



## **Pay Attention to Your Child's Senses: It Can Make a World of Difference**

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An Occupational Therapist trained in Sensory Integration can be very helpful in working with children who are having difficulty paying attention and learning, or with those who are described as “overactive”, “have difficulty sitting still,” “in constant motion,” or the “disorganized child.” The ability to attend and learn are dependent upon the ability to integrate and organize information from our senses.

The five basic senses that we are most familiar with include sight, sound, taste, smell and touch. But there are two hidden senses that we often forget about. The vestibular sense -- the sense of movement, and the sense of proprioception – or muscle awareness. Both are very important and must be taken into account to understand the full benefit of Sensory Integration.

Unorganized sensory input creates a traffic jam in our brain, making it hard to pay attention and learn. To be a successful learner, all our senses must work together in an organized manner. In other words, we must have integration of our senses or Sensory Integration.

When a person has difficulty learning, paying attention, behaving appropriately, or is diagnosed with Attention Deficit Disorder, Attention Deficit Hyperactive Disorder or Obsessive Compulsive Disorder, he or she may in fact have an immature nervous system causing Sensory Integration Dysfunction. As we have just said, the relationship between sensory integration and learning and attention is important. When sensory integration is not working properly, it's hard for a person to filter out nonessential information, background noises, and/or visual distractions and to focus on what is essential.

### The sense of touch

Each of our senses has a discrimination and protective component. We learn about our environment through touch. This includes knowing how heavy, smooth, rough, big or small an object is just by holding it. The system also protects us when the body is threatened by causing us to pull away from hot water or something that is unpleasant. Tactile (touch) integration is important for the development of body awareness, fine motor skills, motor planning and being comfortable with touch. People who have difficulty being in crowds, who pull away from touch or hugs, who are bothered by certain clothes and/or temperatures and textures of foods – as well as those who touch everything – have unorganized processing of tactile input. Children can't learn if they are focusing on the seams in their socks or the tags in their clothing instead of what the teacher is saying.

### The vestibular sense

The vestibular sense provides information related to movement and head position. The vestibular sense is important for the development of balance, coordination, eye control, attention, movement, emotional security and some aspects of language development. A person who has disorganized processing of vestibular input may have difficulty with attention, coordination, following directions, reading (keeping their eyes focused to follow) or eye-hand coordination. Disorganization may also be seen in someone who is constantly in motion, has an extreme fear of movement or is described as an overly sensitive, lazy or sedentary person. Immature language skills are often the reason a child is initially referred to therapy, but the language delay may be the result of immature sensory processing.

### The proprioceptor sense

To know where our body is in space and how we are moving, we need information from receptors located in our muscles and joints, called proprioceptors. Our proprioceptive sense is very important for the development of body awareness. This sense does not work in isolation: information from the vestibular, the tactile and vision senses are constantly interacting for functional movements. When this sense does not process information properly, we may see someone who is clumsy, bumps into other people, and falls or stumbles frequently. Children with this problem can also seem overly aggressive because they might seek input by pushing other children and/or frequently crashing into things. Some may chew on toys, shirt sleeves or food and/or be messy at mealtimes. It may take them a long time to learn new tasks because of poor motor planning, and when a new task is slightly changed they have to learn it all over again. These children might have to put so much effort into staying in the chair in school that they are not able to focus their attention on what is being said in the classroom.

### The auditory sense

Auditory input also has an impact on our level of alertness. For example, most of us know what music calms us down and what music makes us ready to dance. The amount of auditory input that we prefer or can tolerate is very personal. You may have seen a child in the classroom covering his/her ears when music is played or when someone is crying. At the same time, that particular child might be one of the loudest in class. By making loud noises, the child will cover up the sounds that bother him/her. Some children seem as though they hear every little sound, including noises that wouldn't be noticeable by someone else. It can be very hard for a child with auditory processing problems and auditory defensiveness to pay attention to a classroom teacher without corrective strategies and an appropriate environment.

### The visual sense

Light helps us to initiate and maintain alertness. Color helps us to orient, pay attention and learn. We use visual information the same way we use auditory information – to calm us down or to alert us. A cluttered environment is very distracting for most children. To improve attention, we often choose a certain place in a room to make sure we can see and hear. Organization of belongings is another task that is often visually related. Many children with attention difficulties need help to organize their belongings in order to be more successful. Delays in the area of visual-motor and visual-perception skills are common in children with sensory processing problems.

### The senses of taste and smell

Taste and smell are two senses that we use to relate to food. These senses can remind us of something pleasant or can cause a “fight or flight” response. We can alert our taste buds with something spicy or sour, and calm down with a warm drink, etc. The sense of smell can be both alerting and calming, depending on the aroma and how a person responds.

Sensory Integration Dysfunction is still not widely understood by many doctors and education professionals. In fact, Children's Therapy Center is one of only a handful of sites in Connecticut with staff trained to implement the Sensory Integration Praxis Test, a comprehensive evaluation designed to pinpoint SI problems. If therapy is recommended, the Center's staff develops a “sensory diet” which consists of activities designed to challenge the child's ability to respond appropriately to sensory input. The Center works with the parents, teachers and other occupational therapists if the child's school has them, to come up with strategies they can use in any setting. When a child's sensory systems are fully functioning, learning comes easily. But immature systems can make paying attention difficult and learning frustrating. Through sensory integration therapy, many of these difficulties can be overcome.

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