

# SENSORY INTEGRATION RIGHT TIME VIDEO

## Key Points

### General Information

Starting in infancy, children begin to discover the world through their senses. Sometimes children have difficulty understanding the information that comes in through their senses. When this happens, their difficulty processing sensory information can affect how a child learns, plays, and forms relationships.

### Part 1: Defining Sensory Integration and Sensory Processing Disorder

- Humans have five external senses: vision, hearing, smell, taste, and touch.
  - These five senses have receptors for receiving information from outside the body. For example, our ears are receptors for sound (hearing) and our eyes are receptors for vision.
  - Our senses continuously receive and interpret information from the environment all day long.
  - We take in information through our senses and act on that information every day without even thinking about the process.
- We have two additional senses that are internal and less well known. These are sometimes called the “hidden senses” because the information comes from the inside the body rather than from outside the body. The two internal senses are the vestibular sense and the proprioceptive sense
  - The vestibular sense is located in the inner ear:
    - The receptor for this sense is movement, especially head movement.
    - The vestibular sense tells a person if their head or body is moving, giving them a sense of occupying space and is responsible for a person’s balance.
    - Examples of vestibular sensory inputs include spinning, swinging, and rocking. .
  - The proprioceptive sensory input comes from the muscles and joints in the body.
    - The proprioceptive sense is activated anytime we push/pull or put tension on the muscles and joints.
    - Without proprioceptive sense information, we would not know what our body parts are doing or how to coordinate moving them. For example, when we move our feet and legs to walk upstairs, proprioception updates our brain so it contracts the muscles at just the right time, putting enough pressure on the joints so we successfully climb one step at a time.
- The term “sensory integration” refers to the brain processes by which we take in information through all of our senses, register that information, organize it, and then respond to the sensory information. This theory was introduced in the 1960s by Dr. A. Jean Ayres.

- Sensory processing disorder is a condition in which the brain has trouble receiving, organizing, and responding appropriately to information that comes in through the senses.
- Every person's responses to sensory input falls along a continuum or scale; each person has preferences and a different threshold for how much input they can tolerate from each sense. Sensory input can be understood like cups being filled — each person has a different point at which their cup (sense) is too full or empty. When a person's sense/cup overflows, the person can't handle any more input for that sense.
- Every person has different size cups for their senses. Some people might have big cups for every sense, some might have little cups for each sense, and still others might have different sizes of cups for different senses. For example, the same person might have a big cup for hearing and be able to handle all the noise input in the world with no problem, but at the same time this person might have a little cup for touch and not be able to handle certain kinds of touch at all.
- Most people learn to adapt to too much or too little sensory input. When we have too much sensory input, we figure out how to avoid that level of input (e.g., not eating certain foods, avoiding crowds), find ways to manage our environment (e.g., finding a quiet place to work), or take steps to lessen the effects of unwanted sensory input (e.g., deep breathing or meditation). If we need more sensory input, we adapt to get extra sensory input such as riding a roller coaster or listening to loud music.
- When a child cannot handle sensory input and their sensitivity gets in the way of daily functioning, it could signal a sensory processing problem. As such, it is critical for parents who are fostering or adopting to “tune in” to the child and be aware of the child's behavior so they can determine if the child is over or under stimulated.
- When children have challenges with sensory processing and integration, it can show up as behavior problems because they do not take in the world the same way that others do. A parent who is fostering or adopting should ask for an evaluation if they see a child's behavior getting in the way of typical activities and social functioning.
- Problems with sensory integration can occur in three areas, but many don't fit in just one area:
  1. **Sensory avoiding** — refers to children who over respond to sensory information. Examples of sensory-avoiding behaviors include dislike of loud noises; dislike of bright lights; difficulty being in a crowd; not liking to be touched or hugged, even by someone close to them; and/or being extremely bothered by certain textures such as scratchy tags on clothing or having their socks off.
  2. **Sensory seeking** — refers to children who need more sensory input to function or crave more sensory information. Examples of children's sensory-seeking behaviors include clumsiness or frequently falling down; running around the house and crashing into things; climbing and jumping off of things; spinning, hopping, twirling as fast as possible; and touching everything with their hands, including other people.
  3. **Under responsive** — refers to children who underreact to sensory input. Under-responsive behavior can be more difficult to identify than the other two sensory integration problems because under-responsive behaviors are less obvious and are often overlooked. Examples of children's under-responsive behaviors include hanging back and not getting involved with peers or their environment; being very passive, inactive, or sitting around; being unaware of loud noises; not noticing pain in response to bumps and cuts; and being too “easy.”

## **Part 2: Managing Sensory Processing Challenges**

- It is important for parents who are fostering or adopting to not only try to understand how a child's early experiences have influenced their sensory integration but also try to be a "sensory detective" so that they can create a "sensory diet" that can meet a child's needs.
- Starting at the beginning of life, all children need sensory experiences that engage their senses. For young infants, sensory stimulation comes through parents rocking them, feeding them, interacting with them, looking into their eyes, and showing them the world. Children who have not had enough sensory stimulation or who had challenging experiences as infants are more likely to have sensory processing difficulties as they grow up.
- Parents who are fostering or adopting will need to observe the child's behavior to identify sensory needs. Being observant about potential sensory problems will help parents to know not only how and what a child needs to be successful but also how to help the child learn what they need at a given time. Parents who are fostering or adopting can be sensory detectives by
  - Keeping a journal of the child's behavior, tracking when children struggle and then trying to identify if a pattern exists or if certain things seem to act as triggers;
  - Noticing the time of day when challenges seem to occur most often, such as before mealtimes or at bedtime; and
  - Paying attention to when children look for extra sensory experiences, whether anything triggers their need for extra sensory input, or when they seem to pull away.
- It can be tricky to tell the difference between a misbehavior, a sensory-seeking behavior (e.g., crashing into walls or people), or a sensory-avoiding behavior (e.g., hiding). A child's sensory problems might increase during times of elevated stress. Tracking behaviors helps parents plan strategies for stressful times when a child might have greater difficulty with sensory behaviors.
- To maximize a child's success, parents who are fostering or adopting can introduce a "sensory diet" consisting of activities and adaptations that give the child the sensory input they need while minimizing the things that distract or overwhelm the child. Parents often work in partnership with an occupational therapist to create a sensory diet based on the specific needs of the child.
- Sensory diets can be thought of as a "mix 'n match menu."
  - For a child who seeks more sensory input and feels the need to hit or crash into things, the sensory diet might include a pillow mountain or a punching bag. Other sensory diet options might include activities with high tactile sensory inputs such as finger painting, shaping clay or Play-Doh, or playing with a water and sand table.
  - For children who are overly responsive to sensory input and are sensory-avoidant, the sensory diet might include giving the child noise-canceling headphones, a white sound machine to mask background noise, dimmer switches for lights, or tag-less clothing options.
  - For children who over respond to sensory input, a balanced sensory diet would likely include activities to increase the child's "response threshold" so the child will eventually be able to handle more sensory input. Children who are under responsive need more sensory input than other children to register the same sensation. For example, if a child moves slowly in the morning and has difficulty being alert, the sensory diet could include doing 10 jumping jacks as soon as they wake up or taking a shower that ends with cold water.

- Giving children access to objects that simulate their senses throughout the day might help to avoid behavior meltdowns. This part of the sensory diet could include activities that involve slimy things, bouncy balls, weighted blankets, and things with nice smells such as hand lotion. Water activities might also be a particularly good match for some children’s sensory needs.
- Activities that are sensory rich do not take away from family time, but rather can shape family time. Sensory-rich play is great because these activities can meet the children’s sensory needs while building attachments among family members.

### **Part 3: Strategies for Success**

- Mealtime is a common time for sensory challenges to come up. Children who are overly responsive might have concerns with how a certain food looks, feels, the texture in their mouth, or the sounds when they chew the food. Mealtimes can also cause sensory overload in other ways such as multiple conversations, dishes clanking, or the sounds of forks and knives scraping on plates. Some children might not be able to sit still and stay at the table, which can make it difficult for the family to eat a meal together. However, the family can use adaptations such as “sit and move” cushions that allow a child to wobble in their chair, or giving a child a fidget toy to keep their hands busy so that they are better able to sit at the table during meals.
- School is often a challenging environment for children with sensory processing needs. Children can find it difficult to learn when sensory input is getting in the way. For example, when a child’s senses are overwhelmed by the chair they are sitting in, the clothing they are wearing, the noise in the classroom, or the smell of the cleaning products used in the classroom, then the child might be unable to focus their attention on the lesson. Over-stimulated children might be up and down a lot or have a hard time staying focused. Parents who are fostering or adopting might need to advocate with the school on behalf of the child.
  - Parents should partner with teachers to get the child’s sensory integration needs met.
  - Parents might need to request an Individualized Education Program (IEP; for students who qualify for special education) or get a Section 504 plan (for students who require some form of accommodation but do not meet criteria for special education). These documents can detail anything the child needs such as when a child can have a snack, where a child sits and what they need to sit on (such as a wiggle or sensory seat, or with a weighted lap pad), or what can be put in or under the child’s desk to give the child something to fidget with (such as either side of Velcro or a smooth rock).
- Bedtime can be especially challenging for children with sensory processing needs. Some children might have a hard time falling asleep because they have difficulty calming themselves. Parents who are fostering or adopting can help a child learn to calm themselves by introducing calming routines for bedtime such as taking a warm bath (if that works to calm their sensory system), followed by a story, and then going to bed with a weighted blanket. Other children might need to have stimulating activity right before bedtime (such as a pillow fight or playing outside), which is followed by the calming activities.
- As with many aspects of fostering and adopting, parents need new specialized parenting tools and the support of a team to address the needs of a child who has sensory integration needs.