

Sensory Processing Disorder vs. Attention Deficit Disorder

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A Brief Comparison of Two "Look-Alike" Disabilities

In my book, *The Out-of-Sync Child*, I define Sensory Processing Disorder (SPD) as the "inefficient neurological processing of information received through the senses, causing problems with learning, development, and behavior." Picture a child who has trouble processing and interpreting sensory messages about how things feel and what it feels like to be touched. Touch stimulation overwhelms this oversensitive child.

How does his problem play out? He is bothered by the label in his tee-shirt, the approach of a classmate, the lumps in his mashed potatoes, the stickiness of the play dough. Fidgeting and squirming, he pays a lot of attention to avoiding these ordinary sensations. Meanwhile, he is unable to pay much attention at all to the teacher's words or to playground rules.

Say a child with another form of SPD dysfunction has trouble processing movement and balance sensations. Say this under-responsive child needs to move around — much more than her peers — in order to rev up and get going. What is the fallout of her problem? This impulsive "bumper and crasher" craves intense, vigorous movement. She often rocks, sways, twirls, jumps, climbs, leaps, gyrates and gets into upside-down positions. She pays a lot of attention to satisfying her need for movement, and not much attention to her mother's instructions or to where she left her shoes.

Inattention . . . impulsivity . . . fidgety movement . . . these can be symptoms of SPD.

Now consider my definition for Attention Deficit Disorder (ADD): "a neurological syndrome characterized by serious and persistent inattention and impulsivity. When constant, fidgety movement (hyperactivity) is an additional characteristic, the syndrome is called Attention Deficit Disorder with Hyperactivity (ADHD)."

Inattention . . . impulsivity . . . fidgety movement . . . these are definitely symptoms of ADD/ADHD — and of many other difficulties, as well.

In my book, I discuss other "look-alike" conditions which share symptoms with SPD (pp. 17-20). SPD may look like ADHD, and some symptoms may overlap. However, optimum treatment for the two problems is different. Before jumping to conclusions and leaping to drug therapy, parents and professionals need to look at the whole child. Then, they can thoughtfully determine what will help the most.

If the child is frequently — but not always — inattentive, it is useful to ask some questions: Where, when, and how often does this inattention occur? What is the stimulus? What does the child do as self-therapy? What is happening — or not happening — when the child concentrates well? What does the child need, and what helps?

An overloaded child needs less stimulation. So, dim the lights and turn down the radio. Comfort him with "deep pressure" bear hugs. Help him fix up a retreat, with pillows and blankets, under the dining room table.

An under-responsive child needs more sensory stimulation. So, take her to the playground each day, jog together around the block, engage her in gentle roughhousing, and provide her with a chinning bar, a punching bag, and a trampoline.

SPD is a neurological problem which affects behavior and learning. Medicine doesn't fix it, but, often, occupational therapy helps. This therapy addresses the child's underlying difficulties processing sensations rather than just the symptoms of inattention.

Not psychostimulants, but a good sensory diet may be a major component in treating the child with an attention problem. (A sensory diet is prescribed by an occupational therapist and is rich in safe, appropriate, and enjoyable touch, pressure and movement experiences.) Taking a conservative approach can't hurt and often helps the inattentive child whose problem is not ADD, but developmentally delayed sensory processing.

Why A "Hands-On" Sensory Diet?

Birds gotta sing, fish gotta swim, and kids gotta MOVE and TOUCH. Moving and touching are how children first learn about the environment around them. Feeling a blanket with their skin, touching a flower petal, stretching their arms up toward the ceiling, climbing a jungle gym, and running in great circles are ways that children gain the important information they require to function well.

Preschoolers need a variety of active, hands-on experiences, because kids are sensorimotor learners. *Sensorimotor* means that sensory information comes in, and motor responses go out. For example, the feel of a bunny's soft fur is a pleasant sensation, and stroking the bunny is the appropriate motor response. Children need many concrete lessons, such as bunny-stroking, before they are developmentally ready to gather abstract information, such as ABCs and math facts.

Using many senses leads to healthy sensory integration. *Sensory integration* is the neurological process of taking in sensory information, organizing this information in the central nervous system, and using the information to function smoothly in daily life. Sensory integration is a never-ending building process: as children gain competence, their sensory integration improves. Thus, the more kids do, the more they can do.

Nature's educational plan is for young children to "do," by touching and being touched, and by moving and being moved. Sensations of touch and movement come through seven sensory systems, but we think of three basic systems when we talk about Sensory Processing Disorder:

- **The tactile system**
provides two kinds of information: 1) The protective sense warns us to defend ourselves from potentially dangerous touch sensations. 2) The discriminative sense tells us where we are being touched, and about the shape, size, and texture of objects that we touch or that touch us. We receive tactile sensations through receptors in our skin.
- **The vestibular system**
gives us information about where our heads are in relation to solid ground; tells us about movement, balance, and our ability to resist gravity; and organizes our bodies and brains for effective, everyday functioning. We receive vestibular sensations in the inner ear.
- **The proprioceptive system**
tells us, without the use of vision, the position of our body parts and how our bodies are moving through space. This system is very important for motor planning — the ability to conceive of and carry out a sequence of complex movements. We receive proprioceptive sensations through our muscles, joints, and ligaments.

At home and at preschool, children should be actively participating in hands-on, sensorimotor experiences all through the day. Passive participation — e.g., watching others play or sitting in front of an electronic screen — will not encourage our children to become competent and confident learners.

Some Ingredients For A Hands-On, Body-On Sensory Diet

Here are some typical sensorimotor experiences which could be selected for a "sensory diet" to help a young child stay organized and alert for interaction and learning. Occupational therapists will recommend a sensory diet after carefully observing your child to see what mix of calming and energizing experiences each child needs to remain attentive and on task throughout the day.

Tactile Experiences

- Making mud pies and sand cakes
- Drawing with wet or dry chalk
- Painting sidewalks and fences with water
- Handling and pedaling tricycles
- Walking barefoot
- Puttering in the garden
- Playing in the sink or bathtub
- Building with blocks
- Manipulating small objects such as Legos, dominoes and jigsaw puzzles
- Using classroom tools, such as crayons, scissors, and brushes
- Examining natural objects, such as pine-cones, feathers, sticks, and rocks
- Lying on pillows or beanbag cushions
- Curling up in "secret hideaways"
- Petting and feeding animals
- Finger-painting with paint, shaving cream, or chocolate pudding
- Gluing art projects
- Manipulating play dough
- Washing hands with soap and drying hands with towels
- Stirring cookie dough
- Eating snacks with different textures, such as cheese, pretzels, and fruit
- Handling rhythm instruments
- Dressing up
- Hugging and roughhousing gently with friends

Vestibular Experiences

- Swinging in circles on a tire swing
- Riding on a playground merry-go-round
- Swinging back and forth
- Riding up and down, walking, and balancing on a seesaw
- Jumping on a trampoline or mattress
- Jumping from a step or from the playground equipment
- Climbing a jungle gym
- Sliding down a slide
- Ascending and descending stairs
- Rolling and sledding down the hill
- Somersaulting
- Running
- Walking on uneven surfaces, such as grass or sand
- Walking on a balance beam, railroad tie, or low wall
- Crawling through tunnels or large cartons
- Swimming

Proprioceptive Experiences

- Pushing and pulling wagons
- Moving through an obstacle course
- Playing "bumpety-bump" on the tire swing
- Hanging from monkey bars
- Stretching up to the sky, like growing pussy willows
- Playing horsy
- Wheelbarrow walking
- Pouring sand, beans, water, or juice from one container to another
- Ripping paper
- Hammering nails into tree stumps or golf tees into Styrofoam
- Pressing pegs into pegboards
- Getting in and out of seat belts, jackets and boots, shoes and socks
- Opening doors without help
- Tumbling on the ground
- Having a pillow fight
- Hosing the car
- Walking in shoeboxes
- Walking with bag of rice or bean bag balanced on head
- Holding up the wall
- Playing catch with a ball
- Throwing snowballs at trees
- Kneading dough or meatloaf
- Pushing palms together

Visual Experiences

- Playing flashlight tag
- Playing balloon volleyball
- Dancing with scarves
- Tossing beanbags
- Tracing letters/numbers on a person's back
- Taking photos with a camera
- Blowing bubbles
- Blowing whistles
- Sucking through straws
- Making angels-in-the-snow
- Drawing chalkboard circles, using both hands
- Playing board games

Auditory Experiences

- Dancing/moving to music
- Drawing to music
- Beating rhythm instruments
- Moving hands, feet, or whole body up and down to sound of a slide whistle
- Making up rhymes
- Singing "drop-in" songs (ex- Old MacDonald had a ___)
- Humming
- Playing a kazoo
- Jumping rope and chanting
- Singing vowels while moving (for example: eeeeeeee, oooooooo)
- Playing non-competitive musical chairs