

SENSORY OVERRESPONSIVITY



Britt Collins, MS, OTR and Lucy Jane Miller, PhD, OTR

Welcome to the Sensory Solutions column! We are excited to bring you information and solutions to help with the sensory needs of your child since most persons with autism spectrum disorder (ASD) have sensory issues of one type or another. It is important to remember that ASD and sensory processing disorder (SPD) are *distinct* conditions that deserve separate consideration. To target treatment of sensory issues appropriately in individuals with ASD, you must first determine the subtype (or more often subtypes) of sensory issues that a person displays. During this year-long column, we will describe how each of the six major subtypes of SPD can be detected and offer ideas for improving the quality of life for individuals on the spectrum with those sensory needs.

What Is Sensory Processing Disorder?

SPD is a complex disorder of the brain that causes people to have problems with interpreting and regulating responses to everyday sensory information. The issues can be seen in one or more of the eight sensory systems—the five well-known sensations: tactile, auditory, visual, olfactory, and taste and three lesser-known sensory systems: the vestibular (sense of movement through space), the proprioceptive (sense of muscles and joints), and the interoceptive (sense of internal organs such as stomach or bladder).

In this column we will focus on Sensory Overresponsivity (SOR), one of the subtypes of SPD called Sensory Modulation Disorder (SMD). People with SMD cannot regulate the sensory information they feel. It's as if their filter is turned down too low, so they feel bombarded by information. Or their filter is up too high, so they are unaware of certain sensations. A third possibility is that they crave and seek out additional sensory input—often getting into people's faces and spaces.

Sensory Overresponsivity

Individuals with SOR are more sensitive to sensory stimulation than most people. Their bodies feel sensation too easily, too intensely, or for too long. Often these people have a “fight, flight, or freeze” response to a sensation (e.g., being touched unexpectedly, loud noise). People with SOR may try to avoid or minimize sensations (e.g., withdraw from touch, cover ears to minimize loud sounds). They may feel so overwhelmed they melt down and/or lose the capacity to pay attention and learn when faced with sensory experiences they find threatening.

When a person is overresponsive, he may appear to avoid certain tasks when actually he is afraid of the activity. His brain is sending a danger signal! This response can be seen in one or more sensory systems. Symptoms of SOR may include the following:

- Vestibular:** does not engage in climbing, swinging, or spinning activities
- Tactile:** avoids touching sticky or goeey things
- Auditory:** may get extremely disorganized in noisy environments
- Visual:** uncomfortable in sun unless wearing sunglasses
- Olfactory:** runs from smells such as dinner cooking
- Taste:** will only eat small set of foods

- Proprioception:** may not like to feel pressure on their feet or legs, and refuses to jump, hop, or skip
- Interoception:** may feel small stomachaches too strongly (and as a result—in the nurse's office frequently)

Emotional Responses as a Result of SOR

Often children with SOR feel panicked, nauseated, nervous, and/or anxious, and refuse to participate in activities. Their meltdown—which is due to fear or danger signals and may look like a bad behavior—may actually be a profound emotional response to a sensory stimuli. Once the sensory precursor and emotional response are identified for the person, they often feel less anxiety and are able to cope with their overresponsivity in a more mature fashion.

How to Help a Child with SOR

Occupational Therapists (OTs), who have been mentored by an advanced OT with experience in sensory integration (SI) therapy, are best situated to help those with SOR. An intense model of treatment (many sessions over a short time period such as 30 sessions in 3 months) works best, with clear parent-identified goals.

The two cornerstones of SI therapy in the STAR model are arousal regulation and developing a relationship with the child. When you are overexcited or overanxious, you become aroused, or are in a heightened state. Regulating arousal is crucial for those with SMD.

The child and OT bond through play. By focusing on a strong foundation of fun in treatment, the OT is better able to guide the child to tolerate sensations that make him anxious or scared. When the relationship is strong, the OT can begin to challenge the child to engage in activities that typically would provide a defensive or oversensitive response. For example, if a child is oversensitive to vestibular stimulation, but proprioceptive stimulation is calming, the OT will pair the two types of stimuli so that the child has proprioceptive input *before* and *after* vestibular stimulation. In this example, a child is interested in trying to ride a scooter board down a ramp, but from past experience with slides, she is afraid of the ramp. The activity is calling to her because it looks fun!

The OT uses her knowledge about proprioception and has the child first build a tower with heavy blocks, then push the scooter board *up* the ramp. Next the child lies on her stomach while the parent or therapist controls the scooter so that the ride down is slow (vestibular stimulation). The child's scooter runs into the tower causing it to fall down, then the child stacks up the heavy blocks again (proprioceptive stimulation). Thus, proprioceptive input, which is calming, is paired with vestibular input, which is arousing. The effect of enough proprioceptive input is that the overresponsivity to vestibular stimulation is lessened. As a result the child feels the flush of success from riding down and can be excited instead of scared. The key to success is the strong relationship with the child, which encourages him or her to try things that typically are aversive.

Sensory Overresponsivity is difficult to manage in some individuals with ASD. However, good occupational therapy from a well-trained professional—lessening the symptoms of responding to sensory stimulation too quickly, too frequently, or for too long—can make a world of difference in the quality of life for a child on the spectrum with sensory difficulties! ■

