when stressed or concentrating. Adults also use the mouth to change state. They may chew gum, bite their nails, chew on pens, smoke, etc.