

香港資優教育學院
The Hong Kong Academy for Gifted Education

Information Sheet

SENSORY INTEGRATION DISORDER (SID)

Definition

Sensory Integration Disorder or Dysfunction (SID) is a neurological disorder that results from the brain's inability to integrate certain information received from the body's five basic sensory systems. These sensory systems are responsible for detecting sights, sounds, smell, tastes, temperatures, pain, and the position and movements of the body. The brain then forms a combined picture of this information in order for the body to make sense of its surroundings and react to them appropriately. The ongoing relationship between behaviour and brain functioning is called Sensory Integration (SI). Sensory Integration provides a crucial foundation for later more complex learning and behaviour. It may also be referred to as dysfunction in Sensory Integration or Sensory Processing Disorder.

Description

Sensory experiences include touch, movement, body awareness, sight, sound, smell, taste, and the pull of gravity. Distinguishing between these is the process of Sensory Integration (SI). While the process of SI occurs automatically and without effort for most, for some the process is inefficient. Extensive effort and attention are required in these individuals for SI to occur without a guarantee of it being accomplished. When this happens, goals are not easily completed, resulting in Sensory Integration Disorder (SID).

The normal process of SI begins before birth and continues throughout life, with the majority of SI development occurring before the early teenage years. The ability for SI to become more refined and effective coincides with the ageing process as it determines how well motor, speech and emotional skills stability develop.

Causes and symptoms

The presence of a Sensory Integration Disorder is typically detected in young children. While most children develop SI during the course of ordinary childhood activities, which helps establish such things as the ability for motor planning and adapting to incoming sensations, for others SI ability does not develop as efficiently. When their process is disordered, a variety of problems in learning, development or behaviour become obvious.

Those who have Sensory Integration Dysfunction may be unable to respond to certain sensory information by planning and organizing what needs to be done in an appropriate and automatic manner. This may cause either a primitive survival technique called "fright, flight, and fight," or a withdrawal response, which originates from the "primitive" brain. This response often appears extreme and inappropriate for the particular situation.

When the brain poorly processes sensory messages inefficient motor, language, or emotional output is the result.

The following are some signs of Sensory Integration Disorder (SID):

- over sensitivity to touch, movement, sights, or sounds
- under reactivity to touch, movement, sights, or sounds
- tendency to be easily distracted

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- social and/or emotional problems
- activity level that is unusually high or unusually low
- physical clumsiness or apparent carelessness
- impulsive, lacking in self-control
- difficulty in making transitions from one situation to another
- inability to unwind or calm self
- poor self concept
- delays in speech, language, or motor skills
- delays in academic achievement

Characteristically many children with SID can find difficulty with the following:

- some have to think about the daily tasks that most children do automatically, which is very tiring. It is estimated that children with SID use 50% of their energy performing daily tasks that are automatic actions for other children.
- Additionally it is advisable for a daily home programme to be devised by a pediatric occupational therapist to treat SID that can be very demanding and obviously adds to his level of fatigue.
- New or unexpected experiences can be difficult to adjust to; SID children cope a lot better if prepared in advance for changes whenever possible. They can also be easily distracted particularly while trying to concentrate on a task within the classroom. Just being within the classroom environment can be quite stressful at times. (Please refer to “If only school were more like home.”)

SID children can become frustrated and upset by their difficulties. There are times when they try so very hard to succeed to a level of acceptance and satisfaction but are repeatedly met with failure. This has a huge effect on their self esteem and confidence, as does the awareness of feeling different to other children in some ways. Giving clear instructions and checking the child’s expectations can help; like all children they really respond well to genuine praise.

On occasions SID children may reach a point of sensory overload; they may panic and behave in a very anxious way and it may seem inappropriate behaviour for the situation. This is when the “fright flight and fight” response comes into action. We also know that they may not have the ability to calm themselves in the way children not suffering from SID can. Sometimes they need a familiar, trusted adult to give a hand and support with calming down strategies. Slowing down breathing, rubbing their backs and giving a sweet to suck can all help. Moving to an area where the child feels safe and comfortable will also help; children get embarrassed about behaving in this manner in front of other people especially their peers and unknown adults.

SID pertains to the way the brain cannot plan and sequence information from all of the senses efficiently. Sometimes this prevents children from being able to complete or even begin tasks successfully. Feeling disorganized internally and externally creates feelings of anxiety and frustration.

A child with SID can experience fluctuations of mood and levels of activity. Although it is recognized that we all have good and bad days SID’s children are known to experience greater extremes. The

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best way that you can help such a child is by having an understanding as to how SID affects every corner of their life. Putting yourself in his or her shoes will show you what a brave child they are and how much support they require to achieved even the smallest of milestones.

Misdiagnosis

Professionals need to be extremely careful about misdiagnosis of children with SID because many characteristics and traits are similar to, and overlap with, other areas of learning difficulty and disabilities.

Professional diagnosis and advice should be sought before making assumptions and judgments on the needs and particular issues surrounding a child who may have a variety of difficulties which resemble SID or any other learning difficulty or disability.

High Ability

Children and young people with SID and many other disorders and learning difficulties may also have high ability and/or talents in one or several areas of the curriculum. These are termed Twice Exceptional or Learning Disabled children.

For example some students may have:

- high ability in math's and science but suffer from SID and/or other difficulties
 - high ability in arts and music but suffer from SID and/or other difficulties
- SID, like many other learning difficulties, does not affect intellect.

“If Only School Were More Like Home”

The child with SID often has enormous difficulty in the classroom. His problem is not lack of intelligence or willingness to learn. His problem may be Dyspraxia, which is difficulty in knowing what to do and how to go about doing it. The preschooler who has difficulty stringing beads often becomes the school-aged child who can't organize the parts of a research project. He wants to interact successfully with the world around him but he can't easily adapt his behaviour to meet increasingly complex demands. The out-of-sync child may be unable to settle down to work. Everything may be distracting – the proximity of a classmate, the sound of rustling paper, the movement of children playing outside the window, the scratchy label inside his shirt collar and even the classroom furniture. He may be disorganized in his movements, verbal responses and interactions with teachers and classmates for many reasons may be grueling.

1. School puts pressure on children to perform and conform. While the average child buckles down to meet expectations, the out-of-sync child buckles under pressure.
2. The school milieu is ever changing. Abrupt transitions from circle time to art projects, from maths to reading, or from cafeteria to gymnasium may overwhelm the child who switches gears slowly.
3. Sensory stimuli may be excessive. People mill around. Lights, sounds, odours abound. The child may become overloaded easily.
4. Sensory stimuli may be insufficient. A long stretch of sitting may pose problems for the child who needs short stretch breaks to organize his body. A spoken or written lesson, directed toward aural and visual learners, may not reach the kinesthetic and tactile learner.

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5. School is not like home. For many children, school is unpredictable and risky, while home is familiar and safe. The behaviour of the child will differ because the environments differ. School can become more like home, however, when parents share information about their child with the adults who can make a difference in the child's success."

Adapted from: Carol Stock Kranowitz. *Out-of-Sync Child*

Links for further Information and advice

<http://www.maximumpotential.org.uk/>

<http://www.apduk.org/>

<http://ericec.org/digests/e643.htm/>

<http://www.inpp.org.uk/>

James T. Webb, Edward R. Amend, Nadia E. Webb, Jean Goerss, Paul Beljan, F. Richard Olenchak
Misdiagnosis & Dual Diagnosis of Gifted Children & Adults Great Potential Press ISBN:
0-910707-67-7

Carroll, Lee & Tober, Jan (1998). *The Indigo Children: The New Kids Have Arrived*. Carlsbad, CA:
Hay House.

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