

SENSORY *Processing*

Sensory Processing is the way the brain receives, organises and responds to sensory input in order to behave in a meaningful and consistent manner.

When children are efficient in their sensory processing skills, appropriate responses to the environment and stimuli occurs. This is seen through skill mastery, behaviour, attention, and self regulation (controlling their physical activity, emotional and cognitive responses). Children are able to sit and attend to the important pieces of information in a classroom and therefore have a good chance at achieving their academic potential.



Visual

The ability to interpret and understand what is seen.



Olfactory

The ability to interpret smells.



Touch/Tactile

The ability to interpret information coming into the body through the skin.



Auditory

The ability to interpret information that is heard, including volume, pitch and rhythm.

The 8 Senses of The Body



Vestibular

The ability to interpret information relating to movement and balance, using the semi-circular canals in the inner ear.



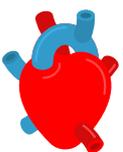
Gustatory

The ability to interpret information regarding taste in the mouth.



Proprioception

The ability to interpret where body parts are in relation to each other.



Interoception

The ability to interpret body signals from within the body, and relate them to an emotion. e.g. hunger, anxiety.



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The brain's job is to **sort through information** from the senses, **decide what's important**, and then to choose how to best **understand and respond** to that information.

Sometimes our brain misinterprets this information.

Let's use the analogy of a cup:



Some children are a **BIG** cup. It takes a lot of sensory information to fill up their cup, and sensory information feels like just a little in their bodies. This can make them seem like they aren't paying attention. Sometimes these children **seek** more information from their environments.

Some children are a **SMALL** cup. It takes only a small amount of sensory information to fill up their cup, and sensory information feels like a lot in their bodies. This can make them feel overwhelmed and over-stimulated. Sometimes these children **avoid** information from their environments.



Children who struggle with Sensory Processing often also have difficulties with:

- **Attention and concentration:** Sustained effort, doing activities without distraction and being able to hold that effort long enough to get the task done.
- **Behaviour:** The actions of the child, usually in response to their environment.
- **Body awareness:** Knowing body parts and understanding of the body's movement in space in relation to other limbs and objects.
- **Coordination:** the ability to integrate multiple movements into efficient movement.
- **Play skills:** Voluntary engagement in self motivated activities that are usually associated with pleasure and enjoyment
- **Self-regulation:** The ability to obtain, maintain and change one's emotion, behaviour, attention and activity level appropriate for a task or situation in a socially acceptable manner.
- **Feeding:** Managing mealtimes and coping with all the sensory information that comes into the body while eating.
- **Toileting:** toilet training is often difficult for children when they can't process or feel information from their bodies about the need to go to the toilet, or that they've had an accident.



Strategies that can help a child with their sensory processing:

Deep pressure input has been found to have a calming effect on all bodies, regardless of how the individual person processes sensory information. Deep pressure can 'wake up' a person who is low, or 'calm down' a person who is running too high.

Activities that help the body to receive more deep pressure include;

Play:

- Animal walks, such as bear walks, crab walks
- Carrying heavy bags, sitting with weighted lap bags
- Play doh and theraputty - pinching, rolling, squeezing
- Crash games, wrestling and rough play
- Rolling up tightly in a blanket
- Tug of war
- Trampolining
- Monkey bars and climbing activities
- Wheelbarrow races and other activities that require weightbearing through the shoulders.



Mealtimes:

- Eating crunchy or chewy foods (such as fruit leathers, muesli bars, dried meat)
- Suck thick liquid through a straw (such as a smoothie)
- Chew on ice

Therapy tools:

- Therapressure brushing
- Chewy tubes, necklaces and toys



Programs available from All Star Occupational Therapy:

- **Sensory Diet prescription**
- **The Wilbarger Therapressure Protocol** (a therapy program designed to reduce sensory or tactile defensiveness and assist with sensory regulation)
- **The Zones of Regulation & The Alert Program** which both promote effective self-regulation through sensory and cognitive strategies
- **Interoception Curriculum:** teaches a child to recognise their body signals for all emotions (affective and homeostatic), and then promotes effective self-regulation