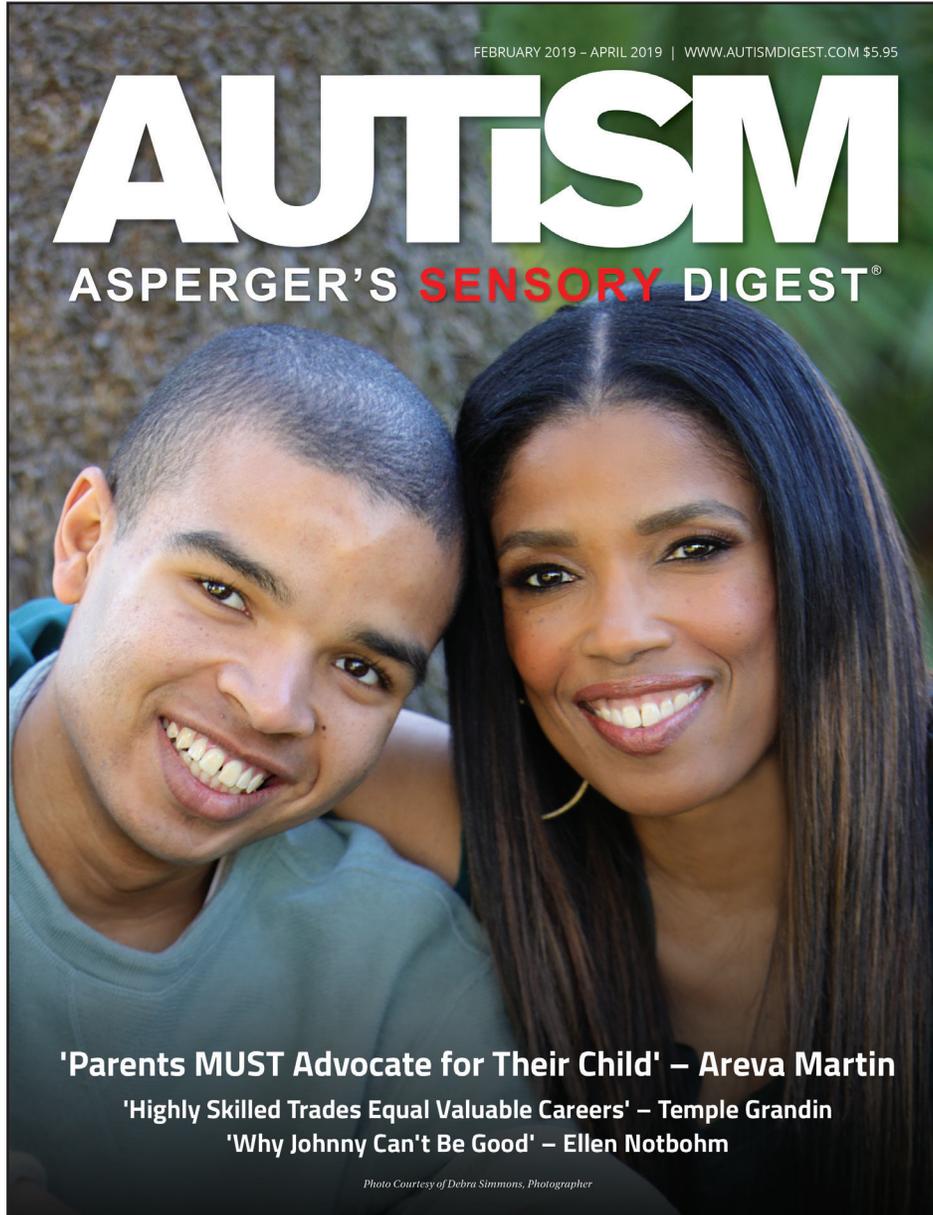


All the latest on what's happening in the world of autism, Asperger's and sensory issues!



SENSORY PROCESSING DISORDER PRIMER: PART II WHEN SENSES ARE OUT OF SYNC

Article By Carol Stock Kranowitz, MA

Award-winning magazine! *Proven success for 20 years*

**CLICK HERE
TO SUBSCRIBE**



Available at
amazon

[http://autismdigest.com/
subscribe-now/](http://autismdigest.com/subscribe-now/)

Call now
800.674.3771

Available on the
App Store



Sensory Processing Disorder Primer: Part II

WHEN SENSES ARE OUT OF SYNC

by Carol Stock Kranowitz, MA

People with SPD process sensations less efficiently than others. Their central nervous system mismanages bodily and environmental sensations. People with SPD have difficulty responding in an adaptive way to sensations that others cope with easily.

What is life like when sensory systems don't work well? "What helps people understand overresponsive sensory problems," says Temple Grandin, PhD, "is asking them to imagine extreme examples of what it feels like. Imagine wearing sandpaper clothes that scratch all over, all day. Imagine washing your face in a bucket of perfume. Imagine feeling as if you'll fall off a cliff when you walk a few steps. Imagine sitting near the stage, next to a rock band's amplifier."

Being deluged by these sensations is to be expected once in a while—but all day, every day? That's what SPD may feel like.

Below are descriptions of three SPD categories and subtypes.

1) SENSORY MODULATION DISORDER

This is difficulty with regulating and organizing the degree, intensity, and nature of responses to sensory input in a graded and adaptive way. Sensory modulation disorder has three subtypes: overresponsivity, underresponsivity, and craving. Also, fluctuating between being overresponsive to some sensations while craving or being underresponsive to other sensations may occur according to the time of day, environment, fatigue, stress, and other factors.

THREE SUBTYPES

• **Sensory Overresponsivity**—Causing the "sensory avoider" to shrink from stimuli. Not only garish, malodorous, raucous, spicy, jolting, and prickly stimuli, but also mild everyday stimuli can quickly make the sensory avoider irritated...very irritated... or angry and thoroughly miserable. Overresponsivity is sometimes referred to as "defensiveness."

• **Tactile:** Light, unexpected touch bothers Emma. She can't bear to have her hair brushed and won't wear a hat. She wears well-worn, long-sleeved, ankle-length clothes to avoid the feeling of air on her skin. She eats soft, mushy food. Being kissed or caressed makes her uncomfortable.

• **Vestibular:** Aiden gets carsick unless he drives. Rocking chairs, elevators, and airplanes make him uncomfortable. He experiences "gravitational insecurity," the extreme fear and anxiety that he will fall when his head position changes or when he moves through space, as when bending over to tie his shoes, turning his body around, scaling a ladder, or riding a bus.

• **Visual:** Logan is highly irritated in milling crowds. Strobe lights and flickering fluorescent lights bother him.



• **Auditory:** In lecture halls, Hannah is annoyed by fluorescent lights buzzing and classmates whispering. In the cafeteria, the sounds of people chewing and swallowing irritate her. At parties, boisterous noises bother her.

• **Olfactory and gustatory:** Ethan can't tolerate perfumes and body odor, seaweed, mothballs, and new-mown grass. Broccoli, bananas, and off-brand cornflakes bother him.

• **Sensory Underresponsivity**—Causing the “sensory disregarder” to show slow or little or even no reaction to stimuli. The person may ignore body-centered and environmental stimuli. He may seem lazy and need much coaxing to get off the couch and out the door. The sensory disregarder needs intense sensory input to “get it.”

• **Tactile:** Kathy can walk barefoot in the snow and step into extremely hot bathwater without being aware of the extreme temperatures. She is unaware when her clothes are twisted or her tights are falling down. She doesn't notice her acne or cuts and bruises.

• **Vestibular:** Freddy frequently trips on air. Unaware that he is falling, he doesn't thrust out a hand or foot to cushion the fall.

• **Proprioceptive:** On the floor, Valerie sits in a W position with her knees close and feet out to the sides for extra stability. Walking on pavement, she slaps her feet for sensory input.

• **Visual:** Gus doesn't notice the snowball coming his way and doesn't duck. He responds slowly when people gesture or traffic lights change.

• **Auditory:** At the stadium, Enrique doesn't hear his friend calling, “Yo! Over here!”

• **Olfactory and Gustatory:** Susie doesn't detect that the cheese is moldy.

• **Interoceptive:** Jenna doesn't notice that she has a stomach ache from eating too much spicy salsa.

• **Sensory Craving**—Causing the “sensory craver” to seek certain sensations longer and more intensely than others. She seems addicted to stimuli. But added sensory input, instead of being satisfying, causes her to become increasingly disorganized and frenetic in search of more stimulation.

• **Tactile:** Sandy constantly reaches out to touch objects and people.

• **Vestibular:** Steve craves intense activities like mountain biking, skateboarding, and downhill skiing. He is in perpetual motion, rocking on his feet when he stands and jiggling in his seat.

• **Proprioceptive:** Myrna bumps and crashes into everything in her path. She constantly gnaws fingernails, hair, and pencils because she needs to chew. She begs for hugs to get deep pressure.

• **Visual:** Sara could watch sliding doors open and close all day. At a party, she lifts her face to stare directly at the strobe light.

• **Auditory:** At a concert or party, Burt gets as close to the amplifiers as possible. Music is never too loud.

• **Olfactory and Gustatory:** When Larry enters a room, he sniffs the air. He sniffs food, objects, and other people. Now a high-schooler, he must control his urge to lick objects and people—but he would if he could.

• **Interoceptive:** Joan eats a whole pizza or a gallon of ice cream to get the sensation of being full.

A study of a large group of general education children found that 16.5 percent have sensory overresponsivity by the age of eight (Ben-Sasson, Carter, et al., 2009). The

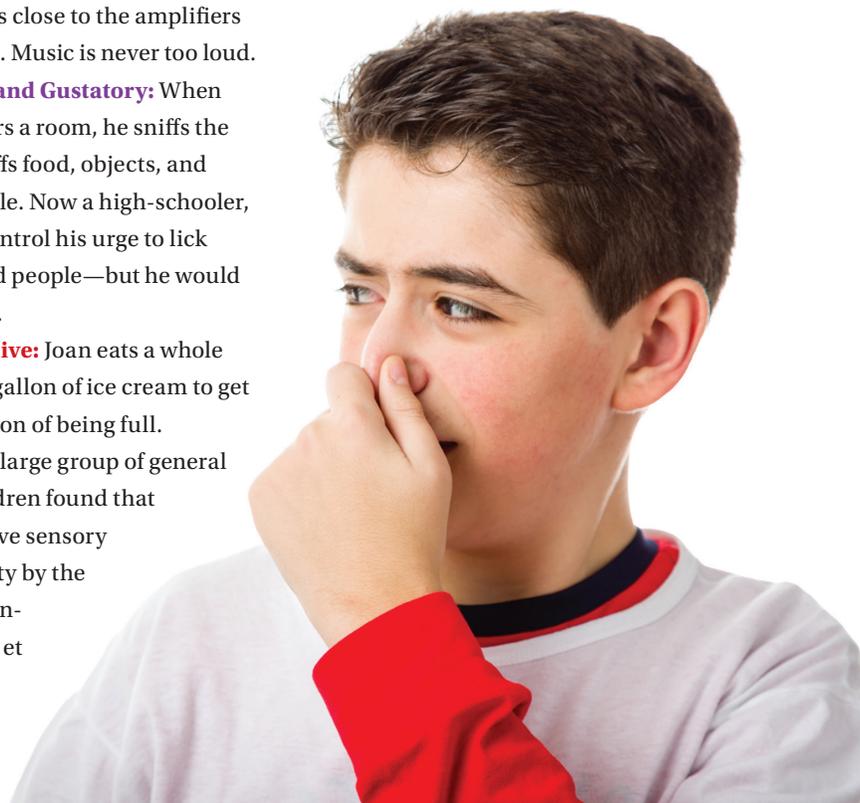
prevalence for all types of SPD is rising. If SPD is unrecognized, many children develop into adults with SPD. Occupational therapists who specialize in sensory issues strive to identify and treat children as young as possible. The goal is to help all children and adults learn to manage their sensory challenges so they can lead satisfying, productive lives.

2) SENSORY DISCRIMINATION DISORDER

This causes the “sensory jumbler” to have difficulty discerning differences among sensory messages, such as how things look, sound, feel, weigh, taste, and smell.

EIGHT SUBTYPES

• **Tactile:** Josie looks disheveled, with messy hair and clothes. Buttons and belts confound her. She seems “out of touch” with her hands and feet, as if they are unfamiliar appendages. When someone touches her she can feel it but can't say where. Holding objects, she has difficulty perceiving their texture, temperature, or density, and often drops them.



- **Vestibular:** In an elevator, Scott can't tell if it's rising or descending, and he often feels nauseous. Because of poor coordination and balance, he never learned to ride a bike.
- **Proprioceptive:** Sophia is confused about how much force to exert. She lifts a book with so much "oomph" that she sends it flying, or she hugs a friend too hard. She is clumsy positioning her body to get dressed, especially if she can't see what she is doing.
- **Visual:** Manny stands there for a while looking for the pickles in the refrigerator or two matching socks in the dresser. Poor depth perception hinders sports, as he can't judge where and how balls and other players are moving. Learning to drive, he has difficulty knowing where the car is on the road, where other cars are in relation to his, and how to parallel park.
- **Auditory:** Mia is confused in groups when several conversations are going

on. She mistakes a loud, friendly voice for an angry voice, or "No!" for "Go!" She has difficulty understanding jokes or remembering lyrics, verbal instructions, or what a friend just said.

- **Olfactory:** Avery can't tell the difference between watermelon or cherry scents or between a clean T-shirt and the one he wore all day yesterday.
- **Gustatory:** Charlotte can't discriminate when food is too salty or sweet or that she has a bad taste in her mouth and should brush her teeth.
- **Interceptive:** Dick often doesn't realize he is hungry or needs to have a bowel movement.

3) SENSORY-BASED MOTOR DISORDER

This is difficulty with movement resulting from inefficient sensory processing, especially in the tactile, vestibular, and proprioceptive senses.

TWO SUBTYPES

- **Postural Disorder**—Causing the "sensory slumper" to have difficulty stabilizing the body while moving or resting in response to the sensory demands of the environment or task. The person may struggle with sensory-based motor functions, such as muscle tone, motor control, balance, bilateral coordination, and crossing the midline.

Roberto slumps at the desk and dinner table. His weak muscles, low tone, and poor core strength make it hard to sit and stay upright. He is clumsy using pencils, walking on gravel, stepping off the curb, reaching for a glass, swimming, kicking a ball, and other tasks that require him to position his body accurately. He would rather stay seated, because movement is so demanding!

- **Dyspraxia**—Causing the "sensory fumbler" to have difficulty with the steps involved in a complex task:

- Ideation, i.e., thinking of an idea for a new, multistep action.
 - George's friends Don and Sam pick him up to go to the movies. Riding in the back seat makes George uncomfortable, but he has no choice. With some effort he climbs in, closes the door, and slumps back. Don waits for a moment and then says, "Seat belt, Dude." George sighs. Oh, seat belt. Right. That, too.
- Planning and sequencing the necessary motions.
 - To use this unfamiliar seat belt, George must modulate and discriminate messages from five sensory systems: vestibular, to turn his head, as well as to stay calm and alert; visual, to look for the buckle; proprioceptive, to stretch out his arm; tactile, to grasp the buckle, and proprioceptive again, to gradually draw out the belt; and auditory, to click the buckle into place. Using his senses to do all these tasks does not happen automatically, so George has to think each one through.
- Execution, i.e., carrying out the plan of action.
 - Sweating, George fumbles with the multistep action and eventually secures the seat belt. Ten minutes after the car pulled into his driveway, off the boys go to the movies.

We all experience clumsiness occasionally. Most of us falter with unfamiliar actions that have sequential steps. Remember when you first rode a bicycle, went through an obstacle course, followed a complex recipe, or dressed up for a date? Initially, everyone bungles a few steps, until these novel tasks become routine.

But unfamiliar actions are full of significant stumbling blocks for the dyspraxic sensory fumbler. Balancing on a bike and flossing teeth may take



many rehearsals and much effort.

It's easy to see that SPD could be disheartening in body, mind, and spirit. However, all may — and often does — turn out well.

In sum, SPD's red flags are unusual responses to sensory input, especially touch and movement. One sense, several senses, or all senses may cause problems. Different combinations of modulation, discrimination, and sensory-based motor issues may occur in one person. *SPD is not an "all or nothing" condition.* It may be a little of this and a lot of that, and issues may differ from day to day, from place to place.

Everyone contends with changes and challenges as they develop. When the senses are out of sync, individuals with SPD struggle with a heavier load than their typically developing peers. Treating these individuals with respect and appropriate therapy is essential. ■

Adapted from *The Out-of-Sync Child Grows Up: Coping with SPD in the Adolescent and Young Adult Years*, which includes personal stories and unique strategies by and for teens with SPD. (TarcherPerigee, 2016)

This is Part II of a two-part primer about sensory processing disorder, commonly experienced by people with

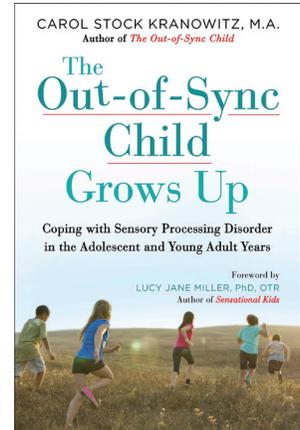


ASD. In this issue of *Autism/Asperger's Digest*, you will find facts about sensory processing disorder, when the senses are "out of sync." (Part I — about typical

sensory processing, when the senses are "in sync" — was in the November/December issue.)

Learn more about these activities and many more in three of Carol's

books, *The Out-of-Sync Child Has Fun*, *The Out-of-Sync Child Grows Up*, and *The Goodenoughs Get In Sync*, and in two books she co-authored with Joye Newman, *Growing an In-Sync Child* and *The In-Sync Activity Cards Book*. Carol is available for workshops on how Sensory Processing Disorder (SPD) affects children and on fun and functional sensory-motor activities to get kids in sync. www.CarolStockKranowitz.com.



Sensitive Sam Books

By Marla Roth-Fisch

Spoken from a child's perspective, this book helps others understand Sensory Processing Disorder.

Featured in *Parents Magazine* under "Healthy Reads"
Book of the Year Award — *Creative Child*

Available on Amazon
Only \$9.95

★★★★★

Sensitive Sam Visits the Dentist

Packed with Hints for Parents!

Having a good first experience with going to the dentist will help a child with autism tolerate the dentist. This book will help children on the spectrum better understand visits to the dentist. *Dr. Temple Grandin*

Available on Amazon
Only \$9.95

★★★★★

Moving Meditations

FOR KIDS AND THEIR FAMILIES

Developed by researchers at Geisel School of Medicine at Dartmouth

- calm stress & anxiety
- support self-regulation and resilience
- enjoyable learning for kids and families
- learn more at BodymindScience.Info

Download on the App Store