

# Sensory Processing Disorder

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# + What is Sensory Processing?

- Our brain's ability to take in information from our 7 senses, organize and interpret this information to respond to the world in a meaningful way.
- Sensory processing is the way we learn about the world and function effectively.





# What is Sensory Processing Disorder?



- A neurological disorder where the sensory information the individual perceives results in abnormal responses.
- It causes difficulty, or inability to function in daily life.

# + SPD continued



- 3 types
  - Sensory Modulation Disorders(SMD)
  - Sensory Based Motor Disorder (SBMD)
  - Sensory Discrimination Disorder (SDD)
- SMD is most commonly seen and discussed

# + How common?

- Used to be 1 in 20, now considered 1 in 16
  - That is one child in every class.
- Autism Spectrum Disorder 9 in 10
- HAS to impact function in daily life
- We all have a little sensory problems



# + Associated problems



- “That some people with autism have some degree of SPD is a recognized fact” (Kranowitz 2005)
- Premature babies, orphanages, highly deprived of sensory opportunities at a young age, autism, highly gifted children, fragile X, mild cerebral palsy

# + Causes



- Exact cause is unidentified
- Thought to be inherited
- Prenatal and birth complications
- Environmental factors

# + Our 7 senses

- Visual
- Olfactory (smell)
- Gustatory (taste)
- Tactile (touch)
- Auditory (hearing)
- Proprioception( body awareness/deep pressure)
- Vestibular (movement/balance)



# + Imagine if:

- You could not tune out that flickering light in the classroom
- The buzzing of the refrigerator in the next room made you lose sleep every night
- Every time you try to write with your pencil you push too hard and break it.
- Every time someone touches you it feels like sandpaper on your skin



# + Problem areas related to SPD



- Self-care ex: Feeding
- Delayed speech development
- Poor attention span or difficulty focusing
- Unusually high or low activity level
- Oversensitivity to touch, sights, or sounds



# 3 categories of Sensory Modulation Disorder



- Sensory Avoiders
  - Over-responsive
  - Respond too much
- Sensory Seekers
  - Craving more
- Sensory under-responders
  - Respond too little
  - Difficult to treat and more uncommon

# + Sensory Avoiders Red flags



- Fight: aggressive or forceful behavior in response to sensation
  - Hitting, biting, kicking
- Flight: flee situations
- Freeze: may completely shut down
- Could try and talk their way out of activity that includes the over stimulating sensation
- Respond as painful or irritating

# + Sensory Seeker Red Flags

- Obvious craving for sensory inputs
- Never seems satisfied
- May look like ADHD





# Sensory under-responder Red Flag



- Will give less of a response to sensory stimulation than peers
- May need stronger input than peers
- Reactions may appear slow
- May appear lazy or disinterested





# Combinations



- $7*7*7=21$  different areas
- Can be an avoider in one sensory input and a seeker in another sensory input
  - Most common: tactile avoider and vestibular seeker
- Can be seeking, avoiding, under-responsive in different sensory inputs
  - Most Common: proprioception seeker and vestibular seeker

# + Most Common SMDs

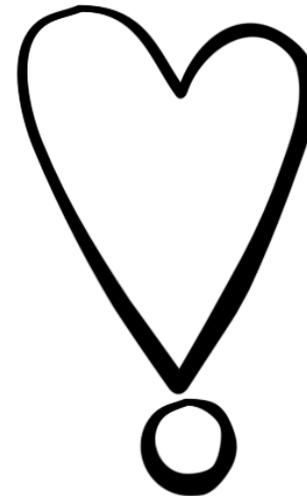


- Vestibular(movement) Seekers
- Auditory Seekers
- Auditory Avoiders
- Proprioception (body awareness/deep pressure) Seekers
- Tactile Avoiders (tactile defensiveness)

# + Remember...



- Not every symptom will appear in every client
- They have good days and bad days
- Likely to have problems with more than one sensory input



# + Proprioception Seekers

- Crashing into things/slams doors
- Pushes heavy objects
- Stomps feet down the hallway
- Aggressive behaviors
  - Hitting, biting, kicking
- Chews on shirt collar, sleeves, or non-edible objects
- Likes tight clothing and shoes



# + Proprioception Seeker Suggestions

- Jumping on mini trampoline
- Pushing therapist on swing
- Crash pad breaks
- Play dough or clay activities
- Wear weighted back packs or weighted blankets
- Focus on seating for child
  - Bean bag vs hard back
  - Keep feet on floor when seated



# + Tactile avoiders



- Avoid messy situations or want to wash hands immediately
- Restricted eaters
- Grooming or bathing can be difficult
- Do not want physical affection
  - Kissing, hugging, holding hands
- Extreme behaviors to light touch and/or certain textures



# Tactile Avoider Suggestions



- PEP:
  - Look, touch, kiss, eat progression
- Use firm touches, pats or hugs
- Do not force touch
- Use food play and be a model
- Do not surprise child
- Decrease lighting and lower your voice
- Talk less

# + Vestibular Seekers



- May be unable to sit still
- Loose floppy body “wet noodle”
- Can appear as ADHD
  - Some children will have ADHD, but do not rely on this!
- May appear recklessness or take safety risks
- Seem impulsive
- Repeated shaking of head, rocking back and forth, jump up and down
- Intense movement experiences
  - Bouncing, flipping, spinning

# + Vestibular Seeker Suggestions



- Consider developmental level with movement
  - Ex: A toddler 3-4 min vs elementary can sit quietly a max of 15-20 min
- Movement breaks are important!
- Change the movement activities on a regular basis
- Use Big transition movements
  - Bug crawls, animal walks, hop, skip, march

# + Seating Options for Movement



# + When swinging (vestibular) WATCH OUT FOR:

- Excessive giggling, yelling, or talking
- Excessive movement on the swing
- Turning pale or sweating
- Marked mood swings following stimulation





# How to respond to Overstimulation



- Slowly stop input/swinging
- If child is dizzy do heavy work activity
  - Push ups, hopping
- Help child breath deeply and slowly
- Provide deep pressure (Ex. Bear hugs)
- Focus on one object that is not moving until dizziness stops

# + Auditory Seeker



- Talks very loud
- Seeks loud noises
- Holds musical objects to ear
- Will clap, sing, or slam loudly
- More common with autism

# + Auditory Seeker suggestions



- Use noises as rewards
- Do not use ear plugs
- Use music in therapy
  - Listen to tape or CD
  - Sing a song with hand motions

# + Auditory Avoiders



- Oversensitivity to noises
  - Vacuum, thunder, train whistle, siren, horn or loud room, air conditioning
- Express excessive emotions with noises
- May put fingers in ears to drown out noises
- May yell to drown out noises
- Very typical with autism



# Auditory Avoiders Suggestions



- Differentiation between sounds may be difficult for child
- When using music:
  - Rhythmic or steady beats
  - Watch the level and other stimuli in room
  - Background music is not recommended
- Private areas and breaks from noise
- Ear plugs, headphones or earmuffs

# + Suggestions for all



- Prevention of sensory based behavior
- Watch for overstimulation or seeking behaviors
- Read cues and give breaks as needed
- Use breathing
  - Breath in 4 counts, hold it, breath out 4 counts

# + References



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