SENSORY 101
Understanding Sensory Regulation For Your Child

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What do we mean by “Sensory Processing” and Regulation?

As humans, we ALL are constantly processing our senses!
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?
Behaviors and Participation in life!

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  ↓  Passive 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

SENSORY CAPACITY

Passive Behavior

Active Behavior

SENSITIVITY

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

- Easy-going personality
- BIG bucket capacity, passive behavior
- May appear uninterested, bored or 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:

- **Actively** FILLING THEIR BUCKET
- 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
TEA CUP
(Low Capacity)

Passive Behavior  →  Active Behavior

UNDER-REGISTRATION  SEEKING

Sensitive  Avoiding

3) Sensitive  4) Avoiding
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 the 7 senses?

Sensory Checklists:
- There are many checklists and sensory assessment tools online
- I often use this one: (click on link below)

Sensational Brain

Sensory Symptoms Checklist: Babies and Toddlers

The following checklist is not a diagnostic tool. Rather, it is an indicator of sensory over- or under-responsiveness. The purpose of this tool is to assist in developing an appropriate treatment plan, and/or “sensory diet,” for an individual with sensory modulation difficulties.

Remember that it is normal for all people to be sensitive to certain sensations. Sensory modulation becomes a disorder only when it is negatively impacting a person’s life (i.e., ability to pay attention, learn, socialize, relax).

* Indicates Sensory-Seeking behavior. Sensory-Seeking is a form of under-responsiveness but these individuals seek intense sensation to make up for the under-responsiveness of their nervous systems. The general under-responders tend to be more passive and sedentary than the sensory-seekers, but still share many symptoms.

Depending on the age of your child, many symptoms will not be applicable. Just check the symptoms you observe at this stage of development and leave others blank.

**TACTILE (TOUCH)**

<table>
<thead>
<tr>
<th>Symptoms of Over-Responsiveness:</th>
<th>Symptoms of Under-Responsiveness:</th>
</tr>
</thead>
<tbody>
<tr>
<td>_____ cries/arches back when held/cuddled</td>
<td>_____ always touching others*</td>
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<tr>
<td>_____ difficulty transitioning to solid foods</td>
<td>_____ prefers to be without clothes and barefoot*</td>
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<tr>
<td>_____ avoids messy play including finger-painting and Play-Doh</td>
<td>_____ doesn’t seem to notice messy hands or face (beyond 12 mos)</td>
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<tr>
<td>_____ dislikes nail-trimming/hair-cutting hair-brushing/tooth-brushing</td>
<td>_____ seems unaware of light touch</td>
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<tr>
<td>_____ limited food preferences, sensitive to food textures</td>
<td>_____ may stuff too much food in mouth*</td>
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<tr>
<td>_____ cries/fusses during diaper change</td>
<td>_____ doesn’t seem to notice cuts and scrapes, doesn’t mind shots</td>
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<tr>
<td>_____ distressed by baths</td>
<td>_____ drools, doesn’t notice runny nose or food on face (beyond 18 months)</td>
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<tr>
<td>_____ startles easily when touched unexpectedly</td>
<td>_____ after 18 months, doesn’t appear to notice wet/soiled diaper</td>
</tr>
<tr>
<td>_____ over-reacts to minor injuries or mosquito bites</td>
<td>_____ delayed fine motor skills</td>
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<tr>
<td>_____ difficulty transitioning to solid foods</td>
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</tbody>
</table>
Where are the 7 senses?

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

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

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

- **AVOIDING**
  - ex. sound (AUDITORY)

Sensory Capacity

Passive Behavior  →  Active Behavior
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

**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?
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

UNDER-REGISTRATION

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

SENSITIVE

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

SEEKING

Incorporate **efficient** sensory activities into the child’s routine so thresholds can be met **WITHIN** activities

AVOIDING

Provide **predictable, calming** activities **prior to and within** routines.
Riding the wave of the day:

OVERLOAD!!

“River of well-being”

L-o-w

Sensory Events Over time
Putting it all together: Daily Schedule

Daily routines reflection questions:

1) **What does a typical day look like?**

2) **What activities/times of day are easiest?**

2) **What activities/times of day are most challenging?**

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<th>Time</th>
<th>Monday</th>
<th>Tuesday</th>
<th>Wednesday</th>
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</table>
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
Putting it all together: Building a 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?
Building a Toolkit

*Muscle Tools*

-also referred to as “Heavy Work” activities

-push, pull, lift

-*these are always regulating except if movement or touch is involved

-free handout available from: theinspiredtreehouse.com

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25 Heavy Work Activities for small spaces

- Massages
- Bear hugs
- Play with a Body Sock
- Yoga Poses
- Pulling resistance bands with hands
- Playing passing games with weighted stuffed animals
- Weighted sensory bottles
- Animal walks
- Wall pushes
- Chair dips
- Tossing and catching heavy bean bags
- Boxing with boxing gloves against a mat or bolster
- Roll a therapy ball up and down the wall
- Squeezing putty or play dough
- Playing tug of war with Pop Toobs
- Tearing paper (especially heavier card stock)
- Crumpling paper and shooting into a garbage can
- Pushing and pulling Squigz
- Cooking activities (e.g. kneading, stirring thick dough)
- Stepping up onto a chair or bench and jumping down (with close supervision!)
- Squeezing sensory balloons (filled with dry beans, dry rice, or play dough)
- Digging in a tactile bin of wet sand or Kinetic Sand
- Writing on and then wiping off or erasing a dry erase board
- Pushing feet against resistance band tied to the legs of a desk
- Wall sits
Putting it all together: Building a Toolkit

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” scheduled activities  
• Individualize! Be fun and creative  
• Consult with an OT for questions
Putting it all together: Resources

- **Online resources:**
  - Sensory Symptoms Checklist (*there are many*)
    - [sensationalbrain.com](http://sensationalbrain.com)
  - [www.handsonaswegrow.com](http://www.handsonaswegrow.com)
  - [www.yourkidstable.com](http://www.yourkidstable.com)
  - [www.sensorysmarts.com](http://www.sensorysmarts.com)
  - [www.theinspiredtreehouse.com](http://www.theinspiredtreehouse.com)
  - Lists of Heavy Work activities:
    - [https://www.andnextcomesl.com/2017/04/heavy-work-activities-for-home.html](https://www.andnextcomesl.com/2017/04/heavy-work-activities-for-home.html)
    - [https://www.yourkidstable.com/heavy-work-activities/](https://www.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
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