

SENSORY PROCESSING

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**Understanding the terms, what it may look like, and
how to help your child succeed**

THE OBJECTIVES

- Understanding the term sensory processing
- Identifying your own sensory processing -Able to use, assist and identify sensory obstacles and challenges in your environment
- Applying sensory strategies or how to support sensory processing through your daily routine.

SENSORY PROCESSING:

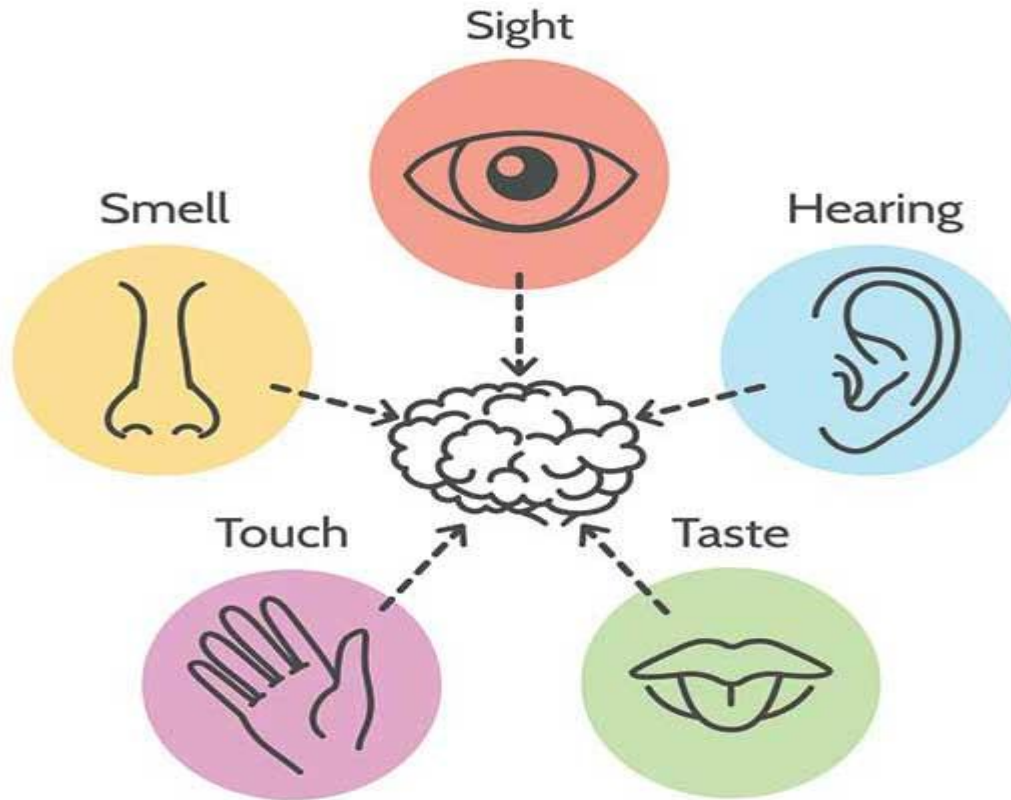
-Refers to the way a person's nervous system receives sensory messages and turns them into responses. These senses include sight, sound, touch, taste, body position and movement.

-Most people receive and organize these messages effortlessly into adaptive physiological and behavioral responses.

-Many also have difficulties in a variety of the senses, others in specific senses, and others solely in one of the senses.

HOW MANY SENSES DO WE HAVE?

THE SENSES



- Olfactory (Smell)
- Gustatory (Taste)
- Auditory (Sound)
- Visual
- Tactile
- Proprioceptive (Body Position)
- Vestibular (Movement)
- Interoceptive (Internal)

WHAT OUR SENSES DO FOR US EVERYDAY?!

All experiences, knowledge and understanding of the world are gained from information gathered through our **SENSES**.

We know walls are solid because, as children, we bumped into them. We can recognize sweet, salty, bitter food because of the sense of taste and smell. We know we might be in danger if we hear a loud, unexpected sound and we are able to cross a road because our senses allow us to see and hear traffic and anticipate how far away moving vehicles are.

Our brains continuously take in sensory information to make sense of what is going on around us. When our sensory processing is working as it should, it is a highly complex system that allows us to function.

Let's have a look at some our senses...

IS THERE A SENSORY TYPE?
OR TYPES?

WHAT IS UNDER THE TYPE OF SENSITIVE LOOK LIKE?

Hyposensitive

- Commonly are under stimulated, require usually increased movement, increased need to taste objects, and smell objects to list a few examples
- Commonly are under sensitive meaning they show little response or no response to being hurt after a fall or hitting head as an example.
- Sensory seeker, is constantly on the go

Hypersensitive

- Commonly demonstrate over stimulated: covering ears as an example
- Commonly over sensitive avoidant to textures, dislikes playgrounds, or long car rides
- Sensory avoider usually known to work hard to stay away from new things or things which they do not feel comfortable with

CAN THERE ONLY BE ONE TYPE?

- The responses can vary and be different to each sense
- Hypersensitive in one sensory system while being hyposensitive in another.
- The fun part about the sensory system is this can change daily
- The thresholds also are of various sizes and needs

TASTE AND SMELL: AKA GUSTATORY SYSTEM

- These systems have the job of tasting and smelling.
- They are two of the senses responsible for telling us about what is safe or harmful.
- Our Taste buds include: Bitter, Sour, Sweet, Salty, and Savoury. Information from the receptors in our nose travel to our brain.
- Odors can affect our thoughts, emotions and behavior.



taste

WHAT YOU MIGHT OBSERVE: TASTE

Hyposensitive

- Constantly put items in their mouth
- chew clothing/hair/fingernails
- Larger amounts of food during eating
- Eats foods with extreme tastes, may overload food with ketchup
- Will lick, taste or often smell everything not limited to foods but many times non-food items

Hypersensitive

- Dislike their teeth being brushed
- Picky eaters
- Foods can not touch on their plate or be mixed
- Fearful of foods
- Easily gags, even with the thought of certain foods
- Difficulty with the temperature of their foods

TASTE/SMELL GUSTATORY: HELPING THIS SENSE

- Exploring with tastes
- Exploring with textures
- Chewing gum-(age & preferences)
- Tasting an orange or a lemon, starting with a taste no biting into
- Crunch on a cold pickle
- Crunch on a pretzel
- Use flavored lip balms
- Scratch and Sniff Stickers
- Using a straw to consume apple sauce
- Drinking thicker smoothies through a straw
- Drinking a milkshake through a narrow straw, may want to start with wider for children with lower tone in the mouth
- Make funny shaped sandwiches using cookie cutters
- Using cookie cutters to make cheese slice figures

WHAT YOU MIGHT OBSERVE: OLFACTORY/SMELL

Hyposensitive

- Frequently observed to smell and sniff items
- Are drawn to strong smells or odors which could be dangerous such as cleaning supplies
- Frequently craves or seeks certain types of smells

Hypersensitive

- Difficulty during mealtime but can be affected by taste and vision as well
- Frequently shows signs of being sick or reports they do not feel well when certain smells are present, most notable when gagging.

OLFACTORY/SMELL: HELPING THIS SENSE

-Use scented markers and crayons

-Use herbs and spices in crafts

-Use of essential oils:

 Calming: Lavender and Vanilla
(can be calming)

 Alerting: Citrus (lemon/orange
and/or citrus may be alerting)

-Scratch and Sniff Stickers

-Scented bubbles

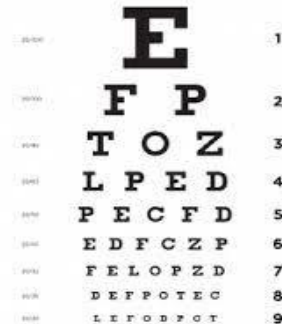
-Scented doughs

-Scented lotions or non scented
lotions based on child's reactions

-Blindfold smelling game

VISUAL

- This sensory system identifies sight!
- It allows us to understand what our eyes see which prepares for a response.
- The visual system is an essential skill for learning.
- Helps us distinguish color, shade, facial recognition, movement, light, patterns and contrast.



WHAT YOU MIGHT OBSERVE: VISUAL

Hyposensitive

- Staring at toys and objects with increase intensity
- Stares or seeks out spinning objects to stare at for prolonged periods of time
- Will frequently spin their own bodies to gain visual feedback from the environment

Hypersensitive

- Seeks dimmer areas of the house withdrawing from light sources or brighter areas
- Difficulty with eye contact
- Will frequently miss a visual cues or visual prompts
- Frequently bump into people and objects, which are always in the same place or new objects in the environment. Spatial awareness, difficulties
- Might look away from the adult who is speaking to better understand directions

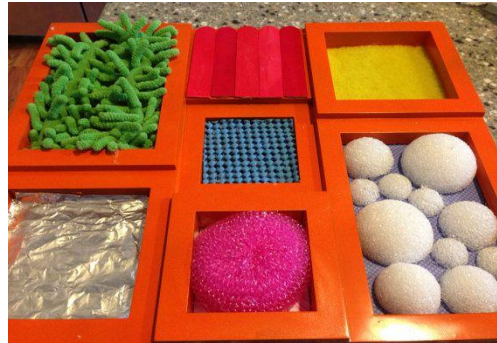
VISION: HELPING THIS SENSE

- Using colored light bulbs
- High Quality Sunglasses for outdoors
- Tinted lenses for indoors if sensitive to glare
- Using wide brim hats or visors
- Limiting amount and number to toys, too many toys may cause for visual overload
- Reconsider choices of patterns or prints on wall, clothing, toys and even food presentation of a plate
- Avoiding fluorescent lighting (sunglasses handy)
- Dimming lights
- Fish tanks, finger lights, liquid timers, lava lamps, bubble lamps, light projector
- Play “I Spy” or “Flashlight tag”
- Engage in activities at home with mazes and dot to dot

TOUCH/TACTILE

- The Sense that allows us to feel the world around us.
- Receives sensations such as pressure, vibration, movement, pain and temperature.
- These sensations are provided to us by what we touch.
- This system alerts us to danger, gives our body boundaries and works together with our other senses to develop awareness of our self.
 - Light touch- someone walking past us versus Family bear hug
- We have two types of touch receptors:

- Protective
- Discriminative



WHAT YOU MIGHT OBSERVE WITH: TOUCH/TACTILE

Hyposensitive

- Limited awareness of someone next to them
- Unaware of bumping into someone being bumped into unless with extreme force
- Lacks awareness of a dirty face after eating
- Lacks awareness of a runny or dripping nose
- Touches all items which appear to have a texture

Hypersensitive

- Dislikes or pull away from hand holding
- Like to have their own couch or end of couch
- Avoid messy play
- Become easily upset at any mess to include water spill on clothing
- Does not like to be hugged
- May take light touch as painful

TOUCH/TACTILE: HELPING THIS SENSE

- Finger Paint
- Sand Play
- Cornstarch and water mixture
- Play dough or clay activities
- Pop Bubbles with fingers
- Baking with an adult (rolling dough kneading dough with hand, helping mix ingredients)
- Cook with an adult, collect and pass ingredients to encourage touching foods
- Touch and feel books
- Kinetic sand
- Make a "Sandwich"= Roll child up in a blanket keeping face and head
- Draw or print on a sand tray
- Walk barefoot in sand, grass or leaves
- Swaddle/Bear Hugs
- Use comforter only not top sheet for sleeping, might need two comforter. Quilts may be preferred due to weight.
- Compression garments, biker shorts under clothing
- Pop bubbles with finger
- Pop bubbles with a pencil/q-tip
- Using gloves for messy play

AUDITORY

- Is the system responsible for receiving sounds and processing the sounds received.
- This is the sense of hearing and understanding what is heard.



WHAT YOU MIGHT OBSERVE: AUDITORY

Hyposensitive

- Always making loud sounds or speaking loud in a quiet environment
- Likes to make noise and sound affects during play
- Prefers to listen to music in excessive volumes
- Has difficulty with differentiating sounds
- Is unaware when someone walks in the room when opening/closing a door sound is present

Hypersensitive

- Covers ears to sounds like fire bells, fire trucks, ambulances even when within the home and sounds are indirect
- Difficulty with low sounding volumes
- Frequently will say a sound is loud when at times our perception is within average range.
- Unable to attend to person when others are speaking and/or sounds are within the direct and indirect environment

AUDITORY: HELPING THIS SENSE

- Singing
- Listening to music
- Quiet Retreat (quiet area)
- Noise Cancelling
Headphones
- Bang a drum
- Rain sticks
- White noise machines
- Aquarium
- Sound Puzzles
- Listen and Name: When you identify things by sound only
- Playing a kazoo
- Blow Whistles
- Play Sound bingo
- Humming
- Chewing gum or objects may support auditory as well

PROPRIOCEPTION



-Sense of body awareness and positioning.

-Enables us to place our body parts in positions and space at an unconscious level.

-Riding a bicycle: While looking ahead our body is still aware of when to move the steering wheel while our legs pedal a bike (fast, slow, or reverse for stopping)

- Driving a car is based on proprioception, while watching the road, knowing exactly what our arms and legs are doing.

WHAT YOU MIGHT OBSERVE: PROPRIOCEPTION

- Pulling on clothing or objects, possibly biting or chewing clothing
- Break crayons when coloring or even toys, lacking the awareness of their own strength
- Difficulty with fine motor skills, presents as a heavy handed, using excessive force to manipulate small objects
- Likes more fitted clothing or seeks squeezes/hugs
- Will look to engage in rough play based activities or tumble like play
- May rock back and forth, or unable to sit in a static position, presenting as always fidgeting
- In more extreme cases may show self-injurious behaviors, looking for input.

PROPRIOCEPTION: HELPING WITH THIS SENSE

- Regular Movement Breaks
- Using fidget toys
- Malleable material to manipulate playdough, putty
- Alternative Seating- therapy ball, wobble cushion
- Crunchy foods/snacks, possible crunching on ice if appropriate
- Shoulder presses
- Weighted lap blanket
- Carrying a grocery bags
- Helping but away heavier grocery items
- Make a “Burrito” or PBJ Sandwich
- Wearing a bookbag with objects to provide some weight
- Help with home chairs (vacuum)
- Resistance bands for exercises
- Wall push-ups or chair push ups
- Foot fidgets (resistance bands across legs of chair)
- Foot pedals
- Wheelbarrow walks
- Play tug a war
- Build an obstacle course
- Throw and catch a medicine ball

VESTIBULAR



- This sense is responsible for detecting movement.
- It helps detect movement but also the interactions of gravity
- This sense is a unique one because it is located in our inner ear.
- The vestibular sense gives us coordination and balance
- Why do you feel funny when you are sitting in a parked car and the car beside you moves? - Your vision is telling you that you are moving, but your vestibular sense is saying, no your stationary.

WHAT YOU MAY OBSERVE: VESTIBULAR

Hyposensitive

- Thrills seekers, jumping from high places and climbing high. Presents as having no sense of danger
- Loves to spin, but never appears like they are dizzy. When swinging they may go very high and/or fast at every opportunity
- Loves hanging upside down on equipment, couch or bed
- Will rock or appears in constant movement with head in changing position

Hypersensitive

- Avoids movement and may be fearful of heights
- Difficulties with elevators or escalator, frequently may even hold hand very tightly in commercial building stairs or show hesitation
- Prefer laying down to sitting up right or will lay head on arm when sitting
- Encounter increased difficulty with activities which are demanding on their balance

VESTIBULAR: HELPING WITH THIS SENSE

- Use a scooter board
- Swing on a hammock
- Swing on a tire swing
- Trampoline
- Slides
- Rocking chairs
- Movement breaks like gonoodle website with dances
- Animal walk breaks
- Spin (sit n spin)
- Rolling in both directions on the floor
- Rolling along a wall while standing
- Sit on a t-stool
- Play head, shoulders, knees, and toes
- Play simon says
- Yoga ball bounce or rocking
- Wobble seat
- Work on activities with tummy time in place
- Ride a rocking horse
- Wear a baseball cap or headphones

INTROCEPTION

- This is how we interpret signals from our internal organs.
- This is an example of sensations of hunger, thirst, needing to use the bathroom and not feeling well.
- Interoception is responsible for our daily needs as humans it is a direct signal to the body and brain

WHAT YOU MAY OBSERVE: INTEROCEPTION

- May appear to overeat and not have the sensation of feeling full
- May never have the feeling or sensation of being hungry
- May never appear to be thirsty or request liquids to consume
- May not show awareness to changes of body temperature or have a sense of temperature outside (not phased by short sleeves mid winter or wearing a sweatshirt in the summer)
- May not be aware of needing to use the restroom

INTROCEPTION: HELPING WITH THIS SENSE

- Yoga - focuses on listening to your body and providing good proprioceptive and vestibular input. It encourages you to look internally and focus on how the body and mind is feeling.
- Mindfulness - gives the person time to focus on their body and emotional state.
- Breathing exercises - like lazy 8. Breathing exercises are calming and also help us to pay attention to what is going on inside our bodies.
- Heavy work activities - involve large muscles of the body. Proprioception is good for body awareness and also for interoception.

IMPORTANT TAKE AWAY!

- This is a screenshot and not intended to meet the needs of any one specific
- All activities and supports should always have an adult present to facilitate and also provide learning experiences alongside the child
- In the world of sensory things may or may not work, there is no perfect solution at times
- No one should ever be forced to engage, try or participate if hesitant or resistant into activities. This is not beneficial.

RESOURCES

<https://occupationaltherapy.com.au/>

-Use search button and enter one of the senses

<https://sensationalbrain.com/>

<https://www.sensorysmartparent.com/sensory-smart-parent-resources>

- Credit to the oxford health with organization and information for provided slides
- Credit to the riverside school for the organization and information gathered for these slides.

THE THINGS THAT MAKE ME DIFFERENT ARE THE
THINGS THAT MAKE ME, ME!

-PIGLET

THE END... ANY QUESTIONS?