



A Primer on *Sensory Integration*

Sensory integration is the ability to organize light, sound, movement, and texture unconsciously and automatically, with no obvious effort. This organization is accompanied by age-appropriate behavior and emotional responses, social engagement, and cognitive reasoning skills, all of which should lead to purposeful work and play.

Without sensory integration, children may experience:

- A need for constant movement or sedentary withdrawal,
- Speech delays that may be accompanied by social avoidance or awkwardness,
- Clumsiness and uncoordination,
- Decreased attention to task or no visual attention at all,
- Poor safety awareness,
- An elevated tolerance to pain.

There is a qualitative difference between behavioral quirks that reflect an individual's unique sensory processing mode and a full-fledged sensory integration disorder.

Without the automatic ability to tolerate the environment (whatever and wherever it is), the effort it takes to learn reading and writing is spent instead on avoiding lights, blocking out sounds, or holding one's body still enough to sit in a chair.

On an almost daily basis, I hear these kinds of anguished comments from parents:

"Why didn't anyone tell me about this two, five, 15 years ago?"

"I know there is something wrong, but no one can put their finger on what is happening with my child or what to do for him."

"As a mother, I know something isn't right, but I have been told not to worry, that my child will grow out of it. But she hasn't."

More often than not, we have children walking through the doors of our therapy center with diagnoses such as fragile X syndrome, ADD/ADHD, Down syndrome, autism spectrum disorders, muscular dystrophy, cerebral palsy, bi-polar disorder, fetal alcohol syndrome, reactive attachment disorder, seizure disorder, anxiety disorder, and many more (including no diagnosis at all). Given the dynamics of each disorder and inherent differences in personality, every one of those children is different, with specific needs we must tailor to their individual situation.

Could all of these children, with their varied diagnoses, share an additional diagnosis of sensory integration dysfunction (a.k.a. sensory processing disorder)? Absolutely.

For one reason or another, many of these children have missed or skipped critical milestones in their development. The ramifications of this can be profound, given our knowledge that one integrative task typically builds upon and interacts with others, allowing the child to build a repertoire leading to sensory mastery. Failure to achieve key components in that mastery is like building a house with a flawed foundation. The result can lead to sensory integration disorder.

Many children take medications and/or go on special diets to curb the associated behaviors related to sensory disorders. Both of these approaches may be beneficial. Working in close consultation with a physician and therapist, parents can determine the possible efficacy of any approach by trial and error.

All of us have unexplainable responses to certain stimuli. The near-universal revulsion to fingernails scraping a chalkboard is a classic example. Others are personalized and even quirky, such as our abhorrence of certain smells or textures of foods that most other people enjoy. Some people, mostly men it seems, stick their tongues out during deep-in-thought activities such as cooking or writing. When we are busy, stressed or bored, some of us chew gum until it becomes the texture of rubber.

A person knowledgeable in sensory integration can give you a sensory-based explanation for all these behaviors. For example, we may swing our leg or tap our foot under the table at a meeting to help regulate our sensory system. This feeds a proprioceptive need (feedback to muscles and joints) and helps keep us awake, interested and organized in thought. Or we may feel the need to chew on gum or suck on candy during a seminar. The mouth is the organization center, keeping our system busy, our mind alert and organized.

So, if you can identify with the quirky behaviors mentioned above, or have 10 more of your own, do you have sensory integration disorder? Not necessarily.

There is a qualitative difference between behavioral quirks that reflect an individual's unique sensory processing mode and a full-fledged sensory integration disorder. The latter manifests in extreme responses that affect one's ability to participate and be effective in daily life. Examples would be a child incessantly walking the perimeter of a playground instead of playing on it with peers, and severe food pickiness that leaves a child eating only a few foods.

Often, people with SID will avoid and seek. They may avoid saying hello or interacting with visitors, but love to crash and ping from one couch to the other while a visitor is there. Or they may avoid certain textures in food, but over-stuff their mouths with other foods.

Scientifically, we can prove a chromosomal or genetically imposed diagnosis, but it is more difficult to explain the behavioral characteristics that come with those diagnoses. Behavior, after all, results from an extremely complex interplay of nature, nurture and culture.

Sensory integration treatment will not remove a diagnosis, but through treatment and education, it can decrease inappropriate behaviors. It is our job as sensory integration specialists to teach children how to process information, how to identify and respond to various forms of sensory input as needed to make it through life one minute at a time. Our hope is to empower them with the tools they need for independence and stability.

Living with a person who has special needs can be challenging, so parents are always looking for additional tools to help make their children's lives (and their own) more efficient and purposeful. Every day, all of us change... learn... adapt. It is imperative that just as we do with eating and



breathing, we integrate our sensory lives so that the basics of living are just that: *basic*. All of our sensory systems were put in place for a reason, and without them we couldn't ever make sense of what we feel, see, hear, taste or smell. All these functions must be in sync for our "selves" to work, play and just *be*.

Sensory integration is essential for growth. It involves much more than a brush on the skin or hands in a sandbox. It is very much a neurological concept, and an integrated approach to how we learn about and function in our world. (FF)

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