SENSORY 101
Understanding Sensory Processing for your child

Neala Harper MS, OTR/L
Babybird OT LLC
nealabird@gmail.com
What is Sensory Processing?

The way the nervous system receives, interprets and responds to sensory messages from our bodies and the environment.

RESPONSE
A response is generated

SENSORY INPUT
Sensory receptors are stimulated.

PROCESSING
Sensory information is organised and interpreted, stored and related to previous experiences.
A Developmental Perspective: Foundation of 7 Senses
The 7 Senses?

1. Touch (tactile)
2. Sound (auditory)
3. Sight (vision)
4. Smell (olfactory)
5. Taste (gustatory)

6. Vestibular
   - Equilibrium/balance
   - Movement perception

7. Proprioception
   - Body awareness
   - Brain-body connection through receptors in muscles and joints
Why Do We Care About Sensory Processing?

DO YOU KNOW ME?

I hate having my hair washed, brushed or cut
I cry and shield my eyes from the sun and other bright lights
I have “selective hearing” or difficulty listening
I am a picky eater; I resist new foods and textures
I complain about tags in my clothing
I seem to be unaware of normal touch or pain; I often touch others too soft or too hard
I hate being tickled or cuddled
I have poor gross motor skills, such as running and riding a bike
I always walk on my tiptoes
I have trouble focusing and/or concentrating
I am overly sensitive to loud sounds such as vacuums and blenders
I am always smelling people, food and objects
I chew on everything
I have poor fine motor skills, such as handwriting and cutting
I have difficulty dressing myself
I sit with my legs in a “W” position
I put my socks on “just so” or maybe I never go barefoot
Winnie Dunn Model
4 Quadrants and The Sensory Profile

Passive Behavior  Active Behavior

UNDER-REGISTRATION  SEEKING

SENSITIVE  AVOIDING

Sensory Capacity
BIG BUCKET
(High Capacity)

1) Under-Registration
2) Seeking

Passive Behavior

Active Behavior

UNDER-REGISTRATION

SEEKING

SENSITIVE

AVOIDING
1) Under-Registration
What it might look like:

- Often easy going personality
- Activity level is lower
- May appear uninterested, bored & unaware of surroundings
- Often lower muscle tone, low endurance & harder to get moving
- Passive: quiet/low engagement
- Sometimes clumsy and awkward
- Decreased body/spatial awareness
- Drooling/open mouth position
2) Seeking
What it might look like:

- Activity level is HIGH
- May take excessive risks during play
- “Bouncing off the walls”-jumping, spinning, crashing and rough housing
- Fidgety, difficulty sitting still
- Excitable, playful, FUN!
- Increased in mouthing or touching objects
- Can be clumsy or disorganized
- Often co-occurring with ADHD
SEEKING
•
SENSITIVE
•
AVOIDING

Passive Behavior  Active Behavior

UNDER-REGISTRATION  SEEKING

SENSITIVE  AVOIDING

3) Sensitive  4) Avoiding

TEA CUP
(Low Capacity)
3) Sensitive
What it might look like:

- A little goes a long way
- “Zero to 60”-emotional responses
- BIG responses but sometimes unclear reason
  - Ex. being touched by others
  - getting dirty
  - sensitive to sounds
- Often in high alert state and “Freeze” response
- Appears anxious
- Fearful of trying new things
- Observant and watching others closely
4) Avoiding
What it might look like:

- Similar to “sensitive” but *active behavior*
- “Zero to 60” reactions
- BIG and expressive responses and clear about what’s upsetting
- High alert state and active response:
  - “Fight or Flight”
- Active refusal to try new things
Where are your 7 senses?

- **UNDER-REGISTRATION**
  - ex. Body awareness (PROPRIOCEPTION)

- **SEEKING**
  - ex. Movement (VESTIBULAR)

- **SENSITIVE**
  - ex. Touch (TACTILE)

- **AVOIDING**
  - ex. sound (AUDITORY)
What does it *look like* in everyday life?

### Passive Behavior

**UNDER-REGISTRATION**
- bumps into things
- doesn’t notice pain

### Active Behavior

**SEEKING**
- always “on the go”
- loves spinning

### Sensory Capacity

**SENSITIVE**
- dislikes clothes because of tags, seams
- doesn’t like messy hands

**AVOIDING**
- will cover ears and run away from vacuum
- dislikes crowded places
UNDER/LOW-REGISTRATION

**Intensify** activities so child will notice/respond. Help them FILL THE BUCKET

**WAKE UP** the body: “wake up mouth/hands/feet/eyes” etc.

Make activities a **multi-sensory** experience

Examples:

Movement breaks and “heavy work” activities:
- Swinging, spinning, jumping, pushing, bouncing on the ball, obstacle course, tug-of-war, animal walks

Strong flavors (ex. sour, spicy)

Sensory bins-interesting textures

Brighter lights, next to window

Be animated, enthusiastic; use gestures; Generate high energy.

What can YOU do?
SEEKING

**Incorporate efficient** sensory activities into the child’s routine so thresholds can be met **WITHIN** activities. Help them know **WHAT to FILL THEIR BUCKETS with:**

- Frequent movement breaks or “jobs” (heavy work is best)
- High movement transitions: obstacle course, jumping, bouncing, animal walks
- Oral input: chews, sucking thick liquid (yogurt, applesauce) through a straw at snack time, blowing bubbles, “chewelry” etc.
- Tactile: fidgets, texture centers, fidget pens
- Olfactory: scented bracelets, alerting scents (citrus, rosemary, pine)

What can YOU do?
What can YOU do?

**SENSITIVE**

Provide **predictable, calming** activities **before and within** daily routines:

- Oral: Chewy tubes, sucking thick liquid through a straw, blowing bubbles, breathing
- Deep pressure and massage (*avoid light touch)
  - Weighted blanket/lap pad/weighted animals (*consult with OT)
- Deep proprioceptive input: heavy work, weights, resistance (see list of heavy work activities)
- Rocking, swinging (predictable linear movement, but use with caution) *good to pair with compression
- Calming touch with “stress balls” or soft objects/stuffed animals
- Calming smells (lavender, chamomile etc)
- Begin teaching self-regulatory strategies
What can YOU do?

AVOIDING

Provide **predictable, calming** activities **prior to and within** routines.

Modify environment:
- Natural lighting or incandescent lamps
- Reduce visual clutter and activity
- “Cozy corner” to take breaks

Self-monitoring/regulation-Body Talk
- “What does my body need?”

Build “tool box” for calming
- “Prime” the body by doing calming activities **prior to** more challenges ones

Visual schedule and advanced warnings for transitions or changes
- See “Sensory Sensitive” list
Putting it all together:
Building a sensory regulation “toolkit”

Body “toolkit”

- Mouth
  - breathe, chew, drink
- Muscle
  - push, pull, lift
- Movement
  - walk, run, swing, dance
- Hand
  - Sensory bins, soft lovies
- Eye
  - lava lamp, bright/dim lights
- Ear
  - music, percussion, white noise

What does my body need?
Putting it all together: Daily Schedule

*Daily routines reflection questions:

- What activities/times of day are easiest?
- What activities/times of day are most challenging?

*Incorporate body “Tools” into daily schedule:

- Also referred to as a “Sensory Diet”=what we feed our nervous systems throughout the day
- Sensory “snacks” every few hours
3 Most Powerful Senses
**Think “womb like”**

1. **Proprioception**
   - Deep pressure
   - Boundaries/pushing against resistance
   - Positioning-physiological flexion with arms and legs tucked

2. **Vestibular**
   - constant sway/rocking type movement
   - various positions (upside-down, sideways etc.)
   - *use cautiously as it can be too much for some systems

3. **Oral**
   - sucking
   - hands to and around mouth
Putting it all together: Things to consider

• Sensory activities are great for ALL children (and adults)! 

• When in doubt, use muscle tools (exercise!). 

• Use vestibular with caution 

• Don’t try to add too many sensory activities to your schedule; incorporate sensory activities into existing daily activities and routines. 

• “10a & 2p” 

• Individualize! Be fun and creative 

• Consult with an OT for questions
Putting it all together: Resources

• Online resources:
  • Description of sensory video: http://youtu.be/D1G5ssZIVUw
  • Sensory Symptoms Checklist (*there are many)
    • sensationalbrain.com
  • www.handsonaswegrow.com
  • www.yourkidstable.com
  • www.sensorysmarts.com
  • Lists of Heavy Work activities:
    • https://www.andnextcomesl.com/2017/04/heavy-work-activities-for-home.html
    • https://yourkidstable.com/heavy-work-activities/

• Books
  • “Sensory 101”- Dayna Abraham
  • “Sensational Kids”- Lucy Miller
  • “Raising a Sensory Smart Child”- Lindsey Biel
  • “The Out-of-sinc-Child”- Carol Stock Kranowitz
Neala Harper, MS, OTR/L
Babybird OT
nealabird@gmail.com
c-303.886.5909