

# Sensory Processing Disorder – List of Traits

**Sensory Processing Disorder**, or **SPD**, formally known as Sensory Integration Dysfunction, is a phenomenon that can have a huge impact on a child’s social skills, general ability to attend, learning and behavior, both in school and elsewhere.

Our senses provide us with input that helps us organize and understand our world.

When we cannot efficiently process input from one or several of these senses, our feeling of wellbeing is negatively affected, and we often get overwhelmed.

As we all know, we have:

- 1) The sense of hearing (auditory),
- 2) The sense of touch (tactile),
- 3) The sense of smell (olfactory),
- 4) The sense of taste (gustatory), and
- 5) The sense of seeing (visual).

Two less known sensory modalities are the:

- 6) Proprioceptive system, and the
- 7) Vestibular system.

A new “sense” being discussed is:

- 8) Interoception

The proprioceptive system is located both in the cerebellum and in our joints and ligaments, and helps us understand how the parts of our body are working together, where our limbs are, where our body is relative to the space we are in and where we are in relation to other people in that space.

The vestibular system is located in the inner ear, and helps control one’s sense of balance, as well as our orientation in space. This system helps with eye-hand and eye-head coordination, and therefore is very important for academic success. It also significantly impacts emotional regulation.

The interoception system detects responses to internal senses, such as hunger, fatigue, heart rate, breathing, and the need to go to the bathroom. As this system overlaps with the proprioceptive and the vestibular, we do not discuss it separately in this presentation.

There is also a lot of overlap between imbalances in the proprioceptive system and the vestibular system, and remedies for one can often help both.

There are many children with either hypo or hypersensitivities in one, two or more of these sensory areas, which cause **sensory processing disorder**. Most children with autism also have **SPD**, but many children have **SPD** and do not have autism. Currently, it is estimated that 1 out of 6 children in North America have **SPD**.



# Auditory Sensitivity



## HYPO Sensitivity: (Under sensitive)

- Cannot follow conversations in a loud room
- Does not hear when being spoken to in a classroom if there is background noise
- Has trouble remembering/following verbal instructions
- Prefers to play music excessively loudly
- May hum, talk or sing to themselves
- Obsesses about a certain song or kind of music

### TRY:

- Instructions could be given directly to child
- Instructions could be sung
- Instructions could be written as well as verbally explained
- Reminders to hum/talk/sing to self under breath.

## HYPER Sensitivity: (Over sensitive)

- Normal classroom noise can be very disturbing
- Is often initially afraid of a musical experience
- May notice &/or be bothered by background noises: buzzing lights, a distant airplane, etc.
- Afraid of, or has unusual responses to, sudden noises like flushing toilets, tea kettles, rattling cutlery, barking dogs, doorbells, fire alarms, etc.

### TRY:

- Quiet music
- Headphones
- Earplugs
- Seat away from group or out of room



# Tactile Sensitivity



## HYPO Sensitivity: (Under sensitive)

- Often wears food and loves to play with it
- Seems to love making messes with art supplies
- May love finger painting, but often paints themselves
- Does not feel physical pain though clearly injured
- Constantly touches various textures
- Constantly bumps into and touches other people

### TRY:

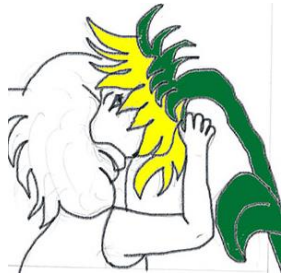
- Fidget box of sensory materials
- Playdough
- Koosh ball or knobby ball
- Stress ball
- Look into “Brushing” treatment

## HYPERSensitivity: (Over sensitive)

- Recoils from touch
- Avoids physical affection even with familiar people
- Sensitive to certain materials and textures, (tags on shirts, cuffs on pants, buttons on button down shirts, new blue jeans, zippers, etc.)
- Recoils from getting hands dirty
- Does not enjoy arts and crafts because of the sensation of different materials

### TRY:

- Use deep pressure when touching--not light touch
- Press firmly down on shoulders
- Place seat to avoid touching others
- First/last in line to avoid bumping into others
- Gradually introduce varied textures through play



# Olfactory Sensitivity



## HYPO Sensitivity: (Under sensitive)

- Does not smell anything,
- Is not aware of their own body smells, of dirty clothes, of something burning, etc.
- Will try to smell things in order to interact with them, (similar to children who mouth everything.)

### TRY:

- Aromatherapy or Plug-ins near desk (be sure there are not children with hyper-sensitivities nearby)
- Stronger/stimulating scents: eg. lemon, mint
- Scented playdough
- Scented rice in sensory table or fidget box
- Scented markers, paints

## HYPER Sensitivity: (Over sensitive)

- Overwhelmed by certain smells, causing dizziness or nausea, or headaches
- The range of smells that upset them is endless and unpredictable
- May affect whom they are willing to be with, if for instance, a person wears a certain kind of perfume.

### TRY:

- Let them choose potentially calming scents, eg. lavender or rose
- Let them use a sachet or unlit candle so that they can control the amount they smell
- Let them use a medical face mask or scarf to cover their nose



## Gustatory/Oral Sensitivity



### HYPO Sensitivity: (Under sensitive)

- Puts everything in their mouth
- Chews on clothes
- Chews/sucks on hands, thumb or fingers
- Chews on pencils, crayons and pens, etc.

### TRY:

- Chewing gum/ice chips
- Sucking on hard candy
- “Chewelry” or chewable pencil toppers

### HYPER Sensitivity: (Over sensitive)

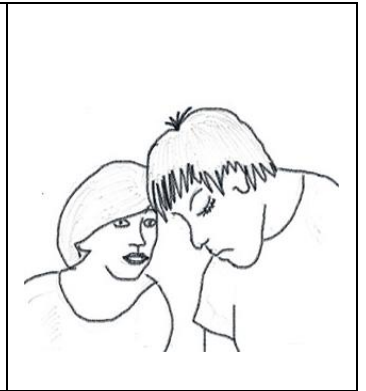
- Cannot bear to have certain types of textures in their mouth
- Has a very strong gag reflex

### TRY:

- Sucking through a straw (water, applesauce, yogurt)
- Sucking on hard candy



# Visual Sensitivity



## HYPO Sensitivity: (Under sensitive)

- Is mesmerized by spinning objects
- Fixates on repetitive sights, like fans or blinking lights
- Fascinated by bright colors and lights
- Flaps hands in front of eyes

### TRY:

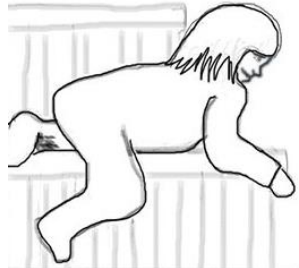
- High-contrast papers
- Gestures and movements when speaking
- Multimedia content

## HYPER Sensitivity: (Over sensitive)

- Has trouble following information on a crowded page
- Bothered by certain kinds of lights
- Gets confused in a busy room.
- Has trouble looking into people's eyes.  
(As Temple Grandin is quoted as saying, "I can listen to you or I can look at you, but I can't do both." The cultural expectation of looking someone in the eyes while listening or speaking is extremely disconcerting and difficult for children w/ SPD.)

### TRY:

- Dim lights
- Sunglasses
- Worksheets organized with less information
- Acetate page filters
- Study carrel



# Proprioceptive Sensitivity



## HYPO Sensitivity: (Under sensitive)

- Seems fearless in high-energy activities, climbs, jumps, spins, swings, loves to roughhouse
- Intentionally bumps into things
- Erratic energy, goes quickly from high to low
- Falls often
- Accident prone
- Uses too much force when handling classroom materials or touching others
- Stands too close to people

### TRY:

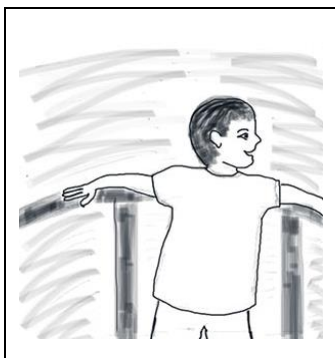
- Alternative seating: Bean Bag chairs, swings, rockers, computer chairs, cushion seats OR work standing.
- Weighted vests, backpacks, blankets, “therabands” on chair/desk legs.
- Incorporate movement throughout the day: Dance breaks to lively music, errands/chores, etc.
- Chewy necklace, fidget box

## HYPERSensitivity: (Over sensitive)

- Doesn't want to participate in typical playground games like tag
- Overly fearful of swings and playground equipment
- Extremely fearful of climbing or falling
- Doesn't like to have feet be off the ground
- Has poor balance
- Averse to crowds
- Fears the possibility of unexpected touches

### TRY:

- Reduce expectations until child can cope
- Give ample warning for transitions/changes in schedule
- Relaxation techniques; deep breathing; minimize movement unless rocking or swinging helps
- First/last in line to avoid contact with others
- Find what calms that particular child
- Heavy work (pushing weighted cart, lifting)



# Vestibular Sensitivity



## HYP0 Sensitivity: (Under sensitive)

- Needs to rock, swing, spin or jump etc.
- Eyes do not track well
- Falls out of chair often
- Delay in language skills
- Delay in reading
- Struggles with bi-lateral movement (crossing the midline)
- Sits in “W” position to compensate for poor trunk strength

## TRY:

- Hanging upside down on playground equipment
- Slides, Swings, Rockers, Swivel chair, Sit n Spin, Tire swing
- Somersaults, cartwheels
- Animal/bug crawls

## HYP0R Sensitivity: (Over sensitive)

- Needs to control movement
- Dislikes sports
- Suffers from carsickness
- Gets dizzy very easily
- Very cautious

## TRY:

- Slow, continuous movement for calming (swing, rocking chair), Tai Chi, Yoga
- Nintendo Wii slow movements
- Sitting on exercise ball
- Standing on balance board
- Curb or balance beam walking



Resources:

1. *Sensory Differences*, The National (U.K.) Autism Society:  
<http://www.autism.org.uk/sensory>
2. *Sensory Processing in Autism*, Autism Spectrum Australia;  
<https://www.autismspectrum.org.au/sites/default/files/Sensory%20processing%20in%20autism%20table.pdf>
3. *Eye Contact is WAY Overrated*, A Sensory Life;  
<http://asensorylife.com/eye-contact-is-way-overrated.html>
4. *Tactile, Vestibular and Proprioceptive Senses*, Cherrington Sawers:  
<http://cherringtonsawers.com/tactile-vestibular-and-proprioceptive-senses.html>
5. *Sensory Processing Disorder*:  
<http://www.sensory-processing-disorder.com/>
6. *The Out-of-Sync Child*, Kranowitz, Carol Stock, Print, 1998
7. *The Loving Push*, Temple Grandin and Debra Moore, Print, 2016
8. Is Your Child A Sensory Seeker or Avoider?  
<https://inyardproducts.com/blogs/blog/is-your-child-a-seeker-or-avoider-or-both>