

A CAREGIVER'S GUIDE TO

Promoting Self Regulation in Foster and Adoptive Youth



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FUTURE

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Using this Guide

Hello! Welcome to *A Caregiver's Guide to Promoting Self-Regulation in Foster and Adoptive Youth*. This guide was created as a tool to support parents and caregivers of children who have experienced the trauma of adoption, foster care, or kinship care. Research has shown that this trauma negatively influences a child's brain development and their ability to regulate their nervous system. This dysregulation can lead to responses and behaviors that are unsafe or not socially appropriate, making participating in everyday activities stressful for both the child and the caregivers.

This guide is designed to help you:

- understand self-regulation and the impact of trauma
- identify the sensory processing patterns and needs of your child
- learn self-regulation strategies that fit those needs
- identify resources for continued education and support

The first part of this guide will provide you with the necessary background knowledge on occupational therapy, self-regulation, the impact of trauma, supporting a dysregulated child, and co-regulation.

The following section will include information about sensory processing patterns and a series of sensory checklists specifically designed for each age group (infants/toddlers, children, adolescents/adults), followed by a strategy tracking log and information to consider when selecting and implementing sensory strategies. The sensory checklists are not a diagnostic tool but are designed to help you become more aware of the sensory needs of both yourself and your child so you can select the strategies that best fulfill these needs.

Then, you will find strategies for calming your nervous system and increasing regulation categorized by each of the 8 senses (Yes 8, we'll expand on this too!). There are also pages with strategies specifically for infants and for mealtime and bedtime routines.

Finally, there will be resources for you to continue learning about self-regulation and sensory processing. This includes information on books, podcasts, and websites related to self-regulation, sensory processing, and occupational therapy.

The content included in this guide is not intended as medical advice or a replacement for receiving occupational therapy services. A skilled occupational therapy practitioner will be able to identify what is best for your child's individual needs. The strategies and resources in this guide are simply a place to start while waiting to receive occupational therapy services. All strategies and activities should be used at your own discretion.

Happy Reading!

*This guide was developed by Doctorate of Occupational Therapy Student Rebecca Sennett in partnership with Raise the Future as part of a doctoral capstone project.

WHAT IS Occupational Therapy?

Occupational therapy practitioners help people participate in what they need and/or want to do in order to promote their health and well-being.³

Occupational therapy practitioners (OTPs), which include occupational therapists and occupational therapy assistants, focus on participation in occupations. The word occupation refers to the things that occupy our time and have meaning or purpose in our lives. There are nine areas of occupations that OTPs focus on: education, play, leisure, social participation, activities of daily living (ADLs; e.g., eating, dressing, hygiene), instrumental activities of daily living (IADLs; e.g., meal preparation, shopping, managing finances), health management, sleep and rest, and work.¹

OTPs work with people across the lifespan in a variety of settings such as schools, outpatient clinics, hospitals, mental health facilities, and nursing homes. They may also work in non-traditional or specialized settings such as community-based programs. Task analysis is used to identify the various factors (e.g. motor, environmental, cognitive) that serve as barriers or supports to participation in these areas.¹ After the OTP, caregiver, and child work together to establish goals, they begin to work towards those goals by modifying the activity and/or engaging in activities that develop the needed skills. Pediatric OTPs work hard to make sessions fun and engaging. This often includes addressing skills through games, crafts, and other play activities, as well as collaborating with parents on strategies to implement at home. What an occupational therapy session will look like depends on the individual OTP, child, and goals.

Why would my child need occupational therapy if they don't have a disability?

In addition to working with individuals who have experienced an injury or illness or live with a disability, OTPs also work to help improve health and wellness in the general population. The trauma, lack of attachment, and instability experienced by some children and youth who are adopted or in foster care leads to altered brain development which can result in delayed or impaired motor, social, cognitive, self-regulation, and sensory processing skills.^{2 · 3} In addition, they may have lacked the modeling and teaching of play, emotional regulation, self-care, and household management skills by caregivers.¹ These factors can impact their engagement in a variety of occupations. OTPs are well equipped to support foster and adoptive families by supporting these skills to improve their quality of life.

Skills Commonly Addressed in Pediatric Occupational Therapy⁴



Feeding Skills

oral motor, exploring new foods, using utensils



Gross Motor Skills

balance, coordination, strength

Fine Motor Skills

object manipulation, precision, finger isolation

Visual Motor & Visual Perceptual Skills

scanning, tracking moving objects, visual discrimination



Emotional Regulation

self-awareness, calming strategies, attention



Sensory Processing

registering and responding to sensory input in a healthy way



Play Skills

turn taking, imagination, sequencing



Social Skills

perspective taking, making and maintaining friendships

Self-Care Skills

dressing, bathing, toileting, grooming



Life Skills

cooking, cleaning, navigating the community



Think your child would benefit from occupational therapy....

Ask your pediatrician for a referral for outpatient or early intervention (ages birth-3) occupational therapy services.

Self-Regulation: What it is and why it matters.

Let's start with the definition of regulation.

To regulate means to adjust, monitor, or direct.⁵ Think about how we regulate the temperature of a room using a thermostat. Self-regulation is our ability to control responses within ourselves. This includes our arousal level, behavior, emotions, thinking, and attention.⁶ There are several components of self-regulation including:

Sensory Regulation: the ability to adjust your arousal level (how alert you are) to match the situation^{6, 7}

Emotional Regulation: the ability to control your emotions and respond to the situation in a safe and appropriate way^{6, 8}

Cognitive Regulation: the ability to control and sustain thinking and attention⁶

Why is self-regulation important?

When you self-regulate, you are controlling your nervous system and managing physiological functions such as your heart rate, breathing, and blood pressure.⁹ By managing your nervous system, you are calming your brain and body so that you are equipped to perform a range of important abilities including:

- controlling your emotions
- positively interacting with others
- avoiding inappropriate or aggressive actions
- carrying out self-directed learning¹⁰

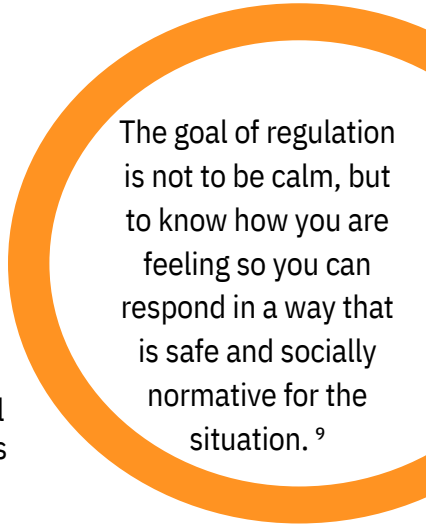
Self-regulation plays a foundational role in the development and well-being of individuals across the lifespan.^{8, 11} Studies have shown that greater self-regulation is associated with positive outcomes in a range of attributes including school readiness, healthy behavior, academic achievement, physical health, and mental health.⁸ Conversely, poor self-regulation is a mechanism responsible for transmitting the effects of early adversity to developmental dysfunction later in life and has been linked to adverse outcomes such as health risk behaviors, psychiatric disorders, substance dependence, crime, and unemployment.^{8, 11, 12}

What does it mean to be dysregulated?

Dysregulation is the expression of distress when a person feels unable to control themselves.⁹

Sensory dysregulation refers to when the sensory system is out of balance as a result of receiving either too much or too little sensory stimulation from the environment.⁷

Emotional dysregulation refers to the inability to control one's emotional state, resulting in actions and behaviors that interfere with the ability to engage with others or respond to a situation in a healthy way.¹³



The goal of regulation is not to be calm, but to know how you are feeling so you can respond in a way that is safe and socially normative for the situation.⁹

5 Signs Your Child May Be Dysregulated:

- Has a hard time with transitions (even between familiar activities)
- Acts impulsively
- Has difficulty responding to verbal instructions
- Quickly becomes very frustrated or emotional when things aren't going perfectly
- Has an unusually high or unusually low energy level¹⁴

THE IMPACT OF TRAUMA ON SELF REGULATION

A child's ability to self-regulate is based on their relationships with their caregivers during their first three years of life. ¹¹



Infants and toddlers rely on their caregivers to give them external cues about how they are feeling. ^{11 · 15} The exchange that occurs when a caregiver labels and responds to a child's emotions creates patterned, repetitive, and reinforced neural wiring that helps the child navigate their senses as the brain develops. ¹⁵ These social exchanges are the basis for their capacity to identify, monitor, and adjust their arousal level based on the chemicals emitted by the brain. In the absence of this experience, their brain defaults to self-protection, meaning they lose the ability to match their arousal level to the social context. ¹⁵ This may look like a child responding to a situation with actions and behaviors that are not considered socially appropriate.



Early life trauma alters brain functioning.

When trauma occurs, the brain will change or shut certain parts down in order to protect itself from stress. When this occurs certain parts of the brain are put on high alert while others are less active. ^{16 · 17} Many children impacted by foster care, kinship care, or adoption have an overactive amygdala which is responsible for activation of the sympathetic nervous system. Our sympathetic nervous system is responsible for the release of adrenaline and other stress hormones as well as our flight, fight, or freeze responses. ^{16 · 17} These responses are intended for activation only during crisis situations, but if a child is under frequent stress they can become chronic, meaning the child is likely to have them in response to seemingly insignificant stressors. ^{16,17 · 18} Studies have also shown that being in foster care is linked with decreased cortex volume. ¹⁹ These changes to brain development often lead to challenges with controlling emotions, behaviors, and impulses. ^{11,19}

Changes in brain functioning can impact sensory processing.



Sensory processing refers to the way we experience and respond to the information coming from our body and the environment. Sensory processing can be divided into 3 components: the sensory input, the interpretation, and the response. ²⁰ For example, when a child gets bumped into in line (sensory input), the child may interpret it as bigger than it is and view it as a threat (interpretation), and then become angry and turn around and push the other child (response). ²⁰ Well-regulated sensory systems contribute to successful social-emotional, motor, communication, self-care, and cognitive skills. ²¹

Individuals with a history of trauma frequently over or under-respond to sensory stimuli due to excessive stimulation of the central nervous system. ²² They may be hypersensitive to sounds, smell, touch, or light, or lack awareness of internal physical sensations, pain, or touch. ²² This can result in extreme overreactions to what others consider mild stimuli, shutting down, or disengaging. ²¹ In addition, challenges with sensory processing can lead to challenges with performing activities of daily living (ADLs), learning, playing, working, and socializing.

Co-Regulation

Regulation must be taught.

Children cannot practice self-regulation until ages 4-5 and cannot do so more dependably until around age 10.¹⁵ In order to learn to self-regulate, children must first co-regulate. During co-regulation, a caregiver provides the child with support, coaching, and modeling to control their emotions.²⁴ As a regulated adult co-regulates with a child the mirror neurons in the child's brain are activated.²⁵ Mirror neurons are brain cells that respond equally when we do something and when we witness someone else doing that same thing (i.e. yawning when you see someone else yawn). These neurons help us feel what others are feeling. Therefore, during co-regulation, they enable the child to "mirror" the adult's calmness.²⁵

In order to co-regulate, you must be regulated yourself.

- Know what triggers you (i.e. your child screaming, crowds)^{9, 26}
 - Be aware of your own sensory processing patterns (see pg. 13)
 - When your child starts to become dysregulated take a moment for yourself before addressing it.
 - Recognize how you are feeling
 - Use deep breathing, self-talk, or another strategy to calm yourself.
- This is also a great way to model self-regulation for your child.²⁶
- Practice self-compassion
 - Acknowledge that supporting a dysregulated child is hard
 - Give yourself grace when you "flip your lid"^{9, 26, 27}

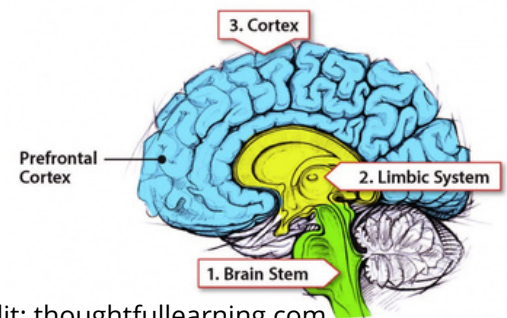
What does it mean to "flip your lid"?

"Flipping your lid" is a term coined by Dr. Dan Siegal that refers to the moments when we are overcome with stress or anger and act/react before we think. This occurs when due to the stress we are experiencing, we are unable to access the higher or "upstairs" part of our brain, which is responsible for reasoning, and therefore rely on the lower or "downstairs" part of our brain which is responsible for our innate reactions and impulses, and strong emotions.²⁷

The 3R's

When supporting a child in moments of dysregulation it is important to consider the hierarchy of the brain.²⁸ We must meet the needs of the simpler lower parts of the brain before we can move to higher and more complex brain functioning.²⁸ Dr. Bruce Perry, a clinician, and researcher specializing in the neurological impacts of child trauma, explains this concept using the "3 R's": regulate, relate, and reason.

1) Regulate! The lowest part of the brain is the brainstem which processes incoming sensory input and regulates physiological functions (e.g. breathing, heart rate, blood pressure).²⁸ During this stage focus on making the child feel calm, loved, and safe.²⁴ Notice your child's arousal level. Do they need to become more calm or more alert to match the situation? Model deep breathing and help them utilize any other strategies to calm their nervous system and adjust their arousal level to match the situation.



Photocredit: thoughtfulllearning.com

2) Relate! A key function of the limbic system is attachment.²⁸ After you help your child regulate, take the time to connect with them. Get down on their level, make eye contact, and then resonate with the child's distress.²⁴ Just validate their emotions, don't try to change them. Then engage in an activity together: sing a song, read a book, go for a walk, or do a sensory activity.

3) Reason! Reasoning and other complex functions such as language and abstract thinking occur in the cortex of the brain.²⁸ Once a child feels safe and connected, they can use the higher thinking portion of their brains and engage in learning and reflection.²⁴ Now is the time to bring up alternatives to behaviors while reinforcing the limits you have previously set.

Remember language is a higher-level brain function, so limit how many words you use while co-regulating.²⁸ Yelling or trying to reason with them when they are dysregulated is not effective.

Understanding Sensory Processing Patterns

The next section of this resource guide contains three sensory checklists: one for infants/toddlers, one for children (ages 4- 10), and one for adolescents and adults (ages 11+). The checklists are designed to identify sensory over- or under- responsiveness in yourself and the children you care for in order to select the most appropriate sensory strategies for helping them self-regulate. The actions included on the checklist are categorized as either under-responsive or over-responsive. Selecting which preferences apply to you/your child the majority of the time will help you identify your/your child's sensory processing patterns.

The 8 Senses

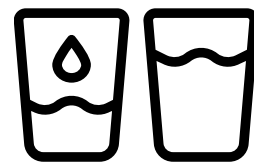
Each checklist will be organized by the 8 different senses. Our senses are the way we receive information from our body and the environment. There are five external senses (also known as the “kindergarten senses”) that you probably have learned about:

- Tactile (touch)
- Auditory (sound)
- Visual (sight)
- Gustatory (taste)
- Olfactory (smell) ¹⁵

(gustatory/olfactory will be grouped together in the checklists as taste and smell are connected)

Each person processes sensory information differently and this greatly impacts the way that we experience and respond to different situations.

Think of sensory systems as cups. Everyone has a different sized cup and the goal is for everyone's sensory cup to feel full, but not overflow. The bigger the sensory cup, the more sensory input that person needs within that system. If someone has a small sensory cup, they can only handle a small amount of input before the cup overflows.



Over-Responsiveness

Over-responsiveness (also called hypersensitivity) refers to when a person has a low threshold for sensory input and becomes overstimulated. ²⁶ Think of an overflowing cup. They may be sensory sensitive and feel overwhelmed by sensory information, and therefore, display frustration and be easily distracted, irritable, cautious, and uncomfortable in loud or bright environments. ^{26,29,30} Someone who is over-responsive may also actively avoid the stimulation. For example, they may run away from busy places, cover their ears when overstimulated by noise, or wear gloves to avoid touching certain textures. ^{29,30}

Under-Responsiveness

Under-responsiveness (also called hyposensitivity) refers to when a person has a high threshold for sensory stimuli, and experiences little or no response from a stimulus. ²⁶ Think of an empty cup. In response to not processing all of the incoming sensory information, they may either appear uninterested or inattentive to their surroundings or compensate by actively seeking sensory input to fill their needs. ^{26,29,30} Sensory seeking can look like hyperactivity, touching others often, or engaging in unsafe activities like jumping from heights. ^{26,29,30}

On page 15, you will find a sensory strategy tracking log that can be used to record your child's sensory preferences based on the checklist and keep track of the corresponding strategies you wish to use. Remember that the following checklists are not a diagnostic tool but a way to identify sensory over- or under-responsiveness.

Sensory Checklist For Infants & Toddlers

The following checklist is designed to identify sensory over- or under-responsiveness in infants and toddlers (ages 0-3), and is not a diagnostic tool. Please note that a child's sensory processing patterns can change over time or be situational. Select the items that are applicable the majority of the time. Some items listed may not be applicable for your child based on their age or culture.

Tactile

Over-Responsive

- Avoids messy play (i.e. finger painting, playdough)
- Dislikes brushing teeth/hair, cutting nails/hair
- Has limited food preferences, sensitive to food textures
- Cries/fusses during diaper change/when being dressed
- Is distressed by baths
- Startles easily when touched unexpectedly
- Has/had difficulty transitioning to solid foods
- Overreacts to minor injuries or mosquito bites
- Resists cuddling or being held (cries/arches back)
- Appears uncomfortable with clothing textures/tags
- Dislikes/refuses to put feet in grass and/or sand
- Dislikes being dried off by towel

Under-Responsive

- Prefers to be without clothes and barefoot
- Doesn't seem to notice messy hands/face (after 12mo)
- Seems unaware of light touch
- May stuff too much food in their mouth
- Doesn't notice runny nose or food on their face (after 18mo)
- Doesn't appear to notice wet/soiled diaper (after 18mo)
- Prefers varied/specific textures of clothes/toys/food
- Wants to touch/feel everything in their environment
- Constantly fiddles with clothing, surfaces, or objects
- Craves hugs, kisses, and contact with others
- Prefers messy play (i.e. finger painting, playdough, sand)
- Doesn't notice/slow to respond when hurt, doesn't mind shots

Proprioceptive

Over-Responsive

- Holds their body in odd positions or appears lethargic (tired and slow movements)
- Moves whole body (not just head) to look at something
- Is hypersensitive to pain
- Avoids or dislikes wearing tight clothing
- Is very sensitive to touch and avoids situations where others may touch them (i.e. hugs)
- Avoids activities such as roughhousing, jumping, banging, pushing, bouncing, climbing, hanging
- Prefers smooth/creamy foods over crunchy/chewy foods

Under-Responsive

- Must be held or use positioning aids/swing/bouncy seat to sleep
- Loves jumping, climbing, and crashing activities
- Enjoys rough play (can be excessively rough with others)
- Walks heavily or on toes
- Prefers to run, jump or stomp when they should be walking
- Prefers crunchy and chewy foods
- Very attached to pacifier (after 1 y.o)/sucks thumb or fingers, bites/chews on clothes/toys (after 2 y.o)
- Prefers tight clothing
- Loves tight hugs and squishing activities or positions
- Chooses thick or heavy blankets
- Likes to sit with knees tucked under themselves
- Hyperextends joints (e.g. bends back fingers, locks knees)
- Engages in self-injurious behaviors: pinching, biting, bangs body parts (e.g. bangs hands together, bangs jaw with hand)

Interoception

Over-Responsive

- Seems to have a low pain tolerance
- Displays significant distress with temperature change (e.g. when cold after bath, after stepping outside on hot day)
- Frequently complains of various aches and pains

Under-Responsive

- Difficult to toilet-train
- Unable to recognize when they are hungry or full (apparent lack of hunger/thirst)
- High pain tolerance/inappropriate response to pain
- Difficulty falling asleep/staying asleep
- Doesn't seem aware of symptoms of illness (e.g. sore throat or nausea)

Vestibular

Over-Responsive

- Dislikes being held away from adult's body or tossed in air, may be clingy
- Dislikes feet being off the ground (avoids swings, slides)
- Fearful of escalators, elevators, and all heights
- Resists leaning back (e.g for hair washing) or floating on back in pool
- Frequently experiences motion sickness, dizziness, or nausea due to watching things move
- Avoids movement
- Dislikes tummy time

Under-Responsive

- Is happiest when rocked or in a stroller, swing, or bouncer
- Dislikes sedentary tasks
- Is in constant motion (loves spinning, swinging, being upside down)
- May have low muscle tone (muscles and joints seem too soft and floppy)
- "W" sits on the floor, slumps/leans in a chair
- Rocks self or moves head back and forth while sitting

Auditory

Over-Responsive

- Easily startled/cries with noises such as vacuuming, hairdryers, toilet flushing
- Dislikes noisy places
- Is easily distracted and bothered by background noises
- Frequently cries, covers ears with loud or unexpected sounds
- Often asks others to be quiet

Under-Responsive

- May not consistently respond to their name (even though hearing is intact)
- Prefers TV volume and music to be loud
- Often doesn't notice background noises
- Makes own sounds frequently, enjoys silly sounds of others
- Frequently says "What?"/needs things repeated (even though hearing is intact)
- May appear oblivious to some sounds, has difficulty locating sounds
- May use self-talk to get through a task

Visual

Over-Responsive

- Bothered by bright lights or sun (blinks, squints, closes eyes)
- Likes wearing hats or sunglasses
- Dislikes visually busy places (i.e. stores, playgrounds)
- Avoids eye contact
- Prefers dim lighting and/or shade
- Rubs eyes a lot

Under-Responsive

- Loves shiny, bright, patterned, spinning, or moving objects
- Difficulty with eye-hand coordination tasks (catching a ball, stringing beads)
- Loves action-packed, colorful TV shows, and electronic games

Olfactory/Gustatory

Over-Responsive

- Talks about smell a lot
- Notices odors others don't notice
- Plugs nose, avoids places with strong smells
- Dislikes new foods, may have very limited food preferences
- Dislikes fragrances from perfume or bath products

Under-Responsive

- Smells and licks inedible objects
- Likes strong odors (i.e perfume, cleaning products, gasoline)
- Prefers strongly flavored foods
- Doesn't notice/care whether food is spicy or bland
- Struggles to distinguish between different smells

Sensory Checklist For Children

The following checklist is designed to identify sensory over- or under-responsiveness in children ages 4-10, and is not a diagnostic tool. Please note that a child's sensory processing patterns can change over time and be situational. Select the items that are applicable the majority of the time. Some items listed may not be applicable for your child based on their age or culture.

Tactile

Over-Responsive

- Avoids affectionate touch (hugs, kisses, holding hands)
- Dislikes being barefoot or certain clothing textures, seams, tags, waistbands, etc.
- Avoids messy play/activities (finger painting, glue, baking, sand), may touch only with fingertips for minimal contact and wants to wash hands during or immediately after activities
- Dislikes nail-trimming/hair-cutting/hair-brushing/tooth-brushing
- Limited food preferences, sensitive to food textures
- Excessively ticklish
- Avoids standing close to others, dislikes being bumped into or brushed passed
- Dislikes/avoids eating foods with fingers/hands
- Overreacts to minor injuries or mosquito bites
- Perceives touch as a threat, and may respond with physical or verbal aggression or appear startled/alarmed
- Sleep may be impacted due to bed linen or blanket textures

Under-Responsive

- Always touching others
- As a young child prefers to be without clothes/barefoot
- Doesn't seem to notice messy hands or face
- Needs to touch and feel everything/constantly fiddles with clothing, surfaces, or other objects
- Brings objects and toys to mouth frequently
- May stuff too much food in mouth
- Seems unaware of light touch
- Doesn't seem to notice cuts/scrapes, doesn't mind shots
- Drools, doesn't wipe runny nose
- Unintentionally rough on pets or other kids
- Prefers toys, clothing, and food with varied/specific textures
- Craves hugs, kisses, and contact with others
- Prefers messy play activities (finger paint, playdough, sand)

Visual

Over-Responsive

- Dislikes visually busy places (stores, cluttered rooms)
- Avoids eye contact
- Prefers dim lighting or shade, and enjoys playing in the dark
- Rubs eyes a lot
- Gets headaches/watery eyes from screentime/reading
- Sensitive to bright lights
- Easily distracted by other visual stimuli in the room
- Has difficulty in bright, colorful rooms

Under-Responsive

- Loves shiny, spinning or moving objects
- Difficulty with eye-hand coordination tasks
- Loves colorful, action-packed TV shows/video games
- Has difficulty with visual tracking, may lose place frequently while reading
- Craves bright and colorful (often busy or cluttered) spaces
- Loves to line things up
- Has difficulty writing (i.e. spacing between words, letter formation, letter size)

Olfactory/Gustatory

Over-Responsive

- Talks about smell a lot, notices odors others don't notice
- Plugs nose, avoids places with strong smells
- Dislikes new foods, has limited food preferences
- Refuses to eat certain food because of the smell
- Offended or nauseated by bathroom/body odors
- Bothered by smell of perfume, deodorant, aftershave
- Bothered by household or cooking smells

Under-Responsiveness

- Smells and licks inedible objects
- Likes strong odors (perfume, cleaning products, gasoline)
- Prefers strongly flavored foods
- Unable to identify smells of scented stickers/pens
- Does not notice odors that others complain about
- Excessive use of smelling when introduced to objects, people, or places

Auditory

Over-Responsive

- Dislikes noisy/crowded places
- Easily distracted and bothered by background noises
- Cries, covers ears, or runs away with loud or unexpected sounds
- Frequently asks others to be quiet/to stop talking or singing
- Fearful of sounds such as a flushing toilet, vacuum, hairdryer, dog barking
- Startled or distracted by loud or unexpected sounds
- Finds some voices to be very disturbing

Under-Responsive

- May not consistently respond to name (even though hearing is intact)
- Prefers TV and music to be loud
- Often doesn't notice background noises
- Makes own sounds frequently, enjoys silly sounds
- Says "What?"/needs directions repeated frequently (even though hearing is intact)
- May appear oblivious to some sounds
- Has difficulty locating sounds
- Uses self-talk to get through a task, or hum to stay focused

Interoception

Over-Responsive

- Seems to have a low pain tolerance
- Displays significant distress with temperature changes (i.e. when cold after bath, stepping outside on a hot or cold day)
- Extreme fear of medical procedures
- Frequently complains of various aches and pains

Under-Responsive

- Difficult to toilet train
- Apparent lack of hunger/thirst
- High pain tolerance/inappropriate response to pain
- Difficulty falling asleep/staying asleep
- Doesn't dress appropriately for weather
- Doesn't seem aware of symptoms of illness (e.g. sore throat or nausea)

Proprioception

Over-Responsive

- Dislikes tight clothing
- Is very sensitive to touch and avoids situations where others may touch them
- Holds their body in odd positions or appears lethargic, tires easily after standing for periods of time
- Appears stiff while walking or standing
- Moves their whole body (not just their head) to look at something
- Appears uncoordinated compared to other children their age
- Is hypersensitive to pain
 - Avoids high-risk play (jumping from extreme heights, climbing tall trees, riding a bicycle over gravel)
 - Avoids activities such as climbing, roughhousing, hanging upside down, bouncing, and jumping
 - Prefers smooth and creamy foods over crunchy foods

Under-Responsive

- Loves jumping, climbing, and crashing activities
- Prefers crunchy and chewy foods
- Sucks thumb/fingers, grinds teeth, cracks knuckles
- Loves "squishing" activities/positions (i.e. tight hugs)
- Chooses thick or heavy blankets
- Engages in self-injurious behavior (i.e. biting, pinching, head-banging)
- Prefers tight-fitting clothes
- Heavy-handed/uses too much force with objects (juice boxes, crayons/pencils, throwing a ball)
- Chews down hard on inedible objects
- Prefers tight/small spaces
- High pain threshold/does not appear to respond to pain
- Participates in rough play, breaks toys unintentionally
- Walks on toes, walks heavily, or prefers to run, jump or stomp heavily when they should be walking

Vestibular

Over-Responsive

- Avoids anything that requires feet to be off the ground (swings, slides, playground equipment)
- Fearful of escalators, elevators, and all heights
- Gets dizzy/motion sick regularly, gets car sick even on short trips
- Dislikes leaning back (e.g. hair washing), floating on back in pool
- Hesitates or avoids walking up/down stairs and ladders (may seek physical support from adults)
- Dislikes rollercoasters/theme park rides and climbing frames
- Dislikes jumping up and down or off heights, swinging
- Has poor balance (e.g. skating, bicycle riding, and skiing)
- Prefers sedentary activities
- Avoids unstable ground surfaces such as deep pile carpet, grass, sand

Under-Responsive

- Dislikes sedentary tasks
- Is in constant motion, fidgets often
- May have low muscle tone
- "W" sits on the floor, slumps, or leans in the chair
- Loves amusement park rides, is a "thrill-seeker"
- Rocks self or moves head back and forth while sitting
- Frequently engages in fast and impulsive movements
- Loses attention when seated for prolonged periods
- Enjoys fast movements without appearing dizzy
- Loves spinning (carousels, spinning toys, spinning around in circles)

Sensory Checklist For Adolescents & Adults

The following checklist is designed to identify sensory over- or under-responsiveness in adolescents and adults (ages 11 +), and is not a diagnostic tool. It is recommended that caregivers use this checklist to identify their own sensory processing patterns. Adolescents can fill out the checklist for themselves with assistance from caregivers as needed. Sensory processing patterns will likely change over time and can be situational. Select the items that are applicable the majority of the time. Some items listed may be not applicable for you or your child based on age or culture.

Over-Responsive

- Avoids or resists friendly/affectionate touch
- Startled by unexpected touch
- Dislikes rough bed sheets
- Becomes distressed when others invade personal space
- Dislikes putting on deodorant or makeup
- Dislikes the feeling of sweat
- Bothered by tags and seams in clothing
- Clothing does not match the weather
- Overly ticklish
- Uncomfortable being dirty
- Becomes distressed by air blowing on skin (e.g., wind, fan)
- Becomes distressed by needles and shots
- Cannot tolerate lotion/sunscreen
- Dislikes self-care tasks (brushing teeth, cutting nails, combing hair)

Tactile

Under-Responsive

- Applies layers of makeup
- Enjoys being dirty
- Is unaware of dirt/food on skin
- Doesn't mind needles/shots
- Likes going barefoot in grass and sand
- Does not notice light touch or scratches
- Craves food with intense textures
- Enjoys textured nail polish/massages/facial masks
- Needs to touch/fidget with something textured to focus
- Prefers contact sports
- Likes clothes with intense textures (e.g., velvet, sequins, lace)
- Enjoys messy crafting (e.g., pottery, painting)
- Unaware of runny nose or watery eyes
- Is always touching others/invading personal space

Over-Responsive

- Plays music at a very low volume/watches television on mute
- Cannot listen to multiple sounds at once, gets distracted by competing noises
- Cannot focus with quiet background noises
- Startles easily with unexpected sounds (A/C, radio)
- Frequently asks others to be quiet
- Becomes distressed by the sound of someone chewing or making excessive noise
- Does not like common household sounds (toilet flushing, washer/dryer, vacuum)
- Prefers quiet environments or activities/spending time with smaller groups of people
- Focuses best when seated at the front of the classroom
- Has difficulty refocusing when loud noises occur when driving
- Benefits from using noise-canceling headphones
- Finds some voices to be very disturbing, dislikes loud laughter

Auditory

Under-Responsive

- Blasts music
- Focuses best when listening to music or other noises
- Has difficulty hearing people who speak quietly
- Watches television with the volume turned up high
- Does not consistently respond when spoken to
- Requires others to repeat themselves when speaking
- Has difficulty locating sounds
- May appear oblivious to some sounds
- Talks out loud to complete a task
- Doesn't notice background noises
- Enjoys loud environments
- Likes to make sounds echo
- Prefers watching and playing louder sports
- Likes spending time with larger groups of people
- Makes loud noises happen repeatedly

Over-Responsive

- Gets dizzy/experiences motion sickness easily
- Prefers seated/inactive tasks, moves slowly and cautiously
- Afraid of heights
- Doesn't like feet to leave the ground
- Avoids going to amusement parks/riding rollercoasters
- Dislikes high energy sports involving a lot of movement (i.e. roller blading, ice skating, skateboarding, dance, gymnastics)
- Becomes distressed when head is tilted out of a vertical position
- Unmotivated to change positions, may be described as lazy
- Avoids or dislikes elevators and escalators

Vestibular

Under-Responsive

- Loves rollercoasters and swinging
- Can jump on a trampoline for hours
- Loves high energy sports with a lot of movement (i.e. roller blading, ice skating, skateboarding, dance, gymnastics)
- Loves to spin/does not get dizzy when spinning
- Cannot fall asleep without moving enough during the day
- Needs to fidget in order to focus
- Is described to be in constant motion or on-the-go

Proprioception

Over-Responsive

- Appears uncoordinated in movements
- Is hypersensitive to pain
- Avoids wearing tight clothing
- Avoids high-risk play (jumping from extreme heights, climbing tall trees, riding bicycle over gravel)
- Prefers smooth and creamy foods over crunchy foods
- Avoids activities that require physical exertion (climbing, pushing, jumping, bouncing)
- Is very sensitive to touch and avoids situations where others may touch them (i.e. hugs)

Under-Responsive

- Walks heavily or on toes
- Grinds teeth and/or cracks knuckles
- Enjoys rough play/contact sports (football, hockey, wrestling)
- Enjoys sports requiring high flexibility (gymnastics, skating)
- Bumps into things/appears clumsy
- Difficulty regulating pressure when writing/drawing/erasing
- Clicks pen to focus
- Enjoys hugs and physical contact (loves bear hugs)
- Likes to wrap up in blankets
- Loves tight and small spaces
- Prefers when clothes fit tightly
- Stuffs food into mouth/eats quickly
- Breaks items unintentionally
- Cannot identify objects by touch alone
- Cannot type or write without looking
- Gets lost easily when driving/has difficulty giving directions
- Needs to chew gum or eat crunchy snacks to focus
- Frequently slumps, lies down, or leans head on hands/arms at desk/table

Interoception

Over-Responsive

- Has a low pain tolerance
- Find sensations that should not be painful to be painful
- Becomes distressed by temperature changes
- Frequently has “growing pains” or general aches/pains
- Is frequently nauseous
- Has poor hunger tolerance (gets “hangry”)
- Constantly feels the need to urinate
- Is resistant to medical procedures
- May become “distracted” by their heart beat

Under-Responsive

- Has a high pain tolerance
- Burns mouth easily
- Has difficulty distinguishing between temperatures
- Has difficulty recognizing hunger cues
- Over-eats and/or has difficulty recognizing fullness/satiety
- Requires food to include a lot of spices
- Does not recognize need to use the bathroom until it is urgent
- Dresses inappropriately for the weather/temperature
- Has difficulty recognizing signs of sickness

Over-Responsive

- Sensitive to bright lights (gets headaches from the light)
- Always needs to wear sunglasses
- Is affected by blue light from electronic devices
- Dislikes video games
- Dislikes bright or visually busy places
- Becomes distressed by disorganized spaces
- Avoids making eye contact
- Prefers working in dim light/enjoys playing in the dark
- Cannot fall asleep unless in total darkness
- Rubs/has watery eyes after reading or looking at a screen
- Gets headaches from visual tasks
- Easily distracted by other visual stimuli in the room

Visual

Under-Responsive

- Enjoys looking at bright/shiny objects
- Prefers colorful items
- Demonstrates poor hand-eye coordination
- Has difficulty visually tracking moving objects
- Has difficulty keeping place when reading
- Enjoys fast paced video games
- Loves spending time in visually busy environments
- Has difficulty locating an item in a busy visual environment
- Does not need to wear sunglasses
- Is not affected by stimulating blue light
- Has difficulty recognizing road signs when driving

Gustatory/Olfactory

Over-Responsive

- Talks about smells often
- Notices odors that others don't
- Is sensitive to perfume/cologne
- Cannot tolerate smell of conventional cleaning products
- Doesn't like candles or air fresheners
- Avoids places with strong smells
- Has a limited food repertoire
- Becomes distressed by being around others who smell

Under-Responsive

- Is unaware of some smells
- Prefers strong flavors of foods
- Is more alert after eating a strong flavor
- Does not recognize body odor
- Wears/prefers when offers to wear a lot of perfume/cologne
- Likes strong smells (e.g., soaps, gasoline, cleaning products)
- Loves candles and air fresheners
- Needs to smell things before tasting them

Strategy Tracking Log

After you complete the checklist(s), fill out the log below for each child and yourself. Look at whether you/your child's sensory preferences lean heavily towards under- or over-responsiveness for any of the senses (e.g. you checked almost all the boxes for tactile under-responsive). You may find that for certain senses you did not check any boxes or checked equal proportions of over- and under-responsiveness for certain senses, that is normal. Then as you go through the strategy section, use this page to keep track of the ones you want to try and take notes on how it went, what materials are needed, and tips to remember.

Areas of over-or under-responsiveness:

Strategy/Activity to Implement

Outcome

When did you try it, how did they respond?



10 Considerations

FOR IMPLEMENTING SENSORY STRATEGIES

1. Arousal Levels

Your arousal level is the state of your nervous system, ranging from asleep to awake, which refers to how alert you are at a given moment. ^{14, 37} The optimal arousal level is dependent on the situation but typically falls somewhere between bored and anxious where we feel both alert and calm. ¹⁴ Before selecting a strategy/activity you must consider where your child's arousal level is at and where it ideally should be for the situation. Calming activities will help decrease a child's arousal level (such as transitioning from high-energy play to nap time) while alerting activities will help increase arousal levels (such as maintaining attention in school). ¹⁵ There are several programs designed to help children learn to recognize and regulate their arousal levels, including *The Alert Program* ³⁸ and *The Zones of Regulation* ³⁹ which you can find more information about online.

2. Meeting the Sensory Threshold

The sensory threshold is the point at which someone reacts to sensory input. Your body needs a certain amount of sensory input to feel good, if you have too much or too little it will be difficult to be in control of your body and maintain attention. The goal is to give your child just the right amount of sensory input they need to be regulated.

*Give your child the sensory input they are seeking first, and then do a calming activity. Doing a calming activity when your child has not met their sensory threshold may not be beneficial and can lead to further dysregulation.

*After completing the activity assess whether they have met their threshold.

Signs that the threshold has been met:

- they are no longer seeking input
- improved focus and attention
- calmer and more organized

* End alerting activities with proprioceptive input (i.e. wall pushes, slow animal walks, pushing hands together) ⁴⁰

4. Rhythm, Repetition, and Relationships

Engaging in patterned, repetitive, rhythmic activity, (walking, running, singing, meditative breathing) elicits a feeling of safety and helps our brain regulate. ⁴¹

Make the activities rhythmic, repetitive, and relational by doing them often and together, and counting, singing, or moving to music while completing them.

6. Timing

- Engage in these activities before tasks that require the child to be regulated and maintain attention (i.e. school, mealtime).
- They can also be incorporated into daily routines (i.e. animal walks from bathroom to bedroom during night time routine).
- Spread sensory activities throughout the day, the effects can last up to a few hours depending on the child and amount of input.
- Some strategies (i.e. breathing techniques) can be used in moments of dysregulation, but should be taught and practiced while the child is calm so that it does not require them to learn while dysregulated. ¹⁵

7. Make it Multi-Sensory

Engaging in activities that involve multiple senses activates different parts of the brain, therefore, improving learning abilities. ⁵⁶ Many of the activities in this guide can address several different senses. (i.e. kneading playdough (proprioceptive & tactile) that is scented (olfactory)).

9. Environment

Consider how the environment will influence arousal levels. For example, doing activities in a brightly lit room with lots of noise will not be as calming as doing so in a quiet, naturally lit room.

3. Adverse Reactions

In some cases, the input may be too intense for the child and lead to adverse reactions such as:

- Nausea or vomiting
- Variation in skin color (flushed or pale)
- Dizziness/loss of balance
- Dramatic change in heart rate
- Hyperventilation
- Excessive sweating
- Becoming angry, upset, or irritable ^{14, 4}

Reactions can be immediate or delayed. If your child has an adverse reaction it is recommended to stop the activity, provide proprioceptive input, and decrease the intensity (i.e. repetitions or duration) in the future. ¹⁴

5. Triggers

When choosing activities it is important to consider ways it could trigger past traumatic experiences (i.e. smells, textures, positioning, materials involved, touch). Make sure to explain what will happen beforehand and ask for their consent before touching them.

8. Your Own Needs

When choosing strategies/activities to engage in with your child you must also consider your own arousal level and sensory preferences. Choosing an activity that will leave you dysregulated will not benefit your child. It is also important to consider if the strategies may impact other people in the home (i.e. changing lighting, using certain scents).

10. Trial and Error

The strategies included in this guide are not one size fits all. It is important to remember that some strategies may take time or not work for your child.

Vestibular Strategies

The vestibular system plays an important role in many skills necessary for everyday activities including motor planning, balance, postural control, body awareness, sustaining attention, coordination, and organization. ¹¹The vestibular system is activated by head position changes (i.e. being upside down, spinning, turning their head, looking up and down). ¹⁵ The activities on this page will help your child improve their vestibular processing by becoming more comfortable with vestibular input and/or meet their need for vestibular input. Vestibular input can be overwhelming and may lead to adverse reactions. ¹⁴ Perform these activities with caution and at your own discretion.

Over-Responsiveness

People who are over-responsive to vestibular input often avoid, are fearful, or become overstimulated by vestibular input. They may be very tense or rigid to avoid changes in head position, have a significant fear of falling, and be slow-moving, cautious, or hesitant to take risks. ¹⁴

Engaging in the following vestibular activities in a structured, non-threatening, fun, and repetitive way will help their nervous system become used to vestibular stimulation and allow them to process and react to the input more efficiently. ¹⁴

Tips for Vestibular Activities

Vestibular input is very powerful and therefore needs to be used with caution. When engaging in vestibular activities with your child make sure to:

- Use proprioceptive input before/during/after vestibular input (see pages 19-20)
- Be on the lookout for adverse reactions
- Start slow. Engage in the activities in very short durations and then build up.
- Take frequent breaks to check in with the child
- Start with activities where their feet remain on the ground while changing positions (e.g. "head, shoulders, knees and toes") ^{14,42}

Calming Strategies

Calming vestibular strategies should be used before bedtime and in other situations where your child needs to decrease their level of alertness. Movements that are calming to the vestibular system include: slow top-to-bottom movement (think of bouncing a baby), gradual position changes, and slowly rocking front to back or side to side.

- Slow, linear, rhythmic swinging ^{15,42}
- Gentle stretching (especially the neck and back) ⁴²
- Slow animal walks with head inversion (i.e. bear walks) ⁴², see page 20
- Rocking back and forth in a rocking chair ^{42,15}
- Tai Chi
- Yoga - try the poses on the right and the following resources:
 - flowandgrowkidsyoga.com
 - *Cosmic Kids Yoga* YouTube Channel
 - *Go with YoYo-Fitness Fun For Kids* YouTube Channel

Under-Responsiveness

People who are under-responsive to vestibular input often seek movement and vestibular input, struggle to sit still, enjoy spinning or swinging for long periods of time without getting dizzy, and may be considered a thrill-seeker or daredevil. ¹⁴

People who are under-responsive need more vestibular input to know where they are in space. The following vestibular strategies/activities can be used to meet their sensory threshold. ¹⁴

Adverse Reactions

When your child engages in vestibular activities make sure to watch for the following:

- Nausea
- Variations in skin color (flushed or pale)
- Dizziness
- Falling/loss of balance
- Excessive sweating
- Becoming angry or irritable
- Yawning
- Vomiting ¹⁴

These reactions may occur immediately or several hours after engaging in the activity.

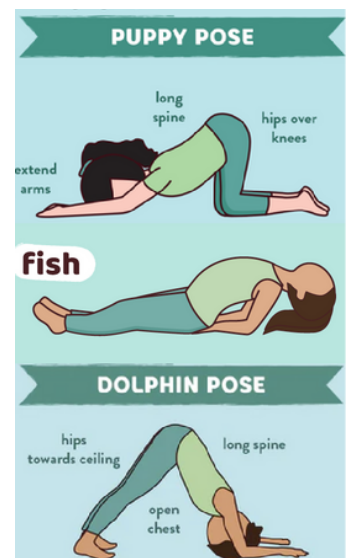


Photo Credit: Flow and Grow Kids Yoga

Alerting Vestibular Activities

Jumping

Jumping side to side, up and down, or forwards and backward are all great ways to get vestibular input and regulate the nervous system. ¹⁴ Variations of jumping activities include: hopscotch, jumping rope, pogo sticking, jumping onto a crash pad or couch cushions, jumping jacks, Chinese jump rope, jumping on a trampoline, ankle skipping toys, or jumping to a target. Other jumping games include:

Lily Pad Jump: This game from Toddler Approved is great for practicing letter and number recognition. Cut lily pad shapes out of card stock or paper and write a different letter or number on each. Place on the floor and have your child jump on the letter/number as you say them, or in sequential order. ⁴³

Laser Beam Maze: Create a laser beam obstacle course using painters tape to attach streamers or yarn between walls or furniture. Have your child jump through the course forwards, sideways, or even backwards.

Tape Jump: To set up this activity from Campus Children's Centre place 5-10 strips of painter's tape approximately 6 inches apart on the floor. Take turns seeing who can jump over the most strips at once or encourage them to jump from one strip to the next.

Swinging

Depending on the type of swing available to you, there's a variety of different positions and directions your child can swing in including sitting up in the swing, laying on the swing, or standing, and swinging forward and backward, side to side, or spinning. Linear (back and forth or side to side) swinging is calming while spinning or elliptical motions are alerting. ¹⁵ If your child spins, make sure they complete an equal number of rotations in both directions. Be on the lookout for adverse reactions and start with 10 seconds or less in each direction. ⁴² Hammocks and hanging chairs, which come in a variety of styles, are great options for teens and adults.

Windmill

To perform this exercise from *Harkla*, start standing up tall with your arms stretched out at shoulder height and feet shoulder-width apart. Reach your right hand to your left foot, stand up tall again, and then reach your left hand to your right foot. Repeat the exercise 10 times. Cue your child to look through their legs at something behind them, if they continue to look straight ahead it may be a sign they are a vestibular avoider (over-responsive). If they lose their balance, the input may be too overwhelming. ⁴²

Exercise Ball

Exercise balls are a great tool for working on vestibular processing and can be purchased for reasonable prices online or at sporting goods stores. Here are three fun ideas from *Chicago Occupational Therapy* for utilizing an exercise ball:



Photo Credit: Chicago Occupational Therapy

Supine: Have your child lean back on the therapy ball so they are eventually upside down with their hands over their heads, and then come back to an upright position. Support your child by holding their hips or thighs. Make it a game by having them grab something such as a foam ball or bean bag from behind and then drop it in a basket or throw it at a target when they resume the upright seated position. ⁴⁵

Bouncing: Have your child sit on top of the ball and start to bounce up and down on the ball. Hold your child's hips or thighs for additional support. You can encourage them to bounce rhythmically while counting or singing a song. ⁴⁵

Prone: Have your child lay on their stomach on the ball as you roll them back and forth. For an extra challenge, roll your child forward and have them hold themselves up on their arms while completing a puzzle or playing a game. ⁴⁵



Photo Credit: Chicago Occupational Therapy

More Vestibular Activities

From *Your Kid's Table* ⁴⁶

- Lying on stomach and propping up on elbows to complete an activity
- Scooter board (spinning, lying on stomach, holding a rope and being pulled)

- Gymnastics
- Doing a handstand against a wall
- Sit 'n Spin/Dizzy Disc
- Monkey bars
- Merry-go-round

- Hanging upside down
- Swimming
- Martial arts
- Going down a slide
- Log rolling

- Skateboarding
- Cartwheels
- Balance beam
- Wobble board
- Dancing

PROPRIOCEPTIVE Strategies

Proprioception is the sense that tells your body where it is in space through sensory receptors in your skin, muscles, and joints. ¹⁴ Proprioceptive input is usually very calming to the nervous system and overrides overstimulating input in other systems. ¹⁴ · ¹⁵ These calming activities (i.e. deep pressure, massage, heavy work) can be beneficial to use before bed or quiet activities, after overstimulating activities/input (such as vestibular or tactile input), and before transitions. Children who are under-responsive to proprioceptive input may chew on things, love heavy blankets, frequently crash into things or flop on the floor, and seek out tight hiding spots. ¹⁴.⁴⁷ It is less common to be over-responsive to proprioception. ³¹ Proprioceptive input can also be alerting (i.e. running, jumping). ¹⁵ It is important to note that many activities in this guide incorporate vestibular, tactile, and proprioceptive input all at once. Studies show that 15-20 minutes of proprioceptive input can help calm an over-responsive child or alert an under-responsive child, depending on their own unique circumstances. ⁴⁸

Heavy Work

The term heavy work refers to activities that push or pull against the body and create active resistance. Heavy work is calming to the nervous system. ¹⁵.³¹ Some examples of heavy work include:

- Carrying a heavy book/stack of books to school or the library
- Helping to carry groceries in from the car
- Riding bike or scooter to school
- Pushing delivery boxes from the front doorstep into the house
- Taking out the garbage or collecting recycling
- Loading the washer/dryer, carrying the laundry basket
- Vacuuming, mopping, or sweeping
- Shoveling snow, raking leaves, or completing other seasonal yard work
- Pushing a grocery cart or stroller (real or toy version)
- Pulling a loaded wagon
- Moving furniture or pushing and stacking chairs
- Kneading dough and rolling it out with a rolling pin (i.e. pizza, cookie, or playdough) ⁴⁷ · ³¹.¹⁵

Sports and hobbies are a great way to incorporate sensory input for older children, teens, and adults. Hobbies that involve proprioceptive input include:

- Running
- Swimming
- Playing woodwind instruments
- Drumming
- Horseback riding
- Gymnastics
- Skiing
- Sledding
- Rock climbing
- Cycling
- Yoga
- Wrestling
- Baseball
- Pottery ⁴⁷ · ³¹.¹⁵

Oral Motor Input

Heavy work to the jaw via food or other oral motor input has a quick impact because the cranial nerves that come from the brain down to the jaw are some of the shortest nerves and therefore can have the most input.

- Chewing gum or eating crunchy/chewy snacks (e.g. dried fruit/fruit leather, beef jerky)
- Using “chewelry” or chew necklaces to deter from chewing on clothes
- Drinking thick liquids (milkshakes, yogurt, pudding) through a straw
- Using water bottles with a bite valve or silicone straw
- Make a bubble mountain: Fill a bowl with some water and a few drops of dish soap and have your child blow through a straw to make a mountain of bubbles
- Have a cotton ball race: See who can use a straw to blow a cotton ball across the floor or table the fastest, or create a path to follow using masking tape
- Blow painting: Add a few drops of watercolor paint to card stock with a dropper or paintbrush. Then blow through the straw at the paint drops. ¹⁵ · ³¹ · ⁴⁹

Active Proprioceptive Activities Cont.

- Throwing/catching a weighted ball ^{14, 31}
- Tug of war ³¹
- Push-ups/wall pushes/chair push-ups ¹⁴
- Crawling through a tunnel or obstacle course ¹⁴
- Wheelbarrow walks ³¹
- Lying on their stomach over an exercise ball and holding themselves up with their arms ³¹
- Pillow fights ¹⁵
- Lying on scooter-board on stomach and propelling self with hands or sitting and using your feet to push yourself off of the wall
- Jumping and yoga activities found on pages 17-18
- Resistance band stretches or activities ¹⁴



• Children who struggle sitting still in a chair may benefit from having a resistance band wrapped around the legs of a chair to push on with their feet while sitting ¹

Animal Walks

	<p>Frog Jump</p> <p>Key Points</p> <ul style="list-style-type: none"> • Squat down like a Frog • Jump as high as you can • Repeat this across the room
	<p>Bear Walk</p> <p>Key Points</p> <ul style="list-style-type: none"> • Extend legs straight • Head down
	<p>Crab Walk</p> <p>Key Points</p> <ul style="list-style-type: none"> • Bottom up for level stomach as the child is able • Feet under knees
	<p>Caterpillar Crawl</p> <p>Key Points</p> <ul style="list-style-type: none"> • Start in downward dog • Walk hands out to plank • Walk Feet up to downward dog
	<p>Kangaroo Jump</p> <p>Key Points</p> <ul style="list-style-type: none"> • Feet together • Hands to chest • Small jumps with both feet • Jumps with hands stationary

Photo Credit: Chicago Occupational Therapy

Passive Proprioceptive Activities

Passive proprioceptive activities refer to activities where the input is being applied to the child by an object or other person. These are great relational activities to bond with your child. These activities may not be appropriate for children who are aversive to touch. Remember to ask for your child's consent first and maintain deep pressure, as light touch is usually alerting and can be perceived as a threat. ¹⁵

Deep Pressure



Steamroller: The child lies on their stomach and an exercise ball or foam roller is rolled over their back. ^{14, 31, 45}

Blanket Burrito: Roll your child up in a blanket or yoga mat. ^{14, 31}

Pillow Sandwich: Put one pillow under your child and one over them. Engage with your child by discussing what ingredients you are putting into the sandwich, and if tolerated add more proprioceptive input by pretending to rub them on. ³¹

Photo Credit: Chicago Occupational Therapy

Hug: A simple way to provide deep pressure is to wrap your child in a bear hug and give some deep squeezes

- If hugs are not perceived as safe, lycra sheets or body socks can provide similar stimulation
- Cuddling with pets, hugging a stuffed animal, or self hugging are other alternatives ^{15, 31}

Massage

Arms and legs massage: Have your child sit across from you in a comfortable seat. Place both hands on top of their thighs and work your hands down the legs with strong, squeezing pressure, taking your time and trying not to lose complete touch. Do the same from the shoulders down to the fingers. You can use lotion, oil, or just your hands. ⁵⁰

Use massage tools: Have your child lie on their stomach and give them a gentle back massage with a vibrating tool. You can roll a tennis ball along their back for extra pressure. ⁵⁰

Compression

Wear compression or snug-fitting clothing: Hoodies and clothing with large pockets can allow for the pressure of the garment to be adjusted to the preferred level of tightness. ¹⁵

Brands that carry compression clothing: Under Armor, Fun and Function, Calm Care, Kozie Clothes

Lycra products: Lycra is a resistive material that is often used by occupational therapists to provide deep pressure to help calm a child and improve overall sensory integration. Lycra swings, sheets, tunnels, and body socks, can be purchased online. ¹⁵

INTEROCEPTIVE Strategies

Interoception is the ability to understand and process internal information including hunger, thirst, fatigue, temperature, digestion, respiration, heart rate, and emotions. ¹ There are receptors in our internal organs, muscles, and skin that communicate with the brain to process the information from inside our bodies. Interoception plays a huge role in our participation in everyday activities such as sleeping, eating, and toileting. ¹⁵ Poor interoceptive awareness is also linked to difficulties with emotional regulation. ⁵¹

Over-Responsiveness

Children who are over-responsive to interoceptive input can find everyday sensations, such as hunger or having to use the bathroom, distracting or painful. ⁵¹ This may result in difficulty maintaining attention to tasks if the child is preoccupied with internal stimuli. In response to the internal stimuli, the child may have physical “overreactions” such as anxiety or meltdowns. ⁵¹

Under-Responsiveness

Some children may be under-responsive to interoceptive input and not receive cues from internal sensations. The child may not be able to respond to the pain or feeling in a functional way. ^{15,51} Children who seem to act out without warning, struggle with potty training, or never seem hungry or thirsty, may be struggling with interoceptive processing. ⁵¹

Strategies for Improving Interoception:

Yoga (pg. 20), Repetitive and rhythmic vestibular input (pgs. 17-18), Deep breathing, Deep pressure (pg. 20), Keep schedules consistent, Mindfulness, Heavy work (pg. 19)

Deep Breathing

Deep breathing not only helps children get in touch with their bodies but has a calming effect on the nervous system. ⁵² These techniques are a great way for kids to calm themselves in moments of dysregulation. ⁵² They should be taught and practiced when the child is regulated.

Rainbow Breathing: Have your child start with their arms at the side of their body and then raise their arms as they breathe in and lower them as they breathe out, so their arms make a rainbow. ⁵²



Pizza Breathing: Have your child pretend they are smelling a delicious hot piece of pizza. Say something along the lines of: "Slowly take a big breath in through your nose to smell the pizza slice. Then even slower, blow out through your mouth to cool it down." ⁵³

Breath Buddies: Have your child lie on their back. Place a favorite stuffed animal on their belly. Have them take a deep breath in and watch their stuffed animal rise up as you count to 3, then have them breathe out and watch the stuffed animal come down as you count to 4. ^{53,54}



Hot Air Balloon Breaths: Have your child sit comfortably and cup their hands around their mouth. Have them inhale deeply, and on the exhale (through their mouth) prompt them to expand their hands outward as if they are blowing up a giant hot air balloon. ⁵⁵

Box Breathing: Prompt your child to breathe in for 4 counts, hold for 4 counts breathe out for 4 counts, and hold for 4 counts. ⁵²

In moments of dysregulation it may be challenging for some children to engage in deep breathing techniques. Others ways to promote deep breathing include:

- Blowing bubbles or a pinwheel ⁵⁴
- Singing together ⁵⁴
- Engaging in the cotton ball race, blow painting, and bubble mountain activities on page.

Mindfulness

Mindfulness is the ability or practice of noticing oneself, including thoughts, feelings, and internal sensations. Engaging in the strategies below with your child will not only support their interoceptive development but improve their attention, reduce stress, and increase emotional regulation skills. ⁵⁶

Body Scans

Body scans are a mindfulness meditation practice involving scanning the body for pain, tension, or anything out of the ordinary. It can improve a child's self-awareness and help them feel more connected to their physical and emotional self. Body scan videos tailored for kids of different ages can be found on YouTube. If your child struggles to follow videos you can guide them through one, using the script below by Annie Murphy from *Declutter the Mind* for inspiration.

To start the “body scan game” have your child sit, close their eyes and use their hand to make contact with different points of the body that you prompt them to touch.

“Hand to top of the head. What does the top of the head feel like? Is it warm? Is it hairy? Is it soft? Is it round?” ⁵⁷

“Hand to belly. What does the belly feel like? Are the clothes soft? Is the belly itchy?” ⁵⁷

Continue to guide them through fun prompts and descriptions for body parts, while asking them what the part feels like in the present moment. ⁵⁷

Tense and Relax

In this exercise, also referred to as progressive muscle relaxation, you and your child will tense and relax your muscles to help improve body awareness.

Option 1: Contract your muscles as tight as you can, all at the same time – including arms, legs, face muscles, and clenched fists. Hold for a few moments, and then release. ^{59,60}

Option 2: Instead of tensing all muscles at once, have your child relax each part of their body, starting with their toes, and working up until they get to their heads. Breathe in when you tense, hold for 4 seconds, and breathe out as you release. ^{59,60}

Other Strategies

Keep Schedules Consistent

- Having a consistent meal/snack schedule is beneficial for children who may over or under eat due to poor interoception.
- Spacing out snacks (having set snack times instead of grazing) can help children regulate and understand hunger and thirst cues more effectively.
- Similarly, having consistent bed/nap times and toileting schedules will help children learn their internal cues. ^{15,61}

Focus on the Senses

Focusing on the sensations we are experiencing can help us be in the moment and feel grounded when we become dysregulated. To perform the senses exercise, kids will need to look around and ask themselves the following questions ⁵⁷:

- What can I see?
- What can I hear?
- What can I smell?
- What can I feel?
- What can I taste?

STOP Method

STOP is an acronym for a practice that can be used to engage in mindfulness whenever needed.

S: Stop whatever you're doing. Pause for a moment and close your eyes.

T: Take a deep breath and focus on how it feels.

O: Observe how you feel. Notice what is happening inside and outside of you.

P: Proceed. Open your eyes and continue doing what you were doing. ⁵⁸

Identify and Label Emotions

- Model labeling your own emotions
- Use feelings playing cards
- Play emotion charades: Write different emotions down on slips of paper and put them in a bag or hat. Take turns picking an emotion to portray and acting out that feeling, without speaking. The other person/people must then guess which emotion is being portrayed. ⁶¹

Visual Strategies

Visual sensory stimuli are received by visual receptors located in the eye and stimulated by light, color, and movement. Our visual system is important as it helps us safely move through our environment, maintain balance, locate needed and wanted items, and perform self-care tasks.¹ It is important to note that visual processing is different than visual acuity (sight and sharpness of vision). Someone can have 20/20 vision but still experience difficulty with interpreting visual information. When considering visual processing challenges, it is recommended that you first rule out a diagnosis of a visual deficit.¹

Over-Responsiveness

A child who is over-responsive to visual input may process lighting as much brighter and/or have difficulty filtering out the varying visual stimulation in the room (e.g. is very aware of pictures on the wall, people moving around, screensavers on computer screens, books on shelves, cars outside, etc.). This causes the child to be easily distracted and in more extreme cases they may feel overwhelmed and highly anxious.^{14, 31}

If your child expresses discomfort with bright/fluorescent lighting...

- Keep lights dimmed
- Use natural or lamp lighting instead of overhead lighting
- Remove fluorescent lights
- Position the child away from the source of light
- Be mindful of reflective surfaces around the environment which may magnify the light source
- Allow them to wear sunglasses or a baseball cap
- Warn them before entering environments with different or strong lighting and provide them with a way to indicate when they are becoming distressed by light.^{15, 31}

If the child is easily distracted by visual stimuli in the room (i.e. movement, decorations, toys, windows, doorways, etc.)...

- Reduce visual distractions such as clutter and decor
- Position the child away from doors, windows, and colorful displays (i.e. when in restaurants, classrooms, etc)
- Turn off TVs or computers when not in use as screensavers can be distracting
- Use wall colors that reduce visual stress (e.g. neutral shades)
- Avoid patterned carpet or flooring
- Limit excessive body language and facial expressions when speaking to them
- If needed provide partitions or boundaries for workspaces (i.e. doing homework at the kitchen table) to reduce distractions.^{15, 31}

Under-Responsiveness

A child who is under-responsive to visual input may demonstrate a high threshold for visual input and have challenges with the following: identifying differences in puzzles, pictures, words, or objects, locating a specific item amongst other items, visually tracking items, (i.e. a ball being thrown, a pencil drawing a line), and visually attending to items with little or no contrast.¹⁴ They may seek out increased amounts of visual stimulation to remain alert.³¹

If your child often misses objects in competing backgrounds (i.e. clothing in a drawer, supplies in a desk) or finds it difficult to name or match colors, shapes, and sizes...

- Reduce visual distractions and keep environments organized and clutter-free
- Position them away from doors, windows, and colorful displays (i.e. in classrooms or restaurants)
- Provide visual structure:
- Color code books and school materials
- Use tape as a boundary marker for materials or use picture templates of where items belong in places (i.e. desk, room)
- Organize and label all materials to identify where they belong
- Use visual reminders to aid organization skills (i.e. a list with pictures of items to pack in their backpack)³¹

If your child seeks out increased amounts of visual stimulation to alert themselves...

- Use visual resources such as visual aids or visual schedules
- Engage in visually stimulating activities (see next page)
- Let them sleep with a nightlight or lava lamp
- Provide a variety of colors and patterns in toys, décor, and clothing
- Schedule time throughout the day to watch videos or play with stimulating toys^{15, 31}

Visually Stimulating Activities

Engaging in visually stimulating activities can help a child maintain an adequate level of alertness and attention throughout the day and can be especially helpful when transitioning from one activity to another. ³¹ Examples of visually stimulating activities include:

- Shadow puppets
- Flashlight tag
- Drawing or painting
- Color mixing activities—this can be done by marbling colored water, ice, milk, paints, or shaving cream
- Scavenger hunts/I-Spy games (finding objects in a book, outside, around the house, or in sensory bottles)
- Spot the difference games
- Light drawing boards
- Matching or memory card games
- Projectors that the child can control to display pictures on walls
- Toys involving lights, spinning, and movement (tops, fidget spinners, yo-yos, kaleidoscopes, sand timer, marble mazes)
- Light table activities (see below)
- Liquid motion toys or sensory bottles (look online for ideas on how to make your own) ^{62,63}



Light tables are a great way to incorporate visual stimuli into your child's favorite play activities. You can purchase a light table or a light panel or assemble one yourself.

A cheap DIY option, from Rachelle at *TinkerLab*, is to make one with a clear under-the-bed style storage box, white tissue paper or wax paper, holiday lights, and tape.

- Place the string holiday lights inside the storage box.
- Tape the tissue paper or wax paper to the underside of the lid.
- Encourage your child to make designs with transparent manipulatives such as Magna-Tiles, opaque tangrams, rounded edge sea-glass pebbles, and transparent circular counters, on the light table. ⁶⁴

More considerations for designing visually calming or alerting spaces and activities....

Calming

- Blues, greens, browns
- Linear lineups
- Balanced symmetrical decorations on walls
- Curves
- Pastels
- Low lighting (i.e. light bulbs, lamps, natural lighting)
- Constant soft light
- Round bubble lights or linear string lights
- Rhythmic side-to-side movement
- Looking up
- Activities that bring the eyes to midline/looking straight ahead (i.e. blowing bubbles) ¹⁵

Alerting

- Yellows, reds, and oranges
- Circular or chaotic lineups
- Sporadic, clutter-style decorations on walls
- Jagged points
- Bright colors
- Bright/fluorescent lighting
- Excessive backgrounds
- Clutter, disorganization
- Strobe effect
- Disco ball
- Activities that bring eyes to the peripheral visual fields (i.e. popping bubbles) ¹⁵

Auditory Strategies

Auditory sensory receptors located in the inner ear identify loud, soft, high, low, near, and far noises in the environment.¹⁴ Auditory processing is different from auditory acuity (the clarity of hearing). Similarly to vision, when considering auditory processing patterns or challenges it is recommended that hearing deficits be ruled out first.¹⁴

Over-Responsiveness

A child who is over-responsive or hypersensitive to sound (also called auditory defensiveness) may demonstrate a low threshold for auditory input. Someone with auditory defensiveness may do the following: react strongly to unexpected or loud noises, cover their ears to protect them from sounds, have difficulties focusing with background noise present, demonstrate difficulties with certain frequencies of sound (a person's voice, car sirens, certain musical pitches), and avoid situations that involve loud sounds.^{14,31}

Strategies for supporting an auditory defensive child

Keep the environment quiet

- Remove any unnecessary background sounds (i.e. replace a ticking clock with a digital clock, turn off the TV when not in use, use visual timers instead of alarms)³¹

Noise-canceling headphones

- Noise-canceling headphones not only decrease the amount of auditory stimulation being interpreted but provide calming proprioceptive input
- For children who do not tolerate headphones, a hoodie or stocking cap can be an effective way to decrease auditory stimulation^{15,31}
- Loop style noise-canceling earbuds are a more discrete alternative to over the ear headphones

Allow them some control or choice

- When possible, let your child control the noise (i.e. let them start the dishwasher) so they know when it is starting
- Give advanced warnings about loud sounds (i.e. vacuuming, flushing a toilet, fire drills, etc.) when possible and discuss calming strategies they can use (deep breathing, proprioceptive input)
- Offer a choice of gum/crunchy snacks, or playing light music, as a distraction from irritating background sounds³¹

Adapt your approach

When addressing your child stand nearby and speak softly instead of yelling across the room

- Limit your language
- Incorporate visual aids³¹

Is your child a screamer?

A scream is an effective way to block out auditory stimulation. When someone screams the stapedius muscle inside their ear activates and dampens the noise.¹⁵ Instead of viewing screaming as strictly behavioral, it is important to consider whether it may be due to auditory overstimulation and how you can provide your child with alternate strategies to reduce the auditory input.

Music

Music is rhythmic, relational, and repetitive and is, therefore, a powerful therapeutic tool. It is an excellent way to co-regulate with teenagers. When listening to music together your heart rate shifts to match the tempo of the song. When two people's heart rates match their arousal levels begin to match and they enter a co-regulated and connected state. Music can be either calming or altering.¹⁵

Calming

- 50-70 BPM
- Familiar melodies
- Habituated sounds
- Patterned humming
- Rhythmic drumming¹⁵

Alerting

- 90-120 BPM
- Unfamiliar melodies
- Arrhythmic paused sounds
- Arrhythmic drumming¹⁵

You can go to getsongbpm.com to find songs with a specific BPM. There are several apps you can use to adjust the BPM of music including AudioScrub and PaceDJ.

Under-Responsiveness

Auditory under-responsiveness or hyposensitivity may be indicative of a child who has a high threshold for auditory input, meaning a lot of input is required in order for the sensation to register. This may look like the following: not responding to their name being called, enjoying making sounds, needing verbal directions repeated frequently, becoming confused when locating a sound, and turning up the music, TV, or sound settings to their max capacity. ^{14,31}

How to support children who are under-responsive to auditory input...

- Encourage playing with instruments and other noise-making toys
- Let them sleep with a fan, quiet music, or a white noise machine
- Play TV, music, and games at an increased—but safe—volume
- Allow them to listen to music/white noise with headphones when appropriate
- Schedule time throughout the day to sing, clap, or listen to music. This can be especially helpful when transitioning from one activity to another.
- Use songs to enhance learning new skills – songs about ABCs, shapes, colors, etc. can help solidify new learning concepts
- Use visual supports to gain attention and to clarify verbal information
- Provide them with alternative sensory input to increase alertness and concentration
- Allow them a longer time to respond when asking questions. They may need additional time to process information.
- Break complicated directions into fewer parts and give them time to complete the first step before going on to the next part ³¹

Tips for loud talkers

Speaking loud can be a sign of auditory hyposensitivity. However, it can also be due to poor abdominal strength and lung capacity. Children who lack breath support and abdominal strength may struggle to regulate vocal pitch, tone, and word capacity and therefore, speak in a loud, fast, and high-pitched manner. ¹⁵

- Teach core exercises to stabilize the rib cage
- Engage in activities that require breath support (swimming, blowing bubbles, etc.)
- Lower your own voice to a whisper—your child may mirror you
- Repeat what they said so they feel heard—they will often repeat things loudly when they feel ignored.
- Be mindful of background noise—children may compensate with a louder volume if they feel they must project over environmental noise
- Speak in an accent—it can promote focus due to the novelty ¹⁵

Auditory Activities

Neighborhood Listening Scavenger Hunt: Go on a walk through your neighborhood and ask your child to locate or name the origin of the sounds you hear. ⁶⁵

Auditory Hide and Seek: Play a game of hide and seek with sounds. The searcher makes a call and each hider responds with their own sound. Then the searcher tries to determine who is making each sound and locates each hider one at a time.

Make your own instrument (i.e. shakers, a rain stick). ^{65,66}

Read or tell stories. ⁶⁵

Have your child identify recorded sounds (such as animal sounds). These sounds can be matched to a picture for a version of BINGO for older children. ⁶⁶

Repeat a clapping or stomping pattern, or nursery rhyme. ⁶⁵

Hide an object that makes sound and then have your child hunt for it. ⁶⁶

Play freeze dance or sing songs that require following directions or actions. ⁶⁵

Make Sound Jars: Find at least 6 jars or tins that you cannot see inside. Fill pairs with the same materials (e.g. 2 with rice, 2 with sand, 2 with macaroni). Shake the tins and place the matching pairs together. ⁶⁵

Musical Glasses: Gather 4-8 glasses. Put different amounts of water in each glass. Use the spoon to tap on the glasses, one at a time. ⁶⁵

TACTILE Strategies

The tactile system is responsible for how we feel things on our body and identify and discriminate between different items we touch. Tactile receptors on our skin and in our mouth allow us to feel a variety of sensations including vibration, pain, light touch, and deep pressure.¹⁴ The tactile system allows us to understand our environment and is designed to keep us safe by recognizing when we are too hot, too cold, or in pain.^{14,15}

Light vs. Deep Touch

Light touch refers to something brushing against your skin, such as clothing, tickling, or a mosquito. It is often perceived as painful and can lead to adverse reactions. Light touch is harder to process than deep touch.¹⁵ Offering light touch activities can benefit tactile-seeking children because it offers more input that they have to work hard to process. Light touch should be followed by deep touch. Deep touch, also referred to as deep pressure, is a combination of tactile and proprioceptive input and has a very calming effect on the nervous system.¹⁵ Ideas for deep pressure can be found on page 20.

Tactile Defensiveness

Over-responsiveness to tactile input is also called tactile defensiveness. Tactile defensiveness refers to when an individual is hypersensitive to certain types of tactile stimulation that are non-threatening and generally tolerated by others. It can mean poor tolerance to certain clothing, textures, food, hygiene tasks, or being in close proximity to others.^{68,69}

Ways to Support Tactile Defensive Kids

Clothing

- Try seamless clothing (www.smartknitkids.com)¹⁵
- Cut tags out of clothing
- Wear clothing made from 100% natural material (cotton, bamboo) and avoid 100% polyester or poly-cotton blends⁶⁷
- Wash clothing several times before wearing the first time⁶⁷
- Use natural/hypo-allergenic detergent⁶⁷
- Wear spandex or compression clothing (see page 20 for brands) under regular clothing—deep pressure is distributed over the body, providing a calming effect¹⁵

Meal Time

- Separate textures during meals. It may help to avoid mixing foods together that have conflicting textures (i.e. mashed potatoes and gravy)^{15,70}
- See page 33 for more mealtime sensory strategies

Proprioceptive Input

- Offer deep pressure when a child is irritated by texture. This could include massage, a bear hug, or wrapping them tightly in a blanket.^{15,67} See pages 19-20 for ideas.
- Keep crunchy foods on hand for increased proprioceptive input¹⁵

Messy Play

- Engage in play involving undesirable textures starting with short periods of time and slowly increase the time that it is tolerated⁷¹
- See below for tips and page 28 for sensory play ideas

Tips for Messy Play With Tactile Defensive Kids

Choose a designated place in the home or yard for messy play activities. Tuff trays are great for minimizing mess but you can also use trays or containers you already have or a playmat or table that is easy to wipe down. You'll also want water, wipes, and a towel available nearby for washing/wiping hands.

Apply proprioceptive input to the arms and hands before and after the activity (i.e. wall pushes, animal walks).^{14,71}

Get messy with them. Choose a time when you are available to do the activity with your child. If your child is unsure about touching a specific texture they might want to watch someone else interact with it first.⁷¹

Be patient and consistent. Start slow and recognize that it may take multiple exposures for your child to become comfortable with the texture. Start with modifications as needed, such as allowing them to paint with Q-tips instead of finger painting, or using utensils or wearing gloves to handle the messy materials.⁷¹

Use their interests. Incorporate toys or activities that they already love into the activity.

Include them in the clean-up process. Cleaning up is a natural way to interact with the different materials and incorporate tactile input.⁷¹

Under-Responsiveness

Children who are under-responsive to tactile input require a lot of input for their bodies to recognize it. They may have a slow reaction to being touched or hurt, be more prone to injuries due to a lack of pain sensation messages from the brain, or not notice if they are dirty. They may also appear withdrawn, difficult to engage, or clumsy because they do not detect the sensory input in their environment. ^{14,31}

Supporting Tactile Sensory Seekers

- Use fidget spinners, stress balls, and stretchy bands
- Provide a variety of textures in toys, clothing, and food
- Play with messy objects such as finger paints, playdough, sand, and mud
- Make a sensory table and include water, sand, Legos, or other textures
- Practice ways to respect personal space while eating, playing, waiting in lines, etc.
- Provide wobble seat cushions ³¹

Sensory Play Ideas

- Dry sensory bins (rice, sand, beans)
- Make your own playdough, slime, flubber, oobleck, or fake snow
- Play with kinetic sand
- Draw in shaving cream, sand, or salt
- Paper-mache
- Paint: finger paint, with water on the sidewalk, in the bathtub with bath paints
- Hide small objects in playdough, therapy putty, or a sensory bin to find with your fingers
- Face and body paint, temporary tattoos, stickers
- Trace letters or shapes on each other with your fingers or an ice cube. Older kids can try to guess what is being traced.
- Balloons or rubber gloves filled with things like corn, flour, rice, etc.
- Cook or bake together
- Decorate a cake or cookies
- Have a toy car wash: grab some toy cars or other washable toys and three buckets/bowls. Fill one bucket with something messy (i.e. mud or shaving cream), one with soapy water, and one with clean water. Get the toys messy and show your child how to wash and rinse them.
- Make a mystery box: place differently textured and shaped items in a box and have your child try to identify the items with their eyes closed.
- Roll over different textures (i.e. blankets, couch cushions, grass)
- Play/walk barefoot in grass or sand ^{71,14}



Vibration

Vibration provides tactile, proprioceptive, and vestibular input and can be very calming or very alerting depending on the child's unique sensory needs. ⁷¹ Ways to incorporate vibration include:

- Rolling a HoMedics massage ball or other vibrating massage tool over their arms and legs ⁷¹
- Hugging a vibrating stuffed animal



Calming vs. Alerting Tactile Input

Calming

- Soft
- Neutral warmth
- Hard/smooth
- Even consistency
- Cotton, fake fur, cloth
- Squishy fidgets ¹⁵

Alerting

- Prickly
- Extreme temperatures
- Goopy/rough
- Varied consistency
- Polyester/wool
- Vinyl/leather ¹⁵

Olfactory Strategies

Our olfactory system is our sense of smell. Once we detect a smell through receptors in our nose, that signal is sent to the brain to be identified. Because of the connections in the brain, our sense of smell is directly linked to our sense of taste, memory, and emotions.¹⁵

When we smell a certain scent, it can conjure up a memory associated with that smell which will elicit an emotion or feeling to go along with that particular scent. It is important to consider how certain smells may be triggers for children with a history of trauma.¹⁵

Over-Responsiveness

A child who is over-responsive to olfactory input (smells) may notice smells that others do not notice, become distracted by smells, and in extreme cases feel nauseous/unwell but may not be able to identify that smells are the cause. They may avoid places with strong smells (such as refusing to eat in the lunch room or use public bathrooms), eat a restricted range of food due to smells, or be overwhelmed by smells that others do not find unpleasant.^{14,31}

Ways to Support an Over-Responsive Child:

- Make the environment as fragrance-free as possible: use fragrance-free cleaning products, un-perfumed toiletries
- Keep rooms—especially bathrooms and kitchens—well-ventilated and allow a child to sit by an open window if necessary
- Teach them appropriate coping strategies such as covering their nose with a tissue, or informing a caregiver when a the smell is unpleasant, either verbally or with a visual cue
- In classrooms or restaurants, seat the child away from strong smells such as the garbage can or kitchen
- Provide them with a preferred scent (i.e. tissue or piece of material sprayed with scent, lotion)³¹

Under-Responsiveness

A child who is under-responsive to olfactory input may not notice smells and/or seek out intense odors. These children may sniff other people, unaware that it is socially inappropriate, and can be vulnerable to ingesting dangerous substances because of their inability to detect bad smells.

Ways to Support an Under-Responsive Child:

- Have scented objects, such as candles, lotions, and soaps, available
- Set up a smelling station: use containers filled with different cotton balls containing essential oils, spices, and smelly objects
- Teach them ways to avoid ingesting harmful foods and substances. (i.e. how to read "use by" dates and identify 'hazardous' symbols, how to spot bad smells using other's facial expressions and body language)
- Give them a tissue or piece of material with a preferred scent to smell instead of smelling people or potentially harmful materials
- Provide activities that stimulate the olfactory senses³¹

Calming vs. Alerting Scents

Calming

- Sweet scents
- Mild odors
- Family/familiar scents
- Lavender
- Cinnamon
- Sugar, flour, vanilla¹⁵

Alerting

- Strong perfume
- Unfamiliar smells
- Peppermint
- Rose/floral
- Lemon
- Musk, smoke
- Onion, garlic¹⁵

Olfactory Activities

- Play in the grass
- Cook and bake with strong smells
- Use scented crayons or markers
- Play with scented playdough, slime, or moon dough
- Make sensory bins with scented items (i.e rose petals, lemon rice, coffee beans, cinnamon sticks)
- Write/draw in a scented salt tray
- Use a scented bubble bath
- Add scented soap, shampoo, or body wash to water play tables
- Make scented jewelry using scented salt dough
- Salt painting with scented Epsom salts
- Play "Guess that scent." Use various scented candles, essential oils, or types of foods and without showing the child have them guess the scent.^{31,72,73}

gustatory strategies

Our gustatory sensory receptors are located on our tongues and process taste. Gustatory senses are linked to our olfactory sense (smell) and therefore, challenges processing gustatory input often go hand-in-hand with an under- or over-responsive olfactory system. Children who are under- or over-responsive to sensory input may struggle to identify and categorize tastes and flavors including sweet, sour, bitter, salty, and spicy. ^{14,31} Strategies regarding mealtime routines and exploring new foods can be found on page 33.

Under-Responsiveness

When a child is under-responsive to gustatory input, their brain is sending the message that they are not receiving enough input to register the taste. Therefore these children will often seek out strong flavors (such as sour candy or spicy seasonings) or very cold or very hot food to meet their threshold. They may also be a messy eater and not notice when food is on their face/lips, over-stuff while eating, or attempt to lick, chew, or mouth non-edible items. Many children who are under-responsive to gustatory input become more alert and engaged after eating a strong flavor. ^{14, 31}

Suggested Strategies:

- Offer strongly flavored foods (e.g. citrus, strong cheeses, curries) and let them add flavors to meals (e.g. chili flakes, black pepper, sauces) and fruit slices to water ^{15,31}
- Allow the child to use mint mouth spray, gum, ice-cold water with fruit slices, or strongly flavored hard candy to help maintain alertness when their attention is fading ³¹
- Incorporate oral motor activities into their daily routine. ¹⁵ See page 19 for ideas.
- If your child over-stuffs their mouth, which can be a safety concern, have them use a smaller/cocktail-style fork to promote smaller bites. Encourage them to set the fork down and take a drink between bites. ³¹

If the child chews or eats non-edible items:

- Practice discriminating between edible and non-edible items
- Offer replacement objects that are similar to the taste/texture they seem to be seeking. Examples include: teething objects, "chewelry" or other commercially available sensory chewable items, gum, dry and crunchy cereal, a dry bagel, chewy sweets, dried fruit, raw vegetables, mint mouth spray ³¹

Over-Responsiveness

When a child is over-responsive to gustatory input, their brain is sending the message that the gustatory input is too much for them to handle. As a result, they may be a picky eater, avoid certain foods that have a particular taste, texture, consistency, or temperature, and become anxious or meltdown when trying new foods. An over-responsive child may refuse to eat certain foods, gag (it's important to rule out any medical complications if your child is frequently gagging), and/or dislike certain seasonings and request more "bland" tasting foods. ^{14,31}

Suggested Strategies:

- Involve them in the food preparation process, including shopping, prepping, and serving ^{15,67}
- Dedicate a certain time of day (outside of mealtimes) or days of the week to trying new foods ^{31,15}
- Play with, craft with, or explore new foods to become familiar with textures ¹⁵
- Try starting with freeze-dried and frozen foods. These foods are more consistent and less intense in terms of texture, taste, and smell compared to fresh fruits and vegetables. ¹⁵
- See page 33 for more mealtime strategies and food play ideas

Calming vs. Alerting Input

Calming

- Sweet
- Chewy
- Bland
- Milk
- Turkey (tryptophan)
- Sucking/blowing
- Warm
- Culturally comforting foods ¹⁵

Alerting

- Spicy
- Licking
- Cold
- Sour
- Crunchy
- Mint/peppermint
- Apples
- Caffeine
- New/unfamiliar foods ¹⁵

Sensory Strategies For Infants

A baby's sensory system develops as they experience new awareness through various sensory stimuli. Sensory play helps to build nerve connections in the brain and supports the development of language, cognitive, and motor skills.⁵⁶ The activities below are specifically for infants, however many of the other strategies and activities in this guide can be modified for infants as well.

Tummy Time

Tummy time refers to laying babies on their stomachs for brief periods while they're awake. It's an important way to help babies strengthen their neck and shoulder muscles, improve motor skills, and develop their sensory systems^{74,75}:



- **Tactile:** Change the surface that the child is lying on (i.e. blanket, mother's skin) to provide a variety of sensations to the tactile system.⁷⁴
- **Proprioception:** Tummy time provides active resistive input to their core and upper body muscles and helps develop body awareness.⁷⁴
- **Vestibular:** Tummy time allows for the child to experience a variety of head positions and lays the groundwork for rocking on hands and knees and crawling.^{74,76} Adding movement during tummy time such as placing them across your legs or rocking provides vestibular input. This will help your baby to understand movement and where they are in space.⁷⁴
- **Visual:** By placing a child on a blanket on the floor, they are encouraged to look up and around. This is further encouraged when you are down on the ground with the child. Bubbles, mirrors, and toys are great ways to encourage the child to look up and scan their immediate environment.⁷⁴⁻⁷⁶

Always stay with your baby during tummy time. Start newborns on tummy time by placing them belly-down on your chest or across your lap for 30 seconds to a few minutes at a time, two or three times a day.^{74,76} Slowly work up to 60 minutes a day—in a variety of ways including on a blanket on the floor—by the time your baby is 3 months old.⁷⁴

Infant Massage

Massage provides important touch stimulation and helps babies learn about their body parts and how to control them. Massaging your baby is a way to bond with them and can help with sleep.⁸¹ To learn how to properly massage your baby find an infant massage course or visit [nct.org.uk](https://www.nct.org.uk) to read more about infant massage and watch the following video: <https://www.nct.org.uk/baby-toddler/everyday-care/baby-massage-tips-and-benefits>

Developing the Senses

Vestibular :

- Rock and swing baby gently
- Carry baby in a variety of different positions
- Tummy time⁷⁹

Proprioception:

- Swaddle baby in early months
- Infant massage
- Tummy time⁸⁰

Tactile:

- Let baby play and splash around in the water during bath time
- Wrap baby in different textured towels or blankets while holding them
- Play with sponges and water or ice cubes^{77,78}
- Make a texture board⁷⁸
- Make a sensory ring: Wrap a hula hoop with various types of ribbons and fabrics. Place your child in the middle of the hoop during tummy time and encourage them to feel the different textures.⁷⁷
- Engage in edible sensory play
- Hide toys in jello for them to dig out
- Make edible sand made with oatmeal and graham crackers
- Make rainbow colored noodles⁷⁷

Auditory:

- Talk and sing to baby
- Play with rattles or musical toys⁷⁸

Visual:

- Play with mirrors and flashlights
- Play games face-to-face and make silly faces at baby
- Go on walks outside for a change in scenery
- Hang colorful mobiles
- Play with a sensory bottle or liquid motion toy⁷⁸

SENSORY STRATEGIES FOR bedtime

Develop a Routine

- Incorporate choice
- “Do you want to wear the red or blue pajamas”, “Do you want to crawl to your room like a bear or a crab?”
- Use a visual schedule
- Keep the routine consistent (complete the same tasks in the same order at the same time)
- Fine motor skill activities (i.e. craft activities, puzzles, or coloring pictures) can aid relaxation
- Set aside time earlier during the day to allow your child to share any worries with you and have your full attention
- It can be helpful to discuss how their day went and what is planned for the next day so they are not worried about it before bed.^{1,2,3,8}

Apply Deep Pressure

- Create greater body awareness and a snug environment by using a heavy blanket/double duvet, compression sheets, a sleeping bag, or tucking a double sheet tightly around your child
- Use onesie pajamas
- Have cuddly toys/extra pillows in the bed with the child
- Position the bed so your child can squish themselves against the wall if desired
- Roll the child up tight in a blanket for a few minutes
- Provide firm all-over pressure by hugging them on your lap while reading before bed
- Spend a few minutes in a cocoon swing or a beanbag chair
- See page 20 for proprioceptive activities to include in bedtime routine
- Blow bubbles or drink warm milk through a straw for oral motor input^{1,2,3,5,8,8}

Control Visual Input

- If your child is over-responsive to visual input avoid bright bedroom colors (use pastels), patterns, or lots of pictures on the walls
- If they need complete darkness to fall asleep try black-out blinds or a bed tent, and remove flashing lights (alarm clocks, computer lights)
- Minimize clutter at bedtime
- Dim lighting when getting ready for bed
- Some kids may sleep better with dim lights—try Himalayan salt lamps, lava lamps, or a moving scene night light^{1,2,3,5,8,8}

Tips for Tooth Brushing

Before brushing :

- Provide deep pressure or oral motor input (such as blowing bubbles)
- Tap the child’s gums firmly from the center to each side on the upper and lower gums
- Try firmly pressing around the child’s mouth, cheeks, and chin with a soft, damp, warm washcloth⁸⁴

Incorporate Mindfulness

- Practice meditation⁸³
- Do some light yoga⁸³
- Listen to a mindfulness podcast or use strategies on pages 21-22

Control Temperature

- Keep the room cool
- Put their blankets or pajamas in the dryer for 5 minutes before bedtime
- Place a warm rice pillow in bed or try a microwaveable, stuffed animal¹

Auditory Input

- Try a white noise machine (or app) or a white noise stuffed animal
- Install or place a fan in the child’s room
- Play classical or soothing instrumental music in the background during the bedtime routine^{1,2,83,5,8}

Adjust Tactile Input

- Use high cotton count or flannel sheets and wash them with short wash cycles to avoid pilling
- Wash new sheets and pajamas several times to make the fabric feel softer, remove any labels or tags
- Ensure bedding is smooth—no beads, iron-on prints
- Try different types of pajamas—seamless (or wear inside out), silky, fleecy
- Give massages, back rubs, and bear hugs before bed^{1,2,3,5,8,8}

Try different brushes:

- NUK brush
- Finger toothbrushes
- Electric/vibrating toothbrushes
- Suction toothbrushes
- Soft/silicone bristle toothbrushes⁸⁴

SENSORY STRATEGIES FOR Mealtime

Prioritize Connection

Make family meal times about connection, not content. Do not put any pressure on the child, such as counting bites or monitoring intake. Recognize that connection, and feeling calm at mealtime, will foster better nutrition over time. Work on exploring new foods during their best time of the day away from mealtimes.^{1 5}

Introducing New Foods

Children who are picky eaters may have challenges with new foods including their taste, texture, smell, and temperature. The hierarchy below allows them to become familiar with the food and eliminate some of the unknown factors before eating something new. When introducing foods using this hierarchy be patient, each step may take many trials.⁸⁵

Play with Food

Set aside time for food exploration separate from mealtime. Be playful, put on music or sing songs, talk, laugh, and enjoy learning about food and spending time with your child. Allow them to display terrible table manners and even spit the food out. Do not stress if your child is not eating the foods, just remember they are learning through play.¹⁵ Ideas for food play from *Feeding Plus*:

- Finger paint with pudding/yogurt/whipped cream or use paint brushes to paint with pudding or purees (if your child is not ready to touch)
- Match/count/sort foods into categories (e.g., shape, color, size)
- String Cheerios or Fruit Loops and make food jewelry
- Touch and squish wet foods through Ziploc bags
- Have a teddy bear/doll picnic with real foods
- Flick and roll foods across the table. Play finger-hockey or soccer with foods.
- Make a "meal" with real foods in your child's pretend/child-sized kitchen
- Pretend to be a cat or dog and lick food from a plate
- "Feed" any toys that have a mouth
- Use figurines/action figures to create a food scene (e.g., create funny faces or pictures with foods)⁸⁶

Tips for Mealtime

Get Them Involved

Engage the child in food prep including planning, shopping, gardening, and cooking. Make them "chef" for a day or have them serve the food to others. This gives them a chance to become more familiar with food textures.¹⁵

Apply Proprioceptive Input

Before the meal make sure the child has met their sensory threshold and engage in proprioceptive/oral motor activities.¹⁵

Serve a Preferred Food

Have at least one food you know your child will eat at each meal. If introducing a new food, choose one similar in color, taste, or texture to a preferred food.¹⁵

Make Meal Time Fun

Use fun plates, cups, and utensils or play games such as "20 Questions" or "Would You Rather".

Make it a Routine

Keep a consistent mealtime schedule—predictability can decrease anxiety around mealtimes.¹⁵ Make sure the child is aware of any expectations.

Consider Positioning

Good positioning supports our breathing and provides support and security when sitting, which allows for increased focus, improved hand-to-mouth coordination (fine motor skills), and better chewing. For ideal positioning think 90-90-90 (90-degree angles for hips, knees, and ankles).⁸⁷

- Feet should rest flat on the floor or footrest
- Knees should rest comfortably over the edge of the chair: If the chair is too big try placing a cushion behind their back.
- Hips should be comfortably placed at the back of the chair: If the child slouches in their seat try a wedge-shaped cushion to help them sit upright. If they wiggle constantly or struggle to remain seated, try a move and sit cushion.
- Shoulders should be relaxed and elbows the same height as table: If the table is too big, have them sit on cushions or a booster seat. If the table is too small consider getting a smaller chair for them.⁸⁷



Activities to Promote Cognitive and Emotional Regulation

Self-regulation encompasses not only sensory regulation but emotional and cognitive regulation. Emotional regulation is the ability to exert control over one's own emotional state and cognitive regulation refers to the ability to control and sustain their thinking and attention. ^{6,37}

Games

Games involving following instructions, controlling movements, turn-taking, impulse control, and “getting out” are a great way to practice self-regulation.

- Simon Says
- Musical Chairs
- Bop It
- Relay Races
- Red Light, Green Light
- Jenga
- Operation
- Don't Break the Ice
- Duck, Duck, Goose
- Headbandz
- Freeze Tag or Freeze Dance
- Balloon Volleyball
- Follow the Leader/Mirror Mirror (or other imitation games) ⁸⁸

Writing About Emotions

One way to help kids name and understand their emotions is to have them write about how they're feeling. This can include journaling or just writing down their emotions in 1-2 words. ⁸⁹

Drawing Emotions

Have them draw a picture or create a collage of the different feelings that they experience. You can provide prompts such as, “What does it look like when you're angry?” or “How does it feel when you're happy?” ⁸⁹

Positive Affirmations

Positive affirmations are short, positive statements such as “I am strong” and “I am brave”, that then become mantras when they are repeated over and over to oneself, out loud or silently. When repeated over time while imagining themselves embodying those attributes, statements will become beliefs. Affirmations can be made into songs, written on mirrors, or made into affirmation boards.

Dancing

Dancing is a great physical outlet for emotional energy and helps improve body awareness. Other physical activities such as yoga and walking are also beneficial for improving body awareness. ⁹⁰

Music

Music can regulate levels of arousal by enhancing positive emotions and reducing symptoms of anxiety. Rhythmic movement such as clapping or drumming along to a beat has been found to be especially beneficial to support self-regulatory skills. ⁹¹

Mindfulness

Mindfulness refers to being present and in the moment. ⁵⁷ Mindfulness activities can be found on page 22.

Deep Breathing Techniques

Deep breathing techniques or activities involving breath support, such as playing woodwind instruments and blowing bubbles, promote self-regulation and body awareness. ⁸⁸ See page 21 for ideas.

Reading

While reading, or being read to, kids immerse themselves in the stories and feelings of the characters and therefore experience ways to manage their emotions based on the outcomes in books. ⁹⁷

Puzzles

Puzzles help build skills such as planning, goal setting and deductive reasoning. Children also develop emotional-regulation skills, such as patience and perseverance as they work to fit the pieces together through trial and error, and achieve greater self efficacy after working through frustration to complete the puzzle. ⁹³

ART

Art is a great medium for emotional expression, and completing a project with a friend or caregiver (such as partner painting) promotes teamwork and seeing others' perspectives. ⁸⁸

BOOKS, PODCASTS, & VIDEOS ON

SELF-REGULATION FOR KIDS

Books

Children's books are a great way to bond and facilitate conversations with your child. The following six books are focused on topics related to self-regulation and can provide you and your child with language to discuss the emotions and sensations they are experiencing and strategies to promote self-regulation.

1. *Riley the Brave's Sensational Senses*



Riley the Brave's Sensational Senses, by Jessica Sinarski, teaches children about their senses through a playful story with real-life strategies for emotional regulation. It also includes an educational afterword for grown-ups that explains our eight senses and includes tips for getting the most out of the book.

2. *When Things Get Too Loud*



When Things Get Too Loud by Anne Alcott is all about sensory overload, how it feels, what can trigger it, and what may help. The 'Feel-O-Meter' provides the child and parents with a visual guide through emotions and the book includes ideas to cope with overwhelming situations.

3. *Breathing is My Superpower*



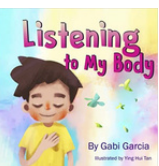
In *Breathing is my Superpower* by Alicia Ortego, the main character Sofia will show your children how to control their breathing in various situations, whether at school, at home, or on the playground. The breathing techniques presented in the book will help your children calm themselves and show them fun ways of managing their own body, breath, and emotions.

4. *Sensory Seeking Sebastian*



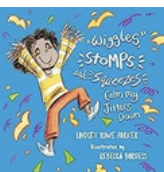
Written by Christia DeShields, this beautifully illustrated book empowers sensory seekers with strategies that help with self-regulation, including ones similar to those in this guide.

5. *Listening to My Body*



Listening to My Body, written by Gabi Garcia and illustrated by Ying Hui Tan, is an engaging and interactive book that guides children through the practice of identifying and naming their feelings and the physical sensations that accompany them. Kid-friendly activities are woven throughout the book to reinforce the teachings, and parent and teacher resources and discussion materials are included in the back of the book.

6. *Wiggles, Stomps, and Squeezes Calm My Jitters Down*



From author Lindsey Rowe Parker and illustrator Rebecca Burgess, this playfully written story is told from a child's perspective and validates the unique sensory experiences of children.

Podcasts

Podcasts are a great way to incorporate the practice of mindfulness into your family's daily routine. The following podcasts are designed for kids, with episodes lasting an average of 5-15 minutes, and can be found on Apple Podcasts, Spotify, and other podcast platforms.

Peace Out: Mindfulness Stories for Kids

Created by Chanel Tsang, each episode is a guided relaxation story for children focused on a social-emotional skill with different mindfulness exercises paired with yoga.



Like You: Mindfulness for Kids



Produced by Perpetual Motion, *Like You: Mindfulness for Kids*, uses breathing, affirmations, music, and imagination to build confidence, explore emotions, and manage anxiety.

Sleep Tight, Relax

Produced by Sleep Tight Media, *Sleep Tight Relax* offers calming stories and meditations that can help prepare children's bodies and minds for a restful night of sleep.



YouTube Channels for Kids

The following YouTube channels are designed to help improve children's mental health and self-regulation abilities through mindfulness, meditation, and yoga.

- The Mindfulness Teacher
- Cosmic Kids Yoga
- Brighten Up! Kids

RESOURCES FOR caregivers

Podcasts



Parenting After Trauma

Parenting After Trauma with Robyn Gobbel is a neuroscience-informed podcast for parents of kids with big behaviors or a history of trauma.

More resources can be found at robyngobbel.com, including:

- Free Resources: E-books, video series, and blogs on topics including attachment, felt safety, and brain development.
- The Club: The club is “a unique virtual community for parents of kids with big, baffling behaviors”. The Club consists of an active online forum, at least 3 live meetings a month on Zoom, and a video library with over 50 video trainings. A monthly fee is required to participate in the club.



All Things Sensory by Harkla

Hosted by Certified Occupational Therapy Assistants Rachel Harrington and Jessica Hill, this podcast is about all things sensory, occupational therapy, parenting, self-care, nutrition, and health.

Harkla (harkla.co) also offers:

- A YouTube channel with videos on sensory activities
- Blogs on a variety of topics, including the 8 senses
- Sensory products you can purchase
- Free webinars focused on sensory, special needs, and child development



The TBRI Podcast

This podcast discusses the elements of trauma-informed care and features chats with experts in the field about implementing Trust-Based Relational

Intervention®—an attachment-based, trauma-informed intervention designed to meet the complex needs of vulnerable children—across different communities of care and practice.

Websites

Your Kids Table (yourkidstable.com) is run by Alisha Grogan, a pediatric occupational therapist and mom who is passionate about educating parents on all things feeding and sensory needs through free workshops, blogs, and printables.

The OT Toolbox (www.theottoolbox.com) is designed for therapists, teachers, and parents to find resources, tools, ideas, and activities designed to support the healthy development of kids.

The OT Butterfly (theotbutterfly.com) is full of educational resources about development, insights on sensory processing, and simple activities for parents to do at home with their child.

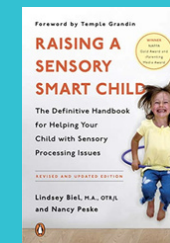
Books

The Connected Therapist

The Connected Therapist: Relating Through the Senses by Marti Smith, OTR/L explores the 8 senses and how adverse experiences shape our preferences and sensory processing abilities, while also providing resources and practical sensory based strategies.



Raising a Sensory Smart Child



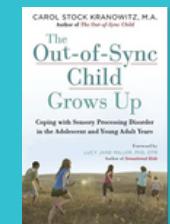
Written by Lindsey Biel, MA, OTR/L & Nancy Peske, this book is full of practical, easy to implement sensory strategies for a variety of situations.

Understanding Your Child's Sensory Signals

Written by Angie Voss, OTR/L, this handbook for parents and teachers includes over 210 of the most common sensory signals and cues your child may be giving you in a simple, organized format that provides the essential information to respond to child's sensory needs right on the spot.



The Out-of-Sync Child Grows Up



A follow up to *The Out-of-Sync Child* and the *Out-of-Sync Child Has Fun*, this book by Carol Stock Kranowitz is aimed at parents of tweens and teens. It gives parents strategies to help their adolescents cope with the sensory aspects of grooming, social lives and dating, playing sports, and music.

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an attachment-based, trauma-informed and holistic approach designed to meet the complex needs of vulnerable children.

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