

Consultants Corner: **What is sensory processing?**

Sensory processing or sensory integration refers to how a child processes incoming sensory information. How well children process sensory information affects their ability to follow routines, tolerate groups, play, and regulate emotions, for example.

Sensory integration is the neurological process by which sensation (such as touch, sight, sound, smell, taste, movement and input received through the muscles and joints) are organized for our use. When our nervous system is able to process and integrate information from all the senses appropriately, we are able to interact with the world in an adaptive and skillful manner. It is the way the brain receives, organizes and responds to sensory input in order to behave in a meaningful and consistent manner. Challenges in sensory integration and modulation show up in a variety of ways and can influence a child's motor skills, learning, behavior and emotional regulation.

When children are efficient in their processing, they make appropriate responses to the environment around them. They master skills, behave predictably, pay attention and show good self-regulation skills (they control their physical activity, emotional and cognitive responses). Children can sit and attend to the important pieces of information in a classroom and therefore have a good chance at achieving their academic potential. Furthermore, children are able to understand their bodies' movement in relation to their surrounding and themselves. This in turn aids in social development.

All the sensory systems need to work together for efficient and effective sensory processing. There are five senses and two hidden senses: the vestibular sense (responsible for information regarding movement) and the proprioceptive sense (information from our muscle and joints). How well these 7 systems process information lead to success or frustration when attempting almost any other skill. Getting dressed, riding a bike or even reading a book requires processing many different sensations.

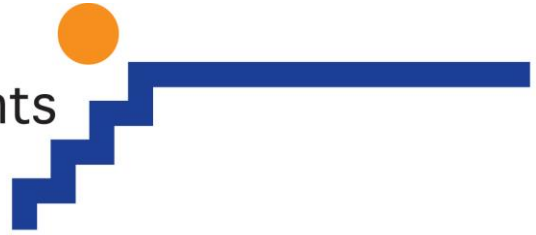
Sensory processing differences may occur when sensory signals cannot organize themselves into appropriate responses. It may affect people in only one sense, just touch, sight, or movement, or in multiple senses. One person may over-respond to the touch sensation and find clothing or unexpected touch distressing. Another might be under-responsive to stimulation such as movement (the vestibular sense) and may crave movement constantly.

Children receiving inaccurate messages from their muscle and joints (proprioceptive sense) might experience poor posture, and as a result may have trouble with gross and fine motor skills development.

Sensory processing is a normal, neurological process. We all have some "glitches" in how we interpret sensory information. Some of us may not like the feel of tags on our clothes, or we may have trouble concentrating with lots of noise around us, or dislike crowds of people when going to a mall during the holiday season. Only when challenges with sensory processing *affect function*, is it time to take a closer look. If your child demonstrates poor attention, inappropriate behavior, is overly active, or is lethargic and lacking in speed of activity, has difficulty in learning and retaining learned skills, is unable to comfortably manage crowds or group settings, shows immature social skills, or heightened anxiety, they

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may benefit from a closer look at their sensory processing systems. Discuss your concerns with your child's teacher and pediatrician to come up with a plan for further investigation.

Resources: www.AOTA.org (American Occupational Therapy Association), <https://www.siglobalnetwork.org/> (Sensory Integration Global Network), Raising a Sensory Smart Child by Lindsey Biel and Nancy Peske, Sensational Kids by Lucy Jane Miller.

Child Development Consultants is a local team comprised of a speech language pathologist, an occupational therapist, and an early childhood special educator/behavior specialist. ChildDC partners with nursery schools, childcare centers, and independent schools around the DMV to provide support, coaching and resources to teachers and families. For more information go to www.childdc.com