CREATING SENSORY SPACES FOR YOUR CHILD WITH SPECIAL NEEDS

The program will be starting at 8:15pm

Presented by

SINAI SCHOOLS
A Uniquely Special Education

hidden sparks
helping children reach their potential
What is Sensory Integration?

❖ Clinically, the term *sensory integration* was first used by OT Dr. A. Jean Ayres in the 1960’s to identify a field of study related to individuals with atypical responses to sensory stimulation.

❖ Sensory integration sorts, orders, and eventually puts all of the individual sensory inputs together into whole brain function.

❖ There are 8 senses of touch, sight, sound, movement, body awareness, taste, smell, and interception- these work together to help us understand our world and our place in it.

❖ The integration of sensory information contributes to successful functioning in daily life reflected in our ability to self-regulate, interact socially, and develop adaptive behavioral skills/abilities.
❖ Current estimates indicate that 5% to 16.5% of the general population have symptoms associated with sensory processing challenges and these estimates are higher for clinical populations such as autism spectrum disorder (ASD) and attention deficit hyperactivity disorder (ADHD)

❖ Between 40 and 80% of children and 3 and 11% of adults with neurodevelopmental disabilities are estimated to have difficulties in sensory processing.
❖ Between 60 and 95% of children with autism spectrum disorders have differences in sensory processing (diagnostic symptom in DSM-5).
❖ Between 2.8 and 6.5% of the typically developing population is also reported to have difficulties in sensory processing.
What causes sensory processing vulnerabilities?

- Prenatal environmental factors
- Genetic/hereditary factors
- Trauma
Parents often notice sensory processing challenges during toddlerhood. Some subtypes of sensory processing difficulties have been associated with impairments in activities of daily living and with other kinds of behavioral problems. Symptoms of poor sensory processing appear to evolve over time and vary considerably depending on the sensory system(s) involved. Inconsistency in presentation, with symptoms that vary in depth and breadth, complicates the diagnostic picture and stresses family dynamics. Caregivers of these children very often perceive they are ineffective in their parenting and experience a higher level of stress than do parents of children without sensory challenges.
8 SENSORY SYSTEMS

- Auditory (hearing)
- Visual (sight)
- Olfactory (smell)
- Gustatory (taste)
- Tactile (touch)
- Interoception (internal sensations)
- Proprioception (pressure)
- Vestibular (Movement)
# Sensory Processing

## Tactile System

Makes sense of information our body receives from touch as our skin feels. Helps us tell the differences of textures, sizes, shapes, etc. Critical for detecting pain, developing body awareness, and controlling social and emotional responses.

### Sensation Seeking
If a child is Sensation Seeking, they typically enjoy sensory input and are constantly seeking for more within their environment.

### Low Registration
If a child has low Sensory Registration, they interpret the sensory input around them less (at lower intensity levels) than others, and notice less in their environment.

### Sensation Avoiding
If a child is Sensation Avoiding, they may appear bothered or overwhelmed by sensory input and tend to avoid these experiences as much as possible.

### Sensory Sensitivity
If a child is Sensory Sensitive, they detect the sensory input around them more than others, and even notice sensory input that others may miss. They have a greater awareness of sensory input.

### Signs of Difficulty
- Extreme dislike of clothing tags, haircuts, teeth brushing
- Over or under reactive to pain & temperature changes
- Frequently dropping objects
- Selective eating for specific textures
- Negative reactions to crowded environments
- Strong dislike or avoids tight clothes that cling to skin
- Toe walking
- Overreacts to or unbothered by messy/wet textures

### Activities & Ways to Help
- **Yoga**:
  - Animal walks
  - Gradual exposure to aversive textures (as to be administered by an occupational therapist)

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# Sensory Processing

## Auditory System

Processes the sounds that we hear, interprets them, and signals to our body to create an response. Can cause the body to react inappropriately. May become fearful/avoidant of loud objects/places, impact our socialization, and decrease school performance.

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### Signs of Difficulty
- Overreact to loud/surprising sounds
- Turns volume of electronics very high
- Excessive dislike of noisy public places
- Enjoys making noise without purpose
- May not respond when their name is called

### Activities & Ways to Help
- Give advance notice when a loud noise is going to occur
- Create a structured schedule/environment
- Carpeted floors to decrease echoes
- Soft, calming, ambient sounds in the background
### Sensory Processing

#### Visual System

- **Takes in the information our eyes receive from the things around us, and communicates with our brain to make sense of it.**
- **Affects balance, school performance, athleticism, depth perception, and safe navigation of our environment.**

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### Signs of Difficulty
- Increased sensitivity to light or dislikes the dark
- Easily distracted by things, difficulty paying attention
- Frequent headaches
- Poor eye contact
- Reversing letters/numbers
- Often bumps into things and falls off of surfaces, such as stairs
- Difficulty with hand-eye coordination tasks

### Activities & Ways to Help
- “I Spy” games, word searches, etc.
- Matching games
- Sorting/organizing items
Sensory Processing

Vestibular System

Our inner ear’s detection of our head position and speed/direction of movement.

Tells our body to make adjustments to help our balance, vision, muscle tone, and coordination.

Affects balance, coordination, attention, and regulation.

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Signs of Difficulty
- AVOIDS or actively seeks out swinging, jumping, or climbing
- Lack of coordination, frequent falling
- Slow, cautious movement
- Easily becomes dizzy or never seems to become dizzy
- Watches moving/rotating objects (i.e. fans, clocks, etc.)
- Prefers to sit during activities or has difficulty sitting still/paying attention
- Sketches, holds head up with hands, prefers lying down

Activities & Ways to Help
- Sensory diets and cartwheels
- Log rolling
- Hanging upside down

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VESTIBULAR BEHAVIORS

Sensitivities
- dislikes fast movements or spinning
- fearful of heights or of falling
- struggles standing still, often rocking or swaying
- can get car sickness or motion sickness easily
- dislikes climbing or going up and down stairs
- may crave fast things or even fast spinning or rolling

Activities
- swinging
- sit and spin chair
- use a scooter board
- an obstacle course
- dancing
- use a balance beam
- climbing and sliding
- encourage skipping or hopping
- jump on a trampoline
- rolling down a hill or a flat surface
Proprioceptive System

- Tells us where our body is in space to help in developing body awareness within our environments.
- Located within our muscles and joints, helps us learn to exert the appropriate amount of force needed for tasks.
- Affects body awareness, coordination, and overall functioning within our environment.

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**Signs of Difficulty**
- Easily frustrated/lacking confidence
- Frequent crashing or pushing self into objects
- Kicking/stomping feet
- Enjoys bear hugs and weighted blankets
- Uses too much force or plays too rough
- Prefers tight clothes/accessories

**Activities & Ways to Help**
- Yoga poses
- Animal walks and wheelbarrow walks
- Pushing/pulling heavy, child-sized items

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**Proprioceptive Behaviors**

**Typical**
- can adjust body to avoid bumping or crashing into things
- able to adjust body against, under or around a chair or bed
- has a strong sense of understanding person space
- can enjoy physical play, wrestling, gross motor play
- tolerates transitions (such as lining up at school, or changing classes) well

**Atypical**
- frequently bumps into things, trips, or falls
- falls out of chairs or rolls off the bed
- agitated if too close to others, or unaware of personal space
- may become aggressive with play and hit, bite, push, etc...
- avoids or becomes anxious with transitions including excessive sensory input

*MovementMatters®*
Interception
The Eighth Sense

In Sensory Processing Disorder the interoceptive Sense can wreak havoc on a child's wellbeing and mental as well as physical health.

- Thirst
- Heart and Breathing rate
- Itch
- Arousal
- Muscle soreness or tension
- Emotions, embarrassment, fear, anger, sadness
- Nausea/Hunger
- Urge to use the bathroom
- Social touch
- Pain

Interceptive Underresponsivity
A child can be unaware of hunger pains or thirst, get hurt without noticing or not feel pain internally although something is wrong.

Interceptive Overresponsivity
A child may have constant aches and pains, always be hungry and/or thirsty and be hyper aware of touch or textures.

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What is **Interoception**?

Interoception is the **internal sense**. It helps with:

<table>
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<tr>
<th>Understanding our body’s needs</th>
<th>Recognizing feelings of hunger</th>
<th>During potty training, knowing when to use the bathroom</th>
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<td>Knowing how to appropriately address needs</td>
<td>Sensing pain and looking for ways to relieve it</td>
<td>Scratching an itch with the proper amount of force</td>
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<td>Regulating emotions and controlling behavior</td>
<td>Feeling sensations of anxiety and calming self</td>
<td>Avoiding temper tantrums by meeting basic needs</td>
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<td><strong>Hearing</strong></td>
<td>loud music, television, background noise</td>
<td>Covers ears when they hear loud noises such as the vacuum cleaner, loud groups of people</td>
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<td><strong>Seeing</strong></td>
<td>go towards colourful toys, patterns, pictures- like a bug to the light</td>
<td>trouble with bright lights, colours etc; may even wear sunglasses when they go places like the shopping centre</td>
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<td><strong>Smelling</strong></td>
<td>Smells everything; flowers, candles etc</td>
<td>May complain about the smell of many things, may have a very acute sense of smell</td>
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| **Tasting**    | Enjoys spicy/hot foods  
                 Will try a variety; to test what they like and don’t | Limited variety of foods they like, based on flavour, texture and even the colour of the food “eating only the red things” |
| **Touching**   | Enjoys tight hugs, wrestling with siblings, the feel of stuff on their bare feet, playing with mud, bubbles, water (you name it they love it- usually the messier the better) | Refuses to be hugged and touched, sometimes even by their own parents. Avoids messy activities, hates certain clothes (for example school uniform) because of the texture and material |
SENSORY INPUT CAN BE

**CALMING**
- SLOW, RHYTHMIC, NATURE SOUNDS
- SOFT/NATURAL LIGHTING, LAVA LAMP
- PUTTY, FIDGET, WARMTH
- SUCK, CHew, BLOW ACTIVITIES, WARMTH (TEA)
- LAVANDAR, VANILLA
- WEIGHTED VEST, SQUEEZES, BLANKET BURRITO
- LINEAR SWINGING, ROCKING

**OR**

**ALERTING**
- FAST TEMPO, LOUD
- BOLD, BRIGHT COLORS AND PATTERNS
- COLD, VIBRATION, LIGHT TOUCH, FAST RUBBING
- COLD, SPICY, SOUR, CRUNCHY
- CITRUS, PEPPERMINT
- JUMPING, BOUNCING
- ROTARY SWINGING
UNDERSTANDING SENSORY BEHAVIOR

WHAT YOU SEE

YOUR CHILD OVERREACTING, BEHAVING BADLY (REFUSING) OR SHYING AWAY, HIDING

YOUR CHILD JUMPING ON THE FURNITURE, MOVING NON-STOP OR CLIMBING EVERYTHING

MELTDOWNS OVER PUTTING ON SOCKS AND SHOES, DOESN’T LIKE WEARING CLOTHES OR BOTHERED BY SOME FABRICS

PUTTING EVERYTHING IN THEIR MOUTH OR BEING A PICKY EATER

COVERING THEIR EARS; COMPLAINING THAT IT IS TOO LOUD OR ALWAYS TALKING, BANGING THINGS AND MAKING NOISE

CRAWLING ALL OVER PEOPLE, BEING TOO CLOSE/IN PEOPLE’S PERSONAL SPACE, ALWAYS TOUCHING EVERYTHING

COVERING THEIR EYES, SQUINTING, LOOKING DOWN, HAVING A HARD TIME FOCUSING AND EYES DARTING AROUND.

WHAT IT MEANS

YOUR CHILD MAY BE SENSITIVE TO LOUD NOISES, MOVEMENT OR OVERWHELMED BY THE AMOUNT OF INPUT SO THEY ARE TRYING TO RETREAT OR BLOCK IT OUT.

SENSORY SYSTEM CAN BE UNDER OR OVER RESPONSIVE, SOME KIDS HAVE AN INCREASED NEED FOR MOVEMENT AND ARE ALWAYS ON THE GO TRYING TO MEET THAT NEED.

THE FEEL OF THE SOCKS, SHOES OR EVEN THE TYPE OF CARPET MAY BE UNCOMFORTABLE TO THE CHILD

SOME KIDS CRAVE ORAL STIMULATION OTHERS AVOID IT AND MAY BE SENSITIVE TO TEXTURES, TASTES OR SMELLS MAKING MEAL TIMES CHALLENGING

MAY BE SENSITIVE TO SOUND AND MAY TRY TO AVOID IT OTHERS MAY SEEK OUT NOISE AND CREATE NOISE OF THEIR OWN TO SATISFY THEIR NEED FOR SOUND.

CHILDREN MAY STRUGGLE WITH BODY AWARENESS, THEY MAY HAVE A HARD TIME JUDGING DISTANCE, NOT REALIZE THEY ARE TOO CLOSE OR LEAN ON YOU.

CHILD MAY BE OVERSTIMULATED VISUALLY OR BE EASILY DISTRACTED BY VISUAL STIMULI THEY MAY TRY TO BLOCK IT OUT OR BE FASCINATED STARING AT SOME OBJECTS.
What is sensory interior design?

❖ **Therapeutic** form of interior design

❖ Helps children that have certain **sensory needs**

❖ Helps children feel comfortable in their space at home

❖ Aims to help children and families feel better in their home
How is it achieved?

- Focus primarily on the child’s sensory needs
- Adapting the space to their sensory needs
- Use of color, lighting, and furniture placement to achieve the goal
Why is sensory interior design important?

❖ If the child feels calmer and more comfortable in their space at home, they will be better able to perform in other areas of their life
❖ Creates a safe space in the home that will provide comfort and security for the child
❖ Restructures the home to adapt to the sensory needs of the child
❖ Provides a therapeutic solution to allow the child to thrive
So where do I start?

❖ Observe your child and take notes on their behavior

❖ Although there may be other non-sensory related causes, here are some questions to ask yourself as you’re going through this process:
  • Is my child sensitive to certain colors?
  • Get upset when there’s a lot of clutter?
  • Sensitive to noise? Smells? Lighting?
  • Too much energy, or not enough of it?
  • Poor quality of sleep? Uncomfortable, shuffling in bed, wake up often.
I’ve observed my child. Now what?
My child is sensitive to noise

- Noise machine in the room, or just outside of it
- Calming music
- Sound blocking window treatments
- Ceiling tiles and/or wallpaper for noise suppression
My child is sensitive to visual stimuli

- Paint the room a light color i.e. cream, light grey, light blue or green
- Remove everything from the walls. No wall art (frames, decals etc)
- Patterned wallpaper to give them energy instead of feeling sluggish in their room
- Create a “messy” space in the room that’s just for them
- Visuals on the wall, such as wall art or decals
My child is sensitive to smell

❖ Consider using a diffuser
❖ Calming smells: lavender, vanilla, honey
❖ Stimulating smells: cinnamon, lemon, peppermint
❖ Organic fabrics and materials in the room
❖ Eco/non-toxic paint
My child is sensitive to touch

- Weighted blanket: if your child likes deep pressure
- Soft sheets (jersey sheets)
- Compression sheet (feels like a hug)
- Soft security blanket or stuffed animal
My child needs calming techniques and regulation

Rebalance vestibular system

❖ Consider different kinds of swings
❖ Indoor trampoline

Other things you can do:

❖ Use warm lighting with dimmers
❖ Make sure window treatments don’t let light in
❖ Don’t over clutter room with furniture
Case study

- Johnny hates his room
- Hard time falling asleep
- Wakes up in the middle of the night
- Does not want to spend any time in his room
- Irritable, overactive, dysregulated
How do we address this?

❖ Study Johnny’s case by seeing the space
❖ Speak to his parents and ask specific sensory-related questions
❖ Ask parents to observe and journal accordingly
❖ Put all the information together
What we concluded from the information

- Touch
- Sound
- Visual stimuli
How do we address this?

Oversensitive to touch:
❖ Changed sheets to jersey sheets
❖ Alternated between compression sheet and weighted blanket
❖ Sensory swing to provide calmness and regulation

Oversensitive to noise:
❖ Added a sound machine by the door

Visual overstimulation:
❖ Removed all visuals from the walls
❖ Painted walls a light calming color
❖ Re-organized bedroom furniture
❖ Added softer lights
Follow up visit to the home

- Sleep quality improved
- Parents had easier time putting Johnny to bed
- Spent more time in his room because he liked it
- Utilized swing for self-soothing
- Improvement in family dynamic
- Johnny had a safe space