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Understanding Sensory Integration Dysfunction

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PLEASE NOTE: The term "Sensory Integration Dysfunction" is no longer used and has been replaced by "Sensory Processing Disorder," or SPD. For more information, please see Handy Handout #399, "What is Sensory Processing Disorder?"



What is Sensory Integration?

Sam opens the front door and walks into the house. He immediately smells something sweet baking in the kitchen. Yum! Smells like chocolate chip cookies! Sam's mouth waters as he hears the oven timer ringing. He runs to the kitchen to see his mom pull out the first batch of chocolate chip cookies.

Our senses (sight, sound, smell, taste, and touch) tell us about our environment. Our senses receive information from both inside and outside of our bodies. In the above story, Sam's senses worked together to tell him something was baking in the oven. Sensory Integration (SI for short) refers to how our senses work together to organize and process incoming sensory information from the world around us. SI is controlled by the central nervous system, made up of the brain and spinal cord. When our sensory system works together, it allows us to interact with the environment in purposeful and meaningful ways.



What is Sensory Integration Dysfunction?

Sensory integration dysfunction refers to the body's inability to properly take in and use sensory information. A child with an SI dysfunction has difficulty organizing sensory information to carry out everyday tasks, such as dressing, eating, or even playing. Some activities and social situations may be difficult for children with SI dysfunction. For instance, they may dislike finger painting because they don't like to get their hands wet or sticky. Large crowds may overwhelm the child with SI dysfunction due to the noise level and number of people around. SI dysfunction can appear in any combination of the following

senses: hearing, taste, smell, sight, touch, or movement. At some point in our lives, most of us have difficulty processing sensory information; however, when it interferes with our ability to function in our daily lives, it can become a problem!

* Some common characteristics of SI Dysfunction include:

1. Over or under responsiveness to sensory input (i.e., doesn't tolerate tags in clothing or has an unusually high pain threshold)
2. Unusually high or low activity level
3. Child is in constant motion or easily fatigues
4. Difficulties with fine motor (cutting with scissors) and/or motor planning (throwing a ball)
5. Self-regulation problems (i.e., difficulty calming down after an activity)
6. Difficulty changing activities
7. Poor eye-hand coordination

* Note that if your child demonstrates some of the above characteristics, it does not necessarily mean he/she has an SI dysfunction!



What causes SI Dysfunction?

Good Question!! Researchers suggest the following as possible causes of sensory integration dysfunction:

1. Heredity
2. Prenatal exposure to some medications, toxins, drugs, and alcohol

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(cont.)

3. Birth trauma such as lack of oxygen or emergency c-section
4. Unknown reasons



What do I do if I suspect my child has SI dysfunction?

If you suspect your child has an SI dysfunction talk to your pediatrician about your concerns. He/she may refer you to an occupational therapist for a sensory integration evaluation to determine if a problem exists.



How is SI dysfunction treated?

A pediatric occupational therapist (OT) with specialized training in sensory integration can provide treatment for SI dysfunctions. An occupational therapist is a health professional who helps individuals perform age-appropriate and meaningful activities. For children, these activities can include jumping, skipping, buttoning, using utensils, drawing, and writing. The purpose is to engage the child in typical childhood activities such as swinging, playing, and drawing. The child's individual needs determine

treatment. It usually occurs in a sensory enriched environment such as a gym that provides the child with opportunities to swing, jump, and most importantly..... play! In some instances, the OT will develop a sensory diet: a home program that enables the child to participate in activities to strengthen skills learned in treatment. Parent involvement encourages a carryover of skills learned into the home environment. It is important to encourage your child to participate in activities that interest them and to use their strengths to boost their self-esteem.



How does SI affect the Speech-Language Pathologist and treatment?

Speech and language problems often coexist in children with SI dysfunction. The speech-language pathologist plays an important role in treatment. Speech pathologists often integrate sensory activities into treatment to stimulate language production. Activities such as blowing whistles, swinging, and bouncing on a therapeutic ball promote spontaneous language production. Speech-language pathologists and occupational therapists should work together to decide on the best treatment approach for children with SI dysfunction.

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