



Sensory Integration

Sensory Integration is the process by which the receptors pick up a stimulus in the environment or the body, sends the signal to the brain, the brain collects and interprets the information and sends information back as to how to respond or to ignore.

The Eight Senses

Visual	The process in which signals are sent from the eye to the brain to interpret what we see.
Olfactory	Smell. Closely linked to memory and emotion.
Proprioception	The feedback from muscles and joints. Tells us where our body is at any point and contributes to body awareness and movement.
Vestibular	Sensors in the inner ear. Registers head movements and relates to balance.
Tactile	The sense of touch including light touch, pressure, temperature and pain.
Auditory	The process by which sounds are registered and interpreted by the brain.
Oral/Gustatory	Taste and digestion.
Interoception	The inner body sense relating to how we feel inside including hunger, thirst, toilet needs etc...

Reactivity – When the senses receive too much information or too little...



	Hyper reactivity (Too much information)	Hypo reactivity (Too little information)
Proprioception		Decreased awareness of where body is in space. Sensory seeking to gain extra feedback. Climbing, crashing and using too much force. Can be clumsy. Can be floppy.
Vestibular	Too much input. Can complain of dizziness or feeling sick. Avoids activities involving feet off the floor. Avoids playground equipment. Sedate and quiet.	Seeking behaviours. Craves spinning and jumping. Never seems to get dizzy.
Tactile	Avoids particular substances to touch. Dislikes messy play. Reacts to light touch on the skin. Can carry things to protect their hands. Can be ok if within their control. Weather can impact e.g. wind/rain.	Touches everything. Very tactile in interactions. Loves messy play.
Oral	Picky eater. Only likes certain textures, flavours or themes. Has 'safe foods'.	Craves strong flavours. Wants to snack often. Decreased awareness can cause messy eating.
Visual	Squints, avoids looking directly at certain things, difficultly maintaining visual focus. Complains of headaches.	Seeks flashing, spinning and rapid movement in toys and objects. (Can very easily switch to overstimulated)
Olfactory	Reacts in certain environments. Gags, can be sick. Complains about smells that others can't notice. Reacts to people due to perfumes etc... Sniffs objects/food to check they are 'safe'.	Doesn't appear to notice strong smells. Seeks strong smells (especially in food). Sniffs people and things.



Auditory	Reacts to certain noises or pitches. Can hear things others can't. Puts fingers in ears or covers ears. Hums to cover external noises.	Finds it difficult to filter sounds such as hearing their name amongst other noise. May make noises to seek.
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- Children can experience hyper reactivity in one sensory system and hypo reactivity in another.
 - Children can experience fluctuating reactivity within the same system
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- ▶ Children sensory seek by engaging in actions, behaviours or activities that give them increased feedback to that system that they are lacking feedback within.
 - ▶ Children sensory avoid by avoiding, refusing or reacting to activities that give them too much sensory information.

Heavy Work Activities

These are activities designed to target the proprioceptive system (muscles and joints) to create input that is fundamentally calming and helps children self-regulate. These activities can be used at any point throughout the day as a daily routine and are particularly helpful before trigger events. When designing activities think about carry, push, pull and resistance.

- Hand massage
- Wiping down the table after dinner
- Standing and pushing hands (palm down) into table
- Pushing up off chair
- Putty to squeeze/push/Playdough activities
- Sweeping
- Wall pushes (pushing into walls with hands)
- Using oral motor – blowing pom poms with straws, blowing bubbles, drinking from a sports bottle, having a chewy snack
- Tug of war games
- Activities with a theraband e.g stand on it and pull it up with both hands



- Theraband on chair
- Weighted lap pads/shoulder pads
- Weighted wristbands
- Squeezy ball to squash
- Yoga ball seating
- Activities using a therapy ball – rolling forwards, lying down and having it rolled over them
- Sensory sock
- Wrapping up in a yoga mat like a sausage
- Chewy toys

Gross motor:

- Crawling
- Animal walks
- Climbing frames

Useful websites:

[Sensory Supports Archives - GriffinOT](#)

[Self-Regulation Alert Program® Online | AOTA Approved Provider](#)

[Sensory Strategies in Schools - The OT Toolbox](#)

[Sensory Ladders for Self-Regulation – Sensory Project](#)

[Sensory Diet - Kid Sense Child Development](#)

[What is SI? \(sensoryintegration.org.uk\)](#)

[Dyspraxia Foundation - 30th Anniversary - What is Dyspraxia?](#)