



## SENSORY PROCESSING AND SENSORY INTEGRATION IN INDIVIDUALS WITH ASD

Many people are familiar with the five senses of hearing, seeing, touching, tasting, and smelling. In addition to these five, there are two other senses, the vestibular and proprioceptive senses. The vestibular sense helps people with balance. The proprioceptive sense helps people be aware of where their bodies are in relation to other things (for example, people or objects near them.) Sensory processing is the ability to use all seven senses to take in, process, and give meaning to sensory information from the environment.

Sensory integration is the neurological process that organizes and gives meaning to the information that is received from the senses, allowing an individual to respond appropriately. For example, when someone reaches for the stove, feels the heat, withdraws his or her hand quickly, and says “ouch,” sensory integration is at play. In this example, the individual first *feels* the heat, then uses his or her muscles and bones to *withdraw* the hand, and lastly uses *language* to say “ouch.”

### *What are sensory processing difficulties?*

Sensory processing difficulty is a breakdown of the neurological process that organizes the sensory information. Many children with Autism Spectrum Disorder (ASD) have difficulty processing and integrating sensory information and therefore may react differently than expected to information in the environment. Some children may overreact to environmental stimuli, while others may fail to notice or respond to environmental stimuli. A difficulty with processing sensory information can lead to difficulties with completing basic daily activities. For example, a child holding his hands over his ears and screaming as if in pain when the fire alarm sounds, or a child who seems to hear an airplane overhead and stop in his tracks before anyone else can hear it, is having difficult processing sensory information. (These children may also be struggling with other co-occurring conditions to ASD, such as anxiety.)

## *How are sensory processing difficulties treated?*

An occupational therapist (OT) will evaluate the child in question and determine which areas of sensory processing are difficult for him or her. The evaluation will consist of observation, parent/teacher consultation, and one or more standardized assessments. The results of this evaluation will enable the therapist to create a specific set of personalized activities that provide the sensory input for the child to help him or her stay focused and productive throughout the day. These activities may include helping the child recognize when he or she needs a break from an activity, providing structured sensory breaks (for example, quiet time or physical activity, such as jumping on a trampoline, swinging, and being wrapped up tight in a blanket).

These sensory activities can become part of the child's daily routines (for example, carrying grocery bags to the car, squeezing a stress ball during a car ride, playing calming music during homework time). The activities, and where they are included in the child's daily routine, are individualized to the particular needs of the child, with the goal of improving his or her overall arousal and regulation. As a result, the child is better able to engage in meaningful, age appropriate activities throughout the day.

Sensory activities alone do not make a child "better," but when the correctly matched sensory exercises are combined with learning or activities of daily living, the child's ability to participate and learn can be dramatically improved.

### Related Articles:

- [Occupational Therapy for Children with ASD](#)
- [How Do I Choose a Treatment?](#)
- [Choosing a Treatment Provider](#)
- [The Importance of Data Collection in Measuring Progress](#)
- [Who Are All These Professionals](#)
- [Sensory Difference in ASD - Smell](#)

### Recommended Link:

- [CAR Resource Directory \(Search within the Physical Therapy/Occupational Therapy category\)](#)

## Additional Resources:

- [American Occupational Therapy Association](#)

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