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## What is Sensory Processing Disorder?

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**Sensory Processing** is a term referring to the way the nervous system receives messages from the senses and turns them into appropriate motor and behavioral responses. Whether you are eating pancakes, riding a skateboard, or reading a book, your successful completion of any activity requires processing many different sensations.



A Sensory Processing Disorder exists when sensory signals cannot organize themselves into appropriate responses. Pioneering occupational therapist and neuroscientist, A. Jean Ayres, PhD, compares SPD to a neurological "traffic jam" which prevents parts of the brain

from receiving the information it needs to interpret sensory information correctly. A person with SPD finds it difficult to process and act upon information received through the senses which, in turn, can create severe challenges in performing everyday tasks. Clumsiness, behavioral problems, anxiety, depression, and school failure are a few ways SPD can affect someone that does not receive effective treatment.



Sensory Processing Disorder can affect people in only one sense–just touch, sight, or movement–or in multiple senses. One person with SPD may over-respond to the touch sensation and find clothing, physical contact, light, sound, food, or other sensory input as unbearable.

Another might under-respond in reaction to stimulation – even pain or extreme hot and cold. Other children might exhibit appetites that are in perpetual overdrive for certain sensations.



Children receiving impaired messages of sensory processing from their muscles and joints might experience poor posture and motor skills and, as a result, may have low self-esteem, experience social/emotional issues, and struggle academically. This disability

is not an obvious one. People unaware of this disorder, including parents and educators, may label SPD children as clumsy, uncooperative, belligerent, disruptive, or "out of control". Without an appropriate diagnosis and therapy, anxiety, depression, aggression, or other behavior problems can follow.



However, most children with Sensory Processing Disorder (SPD) are as intelligent as their peers and are sometimes intellectually gifted; the wiring of their brain is just different. Those with SPD must learn alternate ways (through therapy) to help them

adapt to how they process information, and they must acquire leisure activities that suit their own sensory processing needs.

Children with SPD often receive a misdiagnosis of Attention Deficit Hyperactivity Disorder and may even begin a regiment of medication that is not addressing their needs. Examine the symptoms of ADHD and SPD side by side, and you will see some striking parallels, as well as several disparities. The two conditions do not always go hand in hand, but they can and often do. Err on the side of caution and consult physicians and therapists who are knowledgeable about both.







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Once children with SPD have an accurate diagnosis, they benefit from a treatment program of occupational therapy (OT) with a sensory integration (SI) approach. Well-trained clinicians may effectively combine an Integrated Listening System or other

complementary therapies with Occupational Therapy and Sensory Integration techniques. This approach typically takes place in a sensory-rich environment sometimes called an "OT gym." During OT sessions, the therapist guides the child through fun activities that are very subtle, yet challenging.



The long-term goal of OT is to help the client participate in meaningful activities ("occupations") while learning to regulate sensory exposure and responses. Over time, the appropriate responses generalize to the environment beyond the clinic to

include the home, school, and the larger community. Effective occupational therapy enables children with SPD to take part in the normal activities of childhood, such as playing with friends, enjoying school, eating, and dressing.



Ideally, occupational therapy for SPD is family-centered. Parents work with the therapist to learn more about their child's sensory challenges and thereby learn methods for engaging with them in therapeutic activities (sometimes called a "sensory diet") at

home and elsewhere. The child's therapist can provide ideas to teachers and others outside the family who interact regularly with the child. Parents and the clients themselves learn advocacy strategies to assist when teaching others that this disorder is real, even though sometimes it is "hidden." With this assurance, they become better advocates within their families, schools, and communities. Preliminary research suggests that SPD is something we inherit. If so, the causes of SPD are in our genetic material. Prenatal and birth complications have also been implicated, and environmental factors may be involved. As with any developmental and/or behavioral disorder, the causes of SPD are likely to be the result of factors that are both genetic and environmental. Only with more research will it be possible to identify the role of each.



## Resources:

ADDitude: Living Well with Attention Deficit. June/July 2004. Is It Sensory Processing Disorder (SPD) or ADD/ADHD? http://www.additudemag.com/adhd/article/793.html

Stephens, Betsy. 2012. Parents Magazine Online. Kids Who Feel Too Much. Retrieved online November 2013 from http://www.parents.com/health/kids-who-feel-too-much/

Sensory Processing Disorder Foundation. 2012. About Sensory Processing Disorder. Retrieved online November 25, 2013 from http://www.spdfoundation.net/about-sensory-processing-disorder.html

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