

About Sensory Integration

Every aspect of sensory issues has to affect learning in some way. Each child is so very different in their tolerance levels and reactions to stimuli but since a child's sensory issues have such a huge effect at school (anywhere from totally shutting down and, thus, not being taught at all to misbehaving so badly that clueless educators send them off to an alternative school where they learn all kinds of disturbing behaviors. Now, I guess some educators argue "did the cart come before the horse?", as in do learning disabilities affect sensory issues or vice-versa. I do not see in my mind that these two issues can be separated. As far as specific research on the topic, I'm afraid I can't help you there. Julia B.

Basically, a description of sensory integration is that it is the ability to take in information through the senses (touch, movement, smell, taste, vision and hearing), put it together with other information, memories and knowledge stored in the brain, and to make a meaningful response. It occurs in the central nervous system and is generally thought to take place in the mid-brain and brain-stem levels in portions of the brain that affect coordination, attention, arousal levels, emotions, memory, and some higher-level functions. It's not possible to have a single set of symptoms, therefore, because every brain is different. The way I like to make an analogy is in two ways: First, sensory information is food that nourishes the brain dysfunctions in processing and organizing this information can be compared to indigestion. It also can be described as a traffic jam in the brain where things get tied up in jams and don't allow certain parts of the brain to do their job.

Many kids will never be given this as a diagnosis if they only see a psychiatrist because it continues to be a subject that most psychiatrists or psychologists know absolutely nothing about. They have little or no training in this area at all. This is why it is so important to have a child evaluated by an Occupational Therapist who has some training in sensory issues and can help you establish a sensory diet that works for your child. It also can present information to the school that the environment that a child is in will significantly affect his behavior. Most school OT's also don't have training in this area so they continue to support the notion that BEHAVIOR is the biggest problem and don't look for underlying causes. Most of the OT's at Children's Healthcare of Atlanta are versed in these issues-they take Medicaid also. They can do what's called a "praxis" (means movement) test and a sensory integration profile.

There are four major areas that can be affected- attention and regulatory problems, sensory defensiveness, activity patterns, and behavior.

Attention- the ability to attend depends on the ability to screen out nonessential information. The SI child responds to sensory information without this "filtering out" ability and seems hyperactive or uninhibited. These kids are constantly seeking sensory input to more or less make sense out of their environment.

Regulatory- these kids sometime have difficulty establishing appropriate eating and sleeping habits, are sometimes unable to calm or control themselves, and sometimes overreact to stimuli(ex. bump into an SI kid by mistake and he turns around and hits you.) As infants, many of these kids were irritable, difficult to calm, and appeared cranky .

Sensory defensiveness is characterized by a fight, flight or fright response to sensory information that unaffected people would consider harmless. An example of this would be a child who typically has a highly aroused system that has prepared the body for survival because they don't recognize that the input is harmless and not threatening to them. Behaviors which can come out of this defensiveness are aggression, avoidance, withdrawal, and intolerance of daily routines. Combing hair, taking a bath, brushing teeth can become battles with kids because of this defensiveness and manifest with tantrums or acting out behaviors. Other kids can cope by being very rigid and demanding with insistence on certain textures, foods, smells.

Auditory defensiveness can cause overreactions to loud noises - many of these kids will place their hands over their ears when they hear loud noises. Taking showers can be a much too noisy of an experience for an auditory sensitive child. Visual defensiveness can cause sensitivity to light or an inability to look at someone when they are speaking to them. Olfactory defensiveness can cause problems with certain smells which other non-affected people don't even notice. Brushing teeth is an oral-motor skill- kids who are SI find brushing their teeth a painful experience and may gag.

Vestibular defensiveness results in intolerance to movement- riding down an escalator, going in elevators, car sickness all can be results.

Activity levels- problems of concern here would be:

1. the child is disorganized and unable to find purpose in an activity
2. the child is clingy and does not move around and explore his environment
3. the child lacks variety in play activities
4. the child appears uncoordinated and has poor balance
5. the child has difficulty calming himself after physical activity, a tantrum, or being upset
6. the child seeks excessive amounts of input to "calm their engine."

Behaviors- many behaviors can present from SI. Emotional and social problems, poor social skills, poor self-concept, low tolerance levels, aggressive behaviors, difficulty with transitions, irritability.

This is just a very basic idea of what sensory integration dysfunction is.

It is a very complicated issue and affects all children differently. It can literally take years to figure out how the environment affects a child's behavior, level of functioning, sleep habits, eating habits, school tolerance, social skills and many other areas.