Sensory Processing Overview

The way the body analyzes and responds to the signals it receives from its environment. Thoughtful, guided exposure to playful sensory experiences ensures that children learn to process and appropriately respond to the sensory stimuli in their environments.

THE AUDITORY SYSTEM

Footsteps, the sound of the wind against your ears, a door creaking, a flushing toilet, even the sounds of someone giving you directions. All these examples have one thing in common: sound.

The auditory sense is how we receive and process the information from the sensory organs inside our ears. When we hear a sound, it travels to our brains to be analyzed so we can generate a response.

THE OLFACTORY SYSTEM

Your favorite piece of chocolate, pancakes on a Saturday morning, rotting fruit in the trash, and your grandma's perfume. All these examples have one thing in common: ***smell****.*

The olfactory system is how we pick up information about the odors around us and pass that information along a channel of nerves, where it eventually reaches the brain. Our olfactory systems can discriminate between thousands of different odors and help us recognize whether smells are dangerous, strong, faint, pleasurable, or foul.

ORAL SENSORY PROCESSING

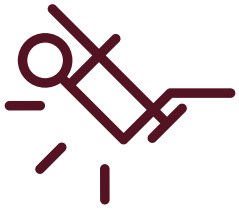
Biting, chewing, chomping, crunching, sucking, licking, and swallowing. All these activities have two things in common: ***taste*** *and* ***texture****.*

Oral sensory processing is the way our brains receive input from our mouth and jaw. When we eat or drink, our mouths send information to our brains regarding what we're eating or drinking. This information includes the temperature, texture and taste. Our brains also receive proprioceptive information from the joints of the jaw as we bite and chew.

THE PROPRIOCEPTIVE SYSTEM

Pushing, pulling, stomping, squeezing, jumping, bending. All these examples have one thing in common: ***body position****.*

Proprioception refers to the way our joints and muscles send messages to our brains to provide information about our bodies' positioning and movement. This sense also allows us to grade the force and direction of our movements.



THE VESTIBULAR SYSTEM

Spinning, turning, flipping, climbing. These sensations all have one thing in common: ***movement****.*

The vestibular sense has to do with balance and movement and is centered in the inner ear. When we move our heads, the fluid in the tiny organs of the inner ear moves and shifts, which constantly provides us with information about the position of our heads and bodies in space (*spatial awareness*).

THE TACTILE SYSTEM

Hugs, clothing, the grass or sand under your feet, the food you eat, the coffee you drink. All these examples have one thing in common: ***touch****.*

The tactile sense is how we interpret the information we get from the receptors in our skin. When we feel an object in our environment, our nervous system receives this information and helps us understand and differentiate pressure, temperature, texture, traction, and other tactile qualities of the object. It also lets us determine exactly what it is that we are feeling.

THE VISUAL SYSTEM

Determining the tint of our shirt to wear for the day, finding our socks in the sock drawer, tracking the teacher as she walks around the room. All these examples have one thing in common: ***sight****.*

The visual system is how we receive and process sensory information through our eyes. When we see an object, it is because of the perception of light. Light rays follow a path through the many different structures of our eyes, eventually relaying visual information to the visual cortex in our brains. Here, the brain identifies the object and gives it meaning. We are able to perceive details like color, three-dimensional depth perception, and the location of the object in space.

Sensory Processing Disorder (SPD)

Sometimes children experience difficulty with processing or tolerating one or more types of sensory input. Several possible medical reasons can cause this difficulty, but one of the most common is Sensory Processing Disorder (SPD). For children with SPD, their bodies do not organize and integrate sensory information properly, which makes it difficult for those children to generate appropriate responses to their environments. This can result in a wide range of confusing and sometimes negative behaviors.