

# SENSORY PROCESSING DISORDER

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# Sensory Processing Disorder

As PATH Intl. professionals and volunteers it is important to **understand why** our clients seem to have sensory difficulties. Then learn **how to help** them adapt in our sensory laden environment.

[Sensory processing disorder](#) is a condition in which the brain has trouble receiving and responding to information that comes in through the senses. Sensory Processing involves the brains ability to organize and understand an array of incoming sensory information entering the brain at the same time.

# Sensory Processing Disorder

Sensory processing is fundamental to the development of all motor and social skills.

This is a filtering system to determine pathways for incoming sensory information.

There are the familiar senses of **sight, taste, smell, and hearing**, but sensory processing involves 3 additional specialized sensory systems, which are very influential with regard to how effectively we recognize and organize incoming sensory information. These are:

- Tactile System: how our body perceives touch
- Proprioceptive System: how our body perceives where we are in space
- Vestibular System: how our body perceives directionality and sense of movement.

Some people with sensory processing disorder are oversensitive to things in their environment. This could manifest in:

- Being uncoordinated
- Bumping into things
- Being unable to tell where their limbs are in space
- Being hard to engage in conversation or play

# Sensory Processing Disorder

Sensory processing disorder may affect one sense, like hearing, touch, or taste. Or it may affect multiple senses. People can be over or under responsive to the things they have difficulties with.

Like many illnesses, the symptoms of sensory processing disorder exist on a spectrum. In some children, for example, the sound of a leaf blower outside the window may cause them to vomit or dive under the table. They may scream when touched. They may recoil from the textures of certain foods. But others seem unresponsive to anything around them. They may fail to respond to extreme heat or cold or even pain.

# Sensory Modulation Disorder

**Sensory Over-Responsivity** Individuals with sensory over-responsivity are more sensitive to sensory stimulation than most people. Their bodies feel sensation too easily or too intensely. They might feel as if they are being constantly bombarded with information. Consequently, these people often have a “fight or flight” response to sensation e.g. being touched unexpectedly or loud noise, a condition sometimes called “sensory defensiveness.” They may try to avoid or minimize sensations, e.g., withdraw from being touched, or cover their ears to avoid loud sounds.

**Sensory Under-Responsivity** Individuals who are under-responsive to sensory stimuli are often quiet and passive, disregarding or not responding to stimuli of the usual intensity available in their sensory environment. They may appear withdrawn, difficult to engage and or self absorbed because they do not detect the sensory input in their environment. Their under-responsivity to tactile and deep pressure input may lead to poor body awareness, clumsiness or movements that are not graded appropriately. These children may not perceive objects that are too hot or cold or they may not notice pain in response to bumps, falls, cuts, or scrapes.

**Sensory Craving** Individuals with this pattern actively seek or crave sensory stimulation and seem to have an almost insatiable desire for sensory input. They tend to be constantly moving, crashing, bumping, and/or jumping. They may “need” to touch everything and be overly affectionate, not understanding what is “their space” vs. “other’s space”. Sensory seekers are often thought to have Attention Deficit Hyperactivity Disorder (ADHD) and Attention Deficit Disorder (ADD).

# Sensory-Based Motor Disorder

## **Postural Disorder**

An individual with postural disorder has difficulty stabilizing his/her body during movement or at rest in order to meet the demands of the environment or of a motor task. When postural control is good, the person can reach, push, pull, etc. and has good resistance against force. Individuals with poor postural control often do not have the body control to maintain a good standing or sitting position.

## **Dyspraxia/Motor Planning Problems**

Individuals with Dyspraxia have trouble processing sensory information properly, resulting in problems planning and carrying out new motor actions. They may have difficulty in forming a goal or idea, planning a sequence of actions or performing new motor tasks. These individuals are clumsy, awkward, and accident-prone. They may break toys, have poor skill in ball activities or other sports, or have trouble with fine motor activities. They may prefer sedentary activities or try to hide their motor planning problem with verbalization or with fantasy play.

# Sensory-Based Motor Disorder

Sensory discrimination refers to the process whereby specific qualities of sensory stimuli are perceived and meaning attributed to them. Discriminate means understanding accurately what is seen, heard, felt, tasted, or smelled. Individuals with SDD difficulties have problems determining the characteristics of sensory stimuli. The result is a poor ability to interpret or give meaning to the specific qualities of stimuli, or difficulty detecting similarities and differences among stimuli. (Am I falling to the side or backwards?).

Individuals with poor sensory discrimination may appear awkward in both gross and fine motor abilities and/or inattentive to people and objects in their environment. They may take extra time to process the important aspects of sensory stimuli.

# Examples as relates to EAAT programs, specific to barn environment, new people and horses:

## **Hypersensitivity To Smells (Over-Responsive):**

- reacts negatively to, or dislikes smells, which do not usually bother, or get noticed, by other people
- tells other people (or talks about) how bad or funny they smell
- offended and/or nauseated by bathroom odors or personal hygiene smells
- bothered/irritated by smell of perfume or cologne
- decide whether he/she likes someone or some place by the way it smells

## **Hyposensitivity To Smells (Under-Responsive):**

- may drink or eat things that are poisonous because they do not notice the noxious smell
- unable to identify smells from scratch 'n sniff stickers
- fails to notice or ignores unpleasant odors
- makes excessive use of smelling when introduced to objects, people, or places

# Examples as relates to EAAT programs, specific to barn environment, new people and horses:

## **Hypersensitivity To Visual Input (Over-Responsiveness)**

- has difficulty keeping eyes focused on task/activity he/she is working on for an appropriate amount of time
- easily distracted by other visual stimuli in the room; i.e., movement, decorations, toys, windows, doorways etc.
- avoids eye contact

## **Hyposensitivity To Visual Input (Under-Responsive Or Difficulty With Tracking, Discrimination, Or Perception):**

- difficulty controlling eye movement to track and follow moving objects
- has difficulty telling the difference between different colors/shapes/sizes
- confuses left and right
- difficulty judging spatial relationships in the environment; i.e., bumps into objects/people or missteps on curbs and stairs

# Examples as relates to EAAT programs, specific to barn environment, new people and horses:

## **Auditory-Language Processing Dysfunction:**

- difficulty identifying people's voices
- difficulty filtering out other sounds while trying to pay attention to one person talking
- bothered by loud, sudden, metallic, or high-pitched sounds
- difficulty attending to, understanding, and remembering what is said or read; often asks for directions to be repeated and may only be able to
- understand or follow two sequential directions at a time
- looks at others to/for reassurance before answering
- difficulty putting ideas into words (written or verbal)
- often talks out of turn or "off topic"
- if not understood, has difficulty re-phrasing; may get frustrated, angry, and give up
- difficulty articulating and speaking clearly
- ability to speak often improves after intense movement

# Examples as relates to EAAT programs, specific to barn environment, new people and horses:

## **Social, Emotional, Play, and Self-Regulation Dysfunction:**

- difficulty getting along with peers
- prefers playing by self with objects or toys rather than with people
- does not interact reciprocally with peers or adults; hard to have a "meaningful" two-way conversation
- self-abusive or abusive to others
- others have a hard time interpreting child's cues, needs, or emotions
- does not seek out connections with familiar people
- difficulty accepting changes in routine (to the point of tantrums)
- gets easily frustrated
- often impulsive
- functions best in small group or individually
- variable and quickly changing moods; prone to outbursts and tantrums
- prefers to play on the outside, away from groups, or just be an observer
- avoids eye contact
- difficulty appropriately making needs known

# Hands-On Demonstrations

Sensory Tactile

Proprioception & Motor Planning/Processing

Visual Processing

Auditory Processing/Overload