

Sensory Processing/Integration:

Sensory processing involves the brain's ability to organize and make sense of sensation (touch, movement, smell, vision, hearing, pain, gravity, temperature, and proprioception) entering the brain at the same time. The brain receives the information, filters it, and allows the body to respond with a behavior. Difficulties with sensory processing will affect behaviors. Hence, children with poor behavioral responses may be an indicator of problems with their sensory processing.

SENSORY DIETS

A sensory diet is an individualized menu of activities to help one reach and/or maintain an optimal level of attention and alertness. Having a sensory diet can help with sensory processing/integration difficulties. It is used throughout the day as needed or scheduled. As adults, we each have our own strategies that can be called our sensory diets. Chewing gum, tapping your fingers on the table during a meeting, swinging your foot, biting the inside of your cheek, drinking coffee, or twirling your hair are a few examples. We use different strategies depending if we are stressed and need to calm down or if we feel lazy and need to get going. Children with attention difficulties, high or low activity levels, poor awareness of their body in space, sensory defensiveness, distractibility, or maladaptive behaviors can benefit from an individualized sensory diet. Sensory diets can incorporate some of the following types of input and activities.

PROPRIOCEPTION

Proprioception is the sensation from our joints and muscles. This sensory information is sent to the brain and it is interpreted for feedback as to where each part of the body is in space and how it is moving. Proprioception helps us use the right amount of force when hugging, it tells you what pressure to use on your pencil and it helps us move around without bumping into walls or tripping.

Proprioceptive input is also very grounding. It tends to be calming and organizing for most people. Heavy work is a kind of proprioceptive input to the muscles and joints. Heavy work includes anything that makes the muscles work against resistance.

MOVEMENT

The vestibular system (with receptors in the middle ear) tells us if we are moving, in what direction, and how fast we are moving. This system in combination with our proprioceptors gives us the most information about our position in space and how we move within our environment. These are very important senses to master for higher level academics, modulation, self-regulation, and organization. The vestibular system also plays a role in our body's muscle tone. It coordinates the two sides of the body and it holds the head upright against gravity. Many with children with vestibular processing difficulties have no idea if their body is moving fast or slow. They do not understand what going slow means. Others have poor muscle tone and need to prop their head up constantly. Our vestibular system also helps to develop perceptual skills, and ocular motor skills. Incorporating movement in the right combination can be very beneficial as part of a sensory diet.

BREATH

Breathing (respiration) is an important part of alertness. When stressed or anxious, the breath is short, quick, and shallow. When relaxed it is longer and deeper. We can use our breath in various ways to change our level of activity and focus. Having an awareness and control over our breathing rate will help with overall brain function, and help reorganize a nervous system which may be disorganized

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MOUTH

The mouth ties in with respiration/blowing/sucking. Activating the mouth can have an affect on the rest of your body. It is also a great place to get proprioceptive input. Having something in the mouth is another good way to help a child focus on an activity (Think of what you do with your mouth. Do you bite your lips? Do you need to eat when reading?) Providing students with a snack during work time may help with extending focus and concentration (i.e. chewing gum when working). Sour foods such as lemon slices or War Heads may be what the active student's sensory system needs. Spicy cinnamon or hot tastes may be better. "Brain food", not food for sustenance, is a way to use the mouth and help with self-regulation/organization of behavior. Brain food is not to be used as rewards but rather as a way to attain a work goal.. Raw vegetables or fruits- celery, carrots, apples- provide a good crunch, which can be very alerting and organizing as the mouth is receiving significant proprioceptive input. Varying the temperature of the food also makes a difference. Frozen grapes or ice chips may be what the child with a low arousal needs to get going.

TOUCH

Touch is very important to human development. Studies have shown that animals that are deprived of touch do not survive very long. Touch can be an important part of a sensory diet. It can be very calming for some sensory systems or very noxious and disorganizing for others- I (i.e. light touch should be avoided for any tactile defensive individual; pressure touch should be used instead). By gaining an understanding of individuals sensory needs and limits we can help set up the sensory/nervous system for improved engagement, alertness, and exploration. As a general rule deep pressure touch is very calming and organizing.

Some children exhibit tactile defensiveness. They dislike unexpected touch they may get from other children in line, sitting close together in the cafeteria, or playing on the playground. Some of the behaviors that can be observed from tactile defensiveness are: hitting peers for no apparent reason, avoiding group games, avoiding messy play, picky eater, isolated socially, long sleeves, long pants, long hair, irritable, and/or anxious. Tactile defensiveness can be a serious problem and should be addressed by an Occupational Therapist.

HEARING

Sounds have a large effect on our system. Some people cannot have conversations when other people are speaking nearby. Some children are defensive to noise. . A cafeteria or auditorium may be a place where many children get in trouble. The noise level may be over stimulating and their sensory system cannot integrate an appropriate adaptive response. Music affects people differently. It can be used as part of a sensory diet. Soft slow music can be calming. Consider using headphones to dampen some noise. Anticipating loud environments and providing the child with a quiet space may prevent bad behavior.

VISION

We use our eyes all the time and often take them for granted; we forget how visual stimulation may affect someone with sensory processing difficulties. Lights and visual stimulation may be distractible for many. Fluorescent lights may be too bright; try natural lighting or use lamps in the classroom to dampen the brightness. Consider using a sheet or office screens to make a low visual stim area in the class.