



# Sensory Integration

What is it and how can we support  
our families?



# LISTEN FOUNDATION

HELPING CHILDREN HEAR, LISTEN, TALK



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# What is Sensory Integration

- The way we process incoming sensory input and respond in our world.
- Neurological processing and organization of sensations in our daily life.
- Generally, we are not even aware all the input, output, coordination that we do.
- Typically, have ability to deal with incoming sensations and react.

I don't like tags and fabrics make my skin feel itchy.

It's hard for me to focus and follow directions.

I love to eat crunchy snacks and request them all of the time! I like spicy foods and chomping on ice.

I sometimes get overstimulated and meltdown.



Sometimes I don't notice when I get hurt.

It's hard for me to fall asleep and I like to sleep in my foot pajamas or a sleep sack.

I chew on everything.

I love be squeezed and I love bear hugs and tickle games.

I don't like having my hair  
or my teeth  
brushed.

I don't like to try new  
things. I like things to be  
predictable.

I like to sit and be read to.

I don't like for my hands to  
be dirty.



I sit with my legs in a  
"W" position.

I am a picky eater and don't  
like certain textures in my  
mouth.

I can overreact to minor  
scrapes and falls etc.

I am clumsy and shy away  
from big gross motor  
movements.

# What do you see???



**Ask yourself....**

**What is the child getting from this behavior?**

**What does their body need?**

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# Tactile Sense

- Primarily through surface of our skin-
  - Texture, shape, and size of objects in our surroundings.
- Actively touching or passively being touched.
- Helps us tell the difference between threatening/safe touch sensations.

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# Vestibular Sense



- Information provided through inner ear.
- Information about gravity, space, balance, and movement.
- Head and body position in relation to the earth's surface.



# Proprioceptive sense



- Information gathered through our joints, muscles, and ligaments.
- Helps determine where our body is in space and what body parts are doing



# Sensory Integration Function is Important For:

- Academic skills
- Attention
- Auditory perception
- Balance
- Bilateral coordination
- Body awareness/ body position
- Eye-hand/eye-foot coordination
- Fine motor skills
- Flexibility
- Force/grading of movement
- Gravitation security
- Gross motor skills
- Hand preference
- Healthy relationships with others
- Kinesthesia/muscle tone
- Postural stability
- Motor planning /praxis
- Self-comforting, self protection
- Self regulation
- Social skills
- Speech/language skills
- Tactile perception
- Visualization
- Visual perception. ( from The out of Sync Child Has Fun- Kranowitz)

# Sensory Integration challenges can occur when:



Brain inefficiently processes sensory messages from the environment or their own body.



Everyday sensations that others barely notice may be very difficult for a child to respond or react to.



The central nervous system is not organizing and regulating incoming information.



Difficulty integrating information from their senses.

May occur on its own, or with other diagnosis, including hearing differences..



When one sense is not processing things correctly, other senses will be heightened.



We all have varying sensory processing behaviors.



The key is to find what helps to get kids regulated.

# How are Sensory Integration difficulties Identified?

Collecting information about child's daily life tasks in home, classroom, community.

Skilled observation of child. (therapist observes how child responds to different sensory inputs and motor planning ability when set up for child to play/ interact).

Parent/Child sensory questionnaires (Sensory Profile checklist)-  
Dunn, 1999)

Parent/Caregiver interview

Standardized tests- Sensory Integration and Praxis Test Battery  
(SIPT) (Ayres, 1989).

Clinical observations of coordination, motor skills, posture,  
reactions to sensory input.

# How can we help?

Pause, observe  
and question

Embed sensory  
play into  
session/child's  
day

- Look for an increase in attention and ability to focus
- Improved coordination of gross motor movement.
- Improved coordination of fine motor movement. (speech production)



# Vestibular

Movement with a purpose

- Push-ups
- Swings
- Trampolines
- Exercise balls
- Spinning equipment
- Twirling, spinning
- Leap frog

-walking, quiet play, get awareness before moving, hold hands when walking





# Tactile

Input into senses-

- Provide varied textures
- Sensory tables (water, rice, beans, orbi balls)
- Playdoh, slime, shaving cream play, sand, slime
- Compression clothing
- Spinners/ fidgets/stress balls
- Massage/bear hugs
- Burrito/hot dog

- gloves/utensils for messy play if avoiding- compression clothes under scratchy,



# Proprioception

- Heavy Work- uses resistance for muscles to work with or against
  - Pushing/pulling heavy wagon, laundry baskets, trash cans etc.
  - Shoveling snow, push brooms
  - Carrying a heavy backpack (wearing coat with rocks or weights)
  - Play wrestling
  - Climbing, running (moving body weight)- on playground
  - Crashpads
- Limit hugs/contact if not desired; cautious on playground equipment and around other kids.



# Oral:

- Oral Motor- (chew suck, blow, heavy work for mouth and lungs can be very organizing and help with focus)
  - Whistles, kazoo, harmonica
  - Sucking thick liquids through a straw, ice cold water drinking
  - Blowing bubbles through a straw into a bucket of water
  - Chewing gum, licorice, crunchy snacks,



- Sing a hello song/dance
- Incorporate Simon says with aud. Directions,
- Book sharing on hands/knees,
- Movement breaks between focused activities- Animals walks

- Encourage family to feed the system first if needed (vestibular, movement?)
- Language input with play and moving with crawling, driving toys, stimulating language with prepositions.
- Walk through routines and inquire how families can include more sensory activities-

Incorporate in a session

# Activities that easily work into a session plan:

- Animal Action
- Freeze Dance
- Set up a mini-obstacle course
- Ring Around the Rosey
- Row-row your boat in the laundry basket
- Play dough
- 5 Little Monkeys Jumping on the Bed
- Hop Little Bunny

# Audiology:

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- Carry a backpack from the parking lot
- Crunchy snacks
- Stop at playground nearby
- Use tactile play items
- Build in time for sensory breaks
- Deep squeezes for child in lap
- Weighted stuffed animal





Much of this lecture  
has been collected from  
Kristen Brainard, OTR



# Resources:

- Miller, Lucy J. (2014). [Sensational Kids: Hope and Help for Children with Sensory Processing Disorder \(SPD\)](#)
- Ayres, A. Jean (1979). Sensory Integration and the Child. Los Angeles: Wester psychological Services
- Miller, L. (2014)- Sensational Kids: Hope and Help for Children with Sensory Processing Disorder (SPD)
- Kranowitz and Miller (2022) [The Out-of-Sync Child, Third Edition: Recognizing and Coping with Sensory Processing Differences \(The Out-of-Sync Child Series\)](#)
- [www.twentyonesenses.org](http://www.twentyonesenses.org)