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Autism Agenda

Linn Benton Lincoln ESD-Cascade Regional Autism Program

Sensory Integration: Tips to Consider

Contributed By Kim Davis and Melissa Dubie

Sensory processing is the "procedure in which we take in sensory messages from our bodies and surroundings. Then we interpret these messages and organize our purposeful responses. This occurs when information about sensations is passed back and forth between the central nervous system (CNS) and nerves in the brain and spinal cord, and the peripheral nervous system with the nerves that are outside the CNS" (Kranowitz, 2004). Sensory intake is happening constantly to each of us as we move through our daily endeavors and we respond accordingly. We receive all input through our senses, via seeing, hearing, smelling, tasting, and touching and through our body centered senses of touch (tactile/protective), movement and gravity (vestibular), and body position (proprioceptive). Each sense acts individually and in union with the others to send us information about our environments and our body in each environment.

To understand how the senses all work together, imagine all that happens within our bodies automatically (if our CNS is intact) when we simply walk up the stairs with our morning cup of coffee. Visually we see the stairs and begin to lift our foot, this involves proprioceptive and vestibular senses as well as tactile. The smell of the coffee is noticed and we take care not to spill it as we ascend. We may hear voices of colleagues, feel our clothes, touch a railing, or have hot coffee slosh onto our hand, yet we continue to shift our weight to lift our legs alternately to continue up the steps. Each sense is called into play and is necessary for successful completion of this activity. In everything we do, messages are constantly being sent and interpreted by our system in order to allow us to proceed successfully.

For some individuals, especially those with an autism spectrum disorder, there may be sensory processing dysfunctions or difficulties. This is the "inability to respond appropriately to ordinary experiences and occurs when the CNS processes sensations inefficiently" (Kranowitz, 2003). Presently there is not one specific cause for sensory dysfunction, but it can cause tremendous misperception from those who support these individuals. Children with ASD may often experience an inability to respond 'appropriately' and be seen as having challenging behaviors or obsessions. Basically the degree and intensity of the input/output don't match. Examples of being overloaded may look like the following in various areas:

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SENSORY INTEGRATION TIPS CONTINUED...

Visual Input

- Stares at spinning objects.
- Spins their own bodies.
- Turns opposite direction from where teacher is lecturing.
- Demands to wear sunglasses indoors.
- Extremely organized or unorganized room (i.e. knows when an object has been slightly moved).
- Looses place when reading.
- Gives no eye contact or looks beyond person's face.
- Trouble locating desired toy on cluttered shelf.
- Turns or tilts head when reading across a page.
- Misjudges spatial relationships so bumps into people or things.

Auditory Input

- Covers ears for a fire drill or when class is loud.
- Runs from loud area.
- Complains of noises in room or outside of window (i.e. lawn mower, heat blower, insects on window, students writing on paper).
- Covers ears in the cafeteria or cannot go into the gym when there are many people in it.
- Demands that dad puts "Rain X" on the windows so won't have to use windshield wipers when it rains.
- Doesn't respond to verbal prompts when putting on noisy clothes (i.e. sweat pants).
- Hums or sings to self.
- Demands that only one person talks at the dinner table.
- Talks louder than anyone in the class.
- Prefers very loud music or none at all in the car.
- Runs out of restroom as toilet flushes.

Tactile Input

- Throws arms back when about to be picked up by adult or pulls away when trying to hold child's hand.
- Is always hanging on adult or laying between his box spring and regular mattress.
- Avoids touching certain surfaces or textures (i.e. fabrics, carpets).
- Prefers to touch specific fabrics (i.e. ladies hose).
- Dislikes getting hands or feet messy (i.e. sand, creams, paint).
- Touches everything in sight.
- Avoids being touched on the face, hair or head (i.e. washing face, hair cut).
- Doesn't react to pain such as cuts, shots, bruises, or breakage of bones.
- Person may bite his or her own skin.
- Reacts negative when approached from behind.
- Wears shorts even in extreme cold temperature.

Continued on page 3.

SENSORY INTEGRATION TIPS CONTINUED….

Taste and Smells

Taste

- Won't eat certain foods (i.e. texture or taste) or eats extreme tasting foods (i.e. lemons, hot sauce).
- Gags when told to eat food doesn't like.
- Licks or tastes playdough or toys.

Smells

- May say "you stink" to staff when wearing a strong perfume or cologne or if can smell onions on staff's breathe from lunch.
- On the opposite extreme, student may smell everything they touch to become orientated and comfortable with the object or thing.
- Breathes through their mouth instead of their nose.
- Won't visit certain environments (i.e. farms, petting zoos, fish stores).
- Does not mind smell of own bowel movement or dirty diaper.
- Won't use the restroom at school.

Proprioceptive Input

(Difficulty interpreting sensations from the muscles, joints, ligaments, and tendons)

- Pulls, twists, or chew on things (i.e. shirt, gum, pencil).
- Frequently breaks toys or hurts classmates when didn't mean to.
- Leans, bumps, trips or crashes into objects.
- Walks along touching walls.
- Too much pressure when writing (i.e. writes letter over and over again until puts a hole in paper).
- Deliberately falls or crashes into things.
- Constantly seems to "physically tackle" everything.
- Stands too close when talking to others.
- Walks stiff and uncoordinated.
- Pulls on fingers or crack knuckles.

Vestibular Input

(Over or under sensitive to balance and movement sensations)

- May seem to be a "thrill seeker" (i.e. jumping from high places, driving fast)
- May be sendentary or cautious or hesitant to take risks
- Difficulty coordinating movements of the eyes
- Trouble staying seated
- Constantly leans head on hand or arm
- Prefers to lie down than sit upright
- Feels seasick, when riding in car, boat, train, airplane, escalator or elevator
- Extreme loose or tense grip on pencil or scissors
- Enjoys being upside down
- Easily looses balance when riding a bike or climbing stairs

These may not be behavior issues, but sensory processing challenges that can be addressed through sensory activities embedded throughout the day and in regular Occupational Therapy (OT) sessions.

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SENSORY INTEGRATION TIPS CONTINUED...

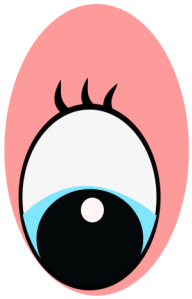
A sensory diet provides the necessary combination of sensory input to 'feed or nourish' a child's nervous system. When a child's nervous system feels properly organized it is better able to achieve optimum attention to tasks and performance of activities. Some children's nervous systems are wired so that they do not efficiently process sensory input and this can contribute to behavioral and emotional problems. A sensory diet can provide or modify sensory input to help meet the needs of these children. Many daily activities can provide sensory input, yet for some children, like children with ASD, they need an individualized sensory diet infused into their day.

Paula Aquilla (2004) says "That sensory diet can include:

- Activities scheduled at certain times during the day;
- Sensory input provided through daily routines or activities;
- Sensory input created by the environment;
- Sensory input offered through recreational or leisure activities; or
- Sensory input from interactions with others."

Here are some ideas in each area that can be used for a "sensory diet".

Visual Ideas



- Limit the amount of visual material hanging from ceiling or walls.
- Store manipulatives inside containers.
- Organize and label all material to identify where they belong.
- Put pictures on containers for students with poor visual memory.
- Use picture templates of where items belong in places (i.e. desk, room).
- Tape a number or letter line onto student's desk.
- Provide primary lined paper or graph paper to help with spacing.
- Keep amount of visual information on worksheet to a minimum.
- Use a lamp instead of overhead fluorescent lighting.
- Use a touch screen instead of computer mouse.
- Use computer software to organize material.
- Allow student to sit with back to teacher (i.e. look at a solid wall).
- Have student write notes and use a peer's note as well.

Auditory Ideas

- Minimize verbal directions.
- Use ear plugs or head phones.
- Allow time for student to listen to favorite music (i.e. classical, Dixie).
- Use more visuals with pictures or words.
- Use social stories about what might happen or sounds that can be heard in the room.
- Desensitize a student to an area by slowly integrating him or her on numerous visits.

Tactile Ideas

- When a student says a touch "hurts" or pulls away, acknowledge their pain and stop touching.
- Experiment with types of clothing that are comfortable (i.e. terry cloth, all cotton, several times washed, no labels).
- Provide easy access to small hand fidgets (i.e. squishy, soft, textured, soft).
- Allow student to sit in a bean bag chair.
- Refer to occupational therapist for further ideas (i.e. weighted vest, utensils, "brushing").

Continued on page 5.

SENSORY INTEGRATION TIPS CONTINUED…

Taste and Smells Ideas

Taste

- When rewarding student with food or cooking time, use food they already like.
- Keep all poisonous substances locked up safely.
- Talk with nutritionist about diet.

Smells

- Have a scented lamp, candle, lotions, liquid soap, scented markers or stickers available to smell to calm student.
- Be aware that if you have a scented object, the student may act adversely to that particular smell.
- Keep Kleenex tissue readily available.
- Use minimal amounts of perfume or cologne.
- Be aware of soaps or detergents use - Use scent free laundry products.

Proprioceptive Ideas

- Engage student in up and down movements (i.e. jumping rope, bouncing a ball, trampoline) to wake up student.
- Back and forth movements (i.e. swinging, sitting in rocking chair) may help calm student.
- Use stress balls, theraputty and fidget toys.
- Allow chewing on crunchy, chewy items (i.e. bubble gum in freezer, licorice sticks, pretzels, carrots).
- Designate an area in the room to stomp feet or pace.
- Never take physical education or recess away from a student (i.e. need deep pressure activities like running, jogging).

Vestibular Ideas

- Create heavy work activities (e.g. take down chairs in computer lab, take garbage out at lunch, take a pile of encyclopedia to library).
- Slowly move from extreme positions (i.e. sitting on floor to standing).
- Slow down our own movements.
- Use bands across front legs of desk.
- Have student sit on wiggle cushion or ball.
- Allow frequent breaks throughout the day.
- Have student jump on trampoline.
- Use sticker or stamps to identify left/right.
- Play games using repetitive alternating and rhythmic movement.
- Reinforce dominant hand use.
- Play on merry go round, ride roller coasters, hang upside down, play team sports, swim, twist chains of a swing and untwisting, go sledding, slide down water slides.

clipartof.com/15406

A diet of sensory activities can do many things for a child over a period of time. "It can calm an over-aroused or active child, increase the activity of an under aroused/passive child, prevent uncomfortable reactions to sensory input, reduce sensory seeking (self-stim) behavior, increase productivity and comfort for the child, and teach the child self-regulation strategies." This takes time and cannot be done in isolation by an OT; it must be a combined effort between home, school, therapy, and all involved in supporting the individual with ASD and sensory issues.

http://www.iidc.indiana.edu/pages/Sensory-Integration-Tips-to-Consider

STIMMING FEELS LIKE

11 People With Autism Explain What Stimming Feels Like

By: Melissa McGlensey

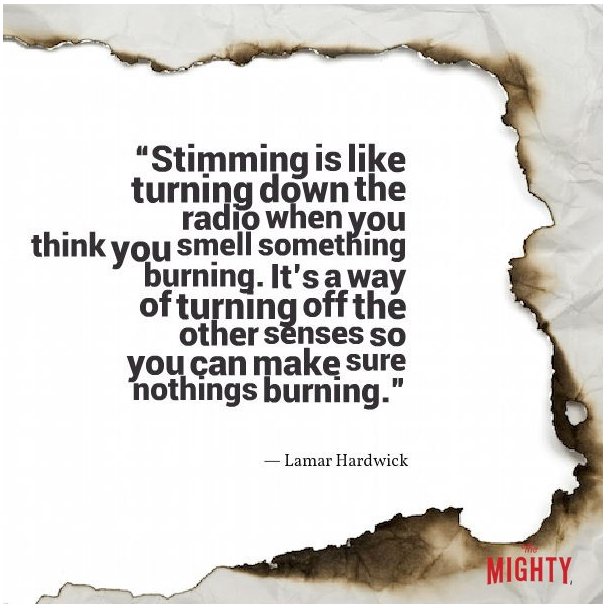
Stimming, or self-stimulatory behaviors, are behaviors people with autism may exhibit to counteract an overwhelming sensory environment or alleviate the high levels of internal anxiety, according to Temple Grandin's post in Autism Digest. Some examples of stimming are rocking, spinning, pacing, repeating words or flapping of arms or hands.

Autistic people aren't the only ones who stim, although occasionally people on the spectrum stim in more obvious ways and may attract attention. Many people have a hard time grasping why someone would stim.
We asked our readers with autism how they explain what stimming is like.

This is what they had to say:

1."It helps my body regulate the sensory information of the world." — Laura Ivanova Smith

2. "You know how when you're cooking something on a stove, you sometimes move the lid slightly off the pot to let the steam out? How you put pressure on a bleeding wound to get the blood flow to stop, or at least lessen? For me, stimming is that relief and release — the preventing of inward things from exploding or running out by doing things outwardly to soothe the inward." — Paula Gomez



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4. "Sometimes when I feel overwhelmed, upset or angry, I need to let it out. I feel antsy when I'm overstimulated, so I need to move around and let out some noise. It's the only way I know how to cope. It calms me down. A common one for me is humming loudly to myself (sometimes with my ears plugged or covered) and most commonly, I'll bounce my leg. It's involuntary, so I don't always realize I'm bouncing my leg. It bothers some people, but I can't help it."– Sydney Brown

5. "What's it like to stim? You tell me. Most non-autistic people impulsively tap their feet, drum their fingers or let out exasperated sighs. They're all natural forms of self-expression. The theory behind autistic stimming is the same — we're just the ones who get called out for expressing ourselves more visibly than you!" — Chris Bonnello from Autistic Not Weird, told The Mighty in an email.

6. "Sometimes the sensory input gets too much, and I feel like I might explode. Stimming releases the tension and makes me feel a lot calmer." — Lucy Clapham

7. "It's the ability and opportunity to shut out external effects. I can tune into myself, reign in my energy and feel completely wrapped and enveloped in my own bubble of comfort and total relaxation. It helps ground me to reality, breathe, slow down and soothes my nervous system that is overtaxed. At best, I feel like there is no one else around and I am completely calm, free and one with the world." — Laura Spoerl

8. "It's a comforting thing to do. Neurotypical people probably understand and do similar things, but the difference is that autism stims feel more necessary, and trying to stop them causes unpleasantness for us. It makes me feel uncomfortable when [it] cannot be done." — Elizabeth Alford

9. "It's a combination of habit and releasing build-up of stress or internal energy in the body. It isn't something you do only when you have anxiety or negative feelings, it feels good. It's kind of necessary." — Planet Autism

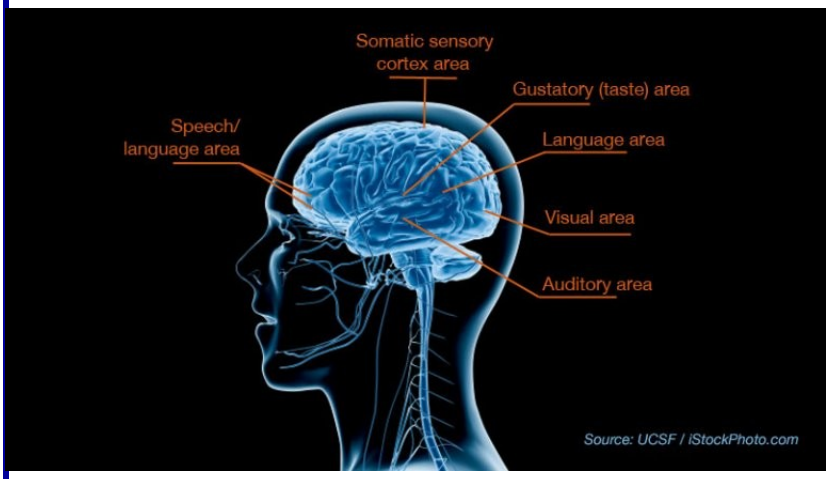
10. "When I'm stressed and overstimulated, I quietly hum or groan. When I'm extremely happy, I smile a 'Cheshire Cat' grin, rock back and forth and voice a little. Stimming is comforting, and it lets off pressure from good and bad emotions. I don't necessarily think 'I need to stim,' I just do." — Rachel Mills

11. "Stimming is like breathing… just as natural, just as important." — Katy Kenah

http://themighty.com/2016/01/11-people-with-autism-explain-what-stimming-feels-like/?

BRAIN STUDY ON SENSORY PROCESSING

Breakthrough Study Reveals Biological Basis for Sensory Processing Disorders in Kids



By Juliana Bunim on July 09, 2013

The image shows areas of the brain that can be affected by sensory processing disorders. Using an advanced form of MRI, researchers at UCSF have identified abnormalities in the brain structure of children with SPD primarily in the back of the brain.

Sensory processing disorders (SPD) are more prevalent in children than autism and as common as attention deficit hyperactivity disorder, yet the condition receives far less attention partly because it's never been recognized as a distinct disease.

In a groundbreaking new study from UC San Francisco, researchers have found that children affected with SPD have quantifiable differences in brain structure, for the first time showing a biological basis for the disease that sets it apart from other neurodevelopmental disorders.

One of the reasons SPD has been overlooked until now is that it often occurs in children who also have ADHD or autism, and the disorders have not been listed in the Diagnostic and Statistical Manual used by psychiatrists and psychologists.

"Until now, SPD hasn't had a known biological underpinning," said senior author Pratik Mukherjee, MD, PhD, a professor of radiology and biomedical imaging and bioengineering at UCSF. "Our findings point the way to establishing a biological basis for the disease that can be easily measured and used as a diagnostic tool," Mukherjee said.

The work is published in the open access online journal *NeuroImage:Clinical*.

'Out of Sync' Kids

Sensory processing disorders affect 5 to 16 percent of school-aged children.

Children with SPD struggle with how to process stimulation, which can cause a wide range of symptoms including hypersensitivity to sound, sight and touch, poor fine motor skills and easy distractibility. Some SPD children cannot tolerate the sound of a vacuum, while others can't hold a pencil or struggle with social interaction. Furthermore, a sound that one day is an irritant can the next day be sought out. The disease can be baffling for parents and has been a source of much controversy for clinicians, according to the researchers.

"Most people don't know how to support these kids because they don't fall into a traditional clinical group," said Elysa Marco, MD, who led the study along with postdoctoral fellow Julia Owen, PhD. Marco is a cognitive and behavioral child neurologist at UCSF Benioff Children's Hospital, ranked among the nation's best and one of California's top-ranked centers for neurology and other specialties, according to the 2013-2014 *U.S. News & World Report* Best Children's Hospitals survey.

"Sometimes they are called the 'out of sync' kids. Their language is good, but they seem to have trouble with just about everything else, especially emotional regulation and distraction. In the real world, they're just less able to process information efficiently, and they get left out and bullied," said Marco, who treats affected children in her cognitive and behavioral neurology clinic.

"If we can better understand these kids who are falling through the cracks, we will not only help a whole lot of families, but we will better understand sensory processing in general. This work is laying the foundation for expanding our research and clinical evaluation of children with a wide range of neurodevelopmental challenges – stretching beyond autism and ADHD," she said.

Imaging the Brain's White Matter

In the study, researchers used an advanced form of MRI called diffusion tensor imaging (DTI), which measures the microscopic movement of water molecules within the brain in order to give information about the brain's white matter tracts. DTI shows the direction of the white matter fibers and the integrity of the white matter. The brain's white matter is essential for perceiving, thinking and learning

BRAIN STUDY ON SENSORY PROCESSING CONTINUED..

The study examined 16 boys, between the ages of eight and 11, with SPD but without a diagnosis of autism or prematurity, and compared the results with 24 typically developing boys who were matched for age, gender, right- or left-handedness and IQ. The patients' and control subjects' behaviors were first characterized using a parent report measure of sensory behavior called the Sensory Profile.

The imaging detected abnormal white matter tracts in the SPD subjects, primarily involving areas in the back of the brain, that serve as connections for the auditory, visual and somatosensory (tactile) systems involved in sensory processing, including their connections between the left and right halves of the brain.

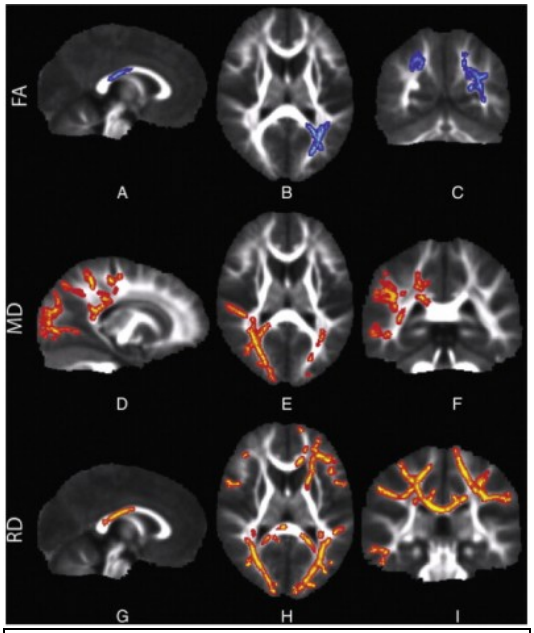
"These are tracts that are emblematic of someone with problems with sensory processing," said Mukherjee. "More frontal anterior white matter tracts are typically involved in children with only ADHD or autistic spectrum disorders. The abnormalities we found are focused in a different region of the brain, indicating SPD may be neuroanatomically distinct."

The researchers found a strong correlation between the micro-structural abnormalities in the white matter of the posterior cerebral tracts focused on sensory processing and the auditory, multisensory and inattention scores reported by parents in the Sensory Profile. The strongest correlation was for auditory processing, with other correlations observed for multi-sensory integration, vision, tactile and inattention.

The abnormal microstructure of sensory white matter tracts shown by DTI in kids with SPD likely alters the timing of sensory transmission so that processing of sensory stimuli and integrating information across multiple senses becomes difficult or impossible.

"We are just at the beginning, because people didn't believe this existed," said Marco. "This is absolutely the first structural imaging comparison of kids with research diagnosed sensory processing disorder and typically developing kids. It shows it is a brain-based disorder and gives us a way to evaluate them in clinic."

Future studies need to be done, she said, to research the many children affected by sensory processing differences who have a known genetic disorder or brain injury related to prematurity.



These brain images, taken with DTI, show water diffusion within the white matter of children with sensory processing disorders. *Row FA*: The blue areas show white matter where water diffusion was less directional than in typical children, indicating impaired white matter microstructure. *Row MD*: The red areas show white matter where the overall rate of water diffusion was higher than in typical children, also indicating abnormal white matter. *Row RD*: The red areas show white matter where SPD children have higher rates of water diffusion perpendicular to the axonal fibers, indicating a loss of integrity of the fiber bundles comprising the white matter tracts.

The study's co-authors are Shivani Desai, BS, Emily Fourie, BS, Julia Harris, BS, and Susanna Hill, BS, all of UCSF, and Anne Arnett, MA, of the University of Denver.

The research was supported by the Wallace Research Foundation. The authors have reported that they have no conflicts of interest relevant to the contents of this paper to disclose.

UCSF Benioff Children's Hospital creates an environment where children and their families find compassionate care at the forefront of scientific discovery, with more than 150 experts in 50 medical specialties serving patients throughout Northern California and beyond. The hospital admits about 5,000 children each year, including 2,000 babies born in the hospital. For more information, visit www.ucsfbenioffchildrens.org.

UCSF is a leading university dedicated to promoting health worldwide through advanced biomedical research, graduate-level education in the life sciences and health professions, and excellence in patient care.

https://www.ucsf.edu/news/2013/07/107316/breakthrough-study-reveals-biological-basis-sensory-processing-disorders-kidsi

Helping Your "Sensory" Kid

by Jennifer L. Stornelli, MOT, OTR/L

Ben can't stand the feeling of tags on his clothing. Timmy covers his ears every time the phone rings. Angela bumps into the other kids in the hallway and sometimes falls out of her chair during class. Samantha hugs her little brother so tightly that he cries.

Do any of these examples sound like your child? Many children with autism spectrum disorders and other developmental disabilities have difficulty with "sensory processing," which is the way our sensory systems (traditionally, touch, smell, sight, sound, and taste) take in information from the environment and make sense of it, so that we can respond in an appropriate way. This article will explain how sensory systems work, describe what happens when these systems are not working properly, and then provide you with ways to help your child with his or her unique sensory challenges.

OVERVIEW OF THE SENSORY SYSTEMS

At every moment, our senses are inundated with new and old information. For those who have sensory systems that are working the way they should, the systems filter out irrelevant information (for example, the sound of the clock ticking, the feel of our shirt on our body, the subtle flickering of the fluorescent lights), and then prioritize the information that is allowed into our conscious awareness.

New sensory input (a doorbell ringing, the feeling of something too hot)—or a change in the intensity of an already existing stimulus (the radio volume turned up, car decelerating to an abrupt stop) —is registered as important because it signals a change in the environment.

Conversely, our brains allow us to get used to or "habituate" to sensory information that remains in a constant state (the hum of the refrigerator, the feeling of our watch on our wrist) so that our attention can be diverted to the processing of more relevant information.

When these sensory inputs and organizing functions are not working the way they should, a person may be said to have a "sensory processing disorder." Below are additional examples of sensory processing challenges your child might be experiencing.

UNDER- RESPONSIVE AND OVER-RESPONSIVE SENSORY SYSTEMS

In addition to difficulties filtering out irrelevant stimuli and prioritizing sensory information, there can be significant differences in the way a child perceives specific information in one or more sensory systems.

Maybe your child is one who screams when he is touched gently, who covers his ears at seemingly benign environmental sounds, or who gags on foods that other children tend to love.

Or perhaps your child doesn't respond being called by name, doesn't notice that she is slipping out of her chair, or isn't aware that her clothing is twisted on her body. These behaviors can also be indicators of a sensory processing disorder.

Many sensory processing issues fall into one of two categories: sensory modulation and sensory discrimination.

Sensory modulation is our ability to turn sensory information into behaviors/responses that match the nature and intensity of the stimulus. When this process is disrupted, the result is over-responsivity or under-responsivity. Children who are over-responsive tend to respond more intensely or quickly to a stimulus than would be expected. Examples of under-responders, are children who don't realize that their shoes are on the wrong feet or don't hear the teacher saying that it's time for snack.

Sensory discrimination refers to our ability to detect variability among sensations in one or more sensory systems (for example, discriminating between a pencil and a ruler when reaching into one's backpack, or being able to tell the difference between something that tastes salty or sweet).

Continued on page 10.

THE "OTHER" SENSES

Ineffective processing of sensory information can also have an impact on our motor system, which is our ability to move effectively and safely.

Maybe you have a child who is always "crashing" into other kids, or who can't figure out how to hop or do a jumping jack, or who can't walk on a balance beam or go down a flight a stairs with alternating feet. These behaviors likely represent another category called "sensory-based motor disorders."
Sensory-based motor disorders often involve inadequate processing of information from two other sensory systems (our "deep senses"): 1.) our *vestibular* system (which provides information about our position relative to gravity, balance, and movement) and 2.) our *proprioceptive* system (information from our muscles and joints). A third sense—our tactile system (sense of touch) —is also critical to our awareness of the body and how it moves.

These three sensory systems—when working properly together—integrate and allow us to move appropriately and effectively. Likewise, information from these systems contributes to our ability to maintain an upright posture against gravity, and to effectively plan movements and sequence actions without over-reliance on our visual system.

The integration from these systems allows us to do tasks such as put a shirt on over our head without falling over, operate the steering wheel in our cars while keeping our eyes on the road, and step onto an escalator without falling down. Other times, we must use our vision to *anticipate* the demands of a given task (for example, picking up a glass that is full, pulling open a heavy door).

Ineffective processing and integration from our various sensory systems can lead to difficulty in social situations, frequent accidents, and frustration. Children who have difficulty with effective proprioception, for instance, might be too rough with other children, bump into them, appear clumsy, and fall out of a chair in class. Children who have difficulty with tactile processing, might over-respond to "normal" social touch or withdraw from play activities because they don't like the feeling of paint on their hands or the texture of sand.

STRATEGIES TO HELP WITH SENSORY CHALLENGES

So what can you do to help your child? There are many considerations when looking at strategies for "sensory" kids. First, remember that every person's sensory profile is different. There is no cookie-cutter solution to treating sensory processing dysfunction. Consider your child, his or her unique sensory profile and challenges, and his or her physical and social environment.

Let's start by examining a few common sensory challenges of children with ASDs and ways to modify the environment to help lessen or avoid the challenges.

Sensory challenge #1: Sensitivity to noise and touch

Social considerations:

- Pair him with playmates who will not over-stimulate him (those who are quieter).
- Educate teachers, siblings, and peers about his sensitivities; explain to them the behaviors that they might see (covering his ears, pulling away from touch, becoming agitated).
- Avoid touching him unexpectedly or coming up from behind.

Environmental adaptation:

- At home, create a "quiet space" for him to escape to when over-stimulated (many parents have had success by keeping a small tent in their child's room).
- Reduce background noise when possible (close windows, consider the volume of your voice, be aware of other environmental sounds and reduce them when possible).
- Give a warning before turning on loud appliances.
- Select clothing and bedding that he tolerates well.
- Consider noise-reducing headphones when he is doing homework or when in the community (with adult supervision).

Continued on page 11.

HELPING YOUR SENSORY KID CONTINUED..

Task modification:

•Avoid sensory experiences that will likely be challenging for him (for example, an event that will crowded and hot); alter tasks so that sensory information is muted (for example, using a paintbrush instead of finger painting).

•Use social stories and a visual daily schedule to help him anticipate events before they occur.

Sensory challenge #2: Social withdrawal and under-responsivity

Social considerations:

•Surround her with siblings/peers who will take the lead and get her involved in their activities.

•Use more animation and a higher energy level to engage her (avoid doing this if child appears to be withdrawing because of sensory "overload").

•Use touch to gain her attention ("Hey, look at this! It will be fun! Come on!").

•Be sensitive to the fact that she might need extra time to respond.

•Use her interests to guide the activity when possible (incorporate her sensory needs and favorite things into functional tasks or play themes).

Environmental adaptation:

•Use music to engage her; use a faster beat to increase arousal level.

•Use strong scents to increase her arousal level (scented toys, aromatherapy).

Task modification:

•Provide intermittent movement breaks during activities to increase task persistence and help sustain adequate an arousal level for the task.

Consider alternative seating such as a special seat cushion or seat wedge such as a Move n Sit, sitting/bouncing on a large exercise ball, or sitting in a chair while the other kids are sitting on the rug.

•Incorporate rich sensory experiences into routines, play, meal-time when possible (for example, textures, aromas, sound, etc.).

Sensory challenge #3: Sensory seeker

Social considerations:

Encourage self-regulation (consider the "How Does Your Engine Run?" program).

Teach him which strategies are appropriate in which settings (for example, asking for a big hug from Mom at home; asking for special seat cushion or an exercise resistive band such as Theraband at school).

•Honor his need for enhanced sensory input by building it into his daily routines (this is called a "sensory diet" and is explained later in the article).

Environmental adaptation:

•Define personal space with a visual boundary (carpet square, floor marker, small pillow, or couch cushion).

•Provide materials for self-regulation throughout the day (for example, a fidget box, headphones, water bottle with sport top or crazy straw).

Task modification:

Provide additional sensory input during seated or more sedentary activities (for example, sitting on an exercise ball or special seat cushion; putting a weighted blanket on his lap during meals).

•Engage him in "preparatory" activities such as running outside, bouncing on a ball, jumping on a trampoline before meal-time or a long car ride.

•Offer sensory-rich materials when possible in daily routines (for example, a variety of sponges/loofahs in bathtub, variety of strong flavors/aromas at meal time, messy arts & crafts).

Continued on page 12.

HELPING YOUR SENSORY KID CONTINUED..

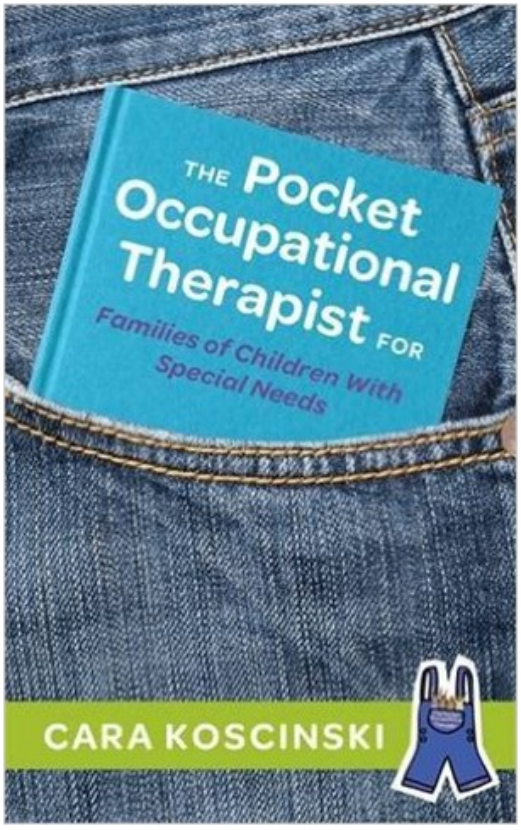
ADDITIONAL STRATEGIES

Understanding your child's unique sensory profile is important so you can create a personalized "sensory diet" for him or her— a daily schedule of sensory-enriched activities, equipment, and strategies to help your child stay focused and on task throughout the day.

Consultation with an occupational therapist can also be very helpful in understanding your child's sensory needs and identifying strategies that will allow him or her to be successful at home, in the community, and at school. It is certainly difficult because of the ever-changing overlap of environments, people, and tasks, but with a greater awareness of your child's sensory challenges and the addition of a sensory diet and sensory strategies, you are increasing the chances that your child will thrive wherever he or she happens to be.

- See more at: http://www.autismconsortium.org/blog/detail/helping-your-sensory-kid#sthash.95ORsvLF.dpuf

BOOK SUGGESTIONS



The Pocket Occupational Therapist for Families of Children with Special Needs

by Cara Koscinski

The Pocket Occupational Therapist is an illuminating and essential guide for caregivers of children with autism, developmental delays, sensory processing disorder and other related conditions. It answers the questions that are most frequently asked of pediatric occupational therapists about:

- Sensory processing
- Handwriting
- Core/body muscle weakness
- Feeding therapy
- Washing hair, brushing teeth
- Transitions
- Behavior
- Life Skills
- Coordination

It then suggests 'Out of the Pocket' activities to do at home that are simple, inexpensive, tried-and-tested occupational therapy favorites. Your child will achieve while having FUN! The most appealing feature of this book is its accessibility - making the topics possible to grasp for parents and caregivers with even limited background knowledge. Also included in the book is a handy developmental chart, outlining the stages of typical child development, which families can use as a valuable reference point. It is evident that Koscinski has used her experiences as both an occupational therapist and a devoted mother to children with special needs to write this practical guide.
Winner of a 2015 Family Choice Award.

Check out the author's website for more information and resources: http://www.pocketot.com/

SENSORY SUGGESTIONS

SENSORY ISSUES IN THE PUBLIC SETTING

The community setting offers many opportunities for learning, but it is also a potential bomb of sensory overload for the person with autism. Understanding these challenges can help parents and therapists deal with negative behaviors that may occur.

Consider a trip to a large retail store. Most people can block out the ambient noise, smells, and visual stimuli. But for someone with sensory issues, this is a serious challenge. He has to sort through a plethora of voices and beeps and rattles which may wreak havoc on his nerves. He is also bombarded with images, products, unfamiliar faces, and bright lighting. The brain of a person with autism is not wired to determine which sensory stimuli should be ignored. Waiting in line may also be a painful experience, because it seems to serve no purpose. The child may feel restrained and uncomfortable. The frustration may be magnified by an inability to communicate or release these feelings. The child does not know what to expect and he does not know what is expected of him.

The easiest solution to this problem is not necessarily the best, though. To never expose the child with autism to a public setting is denying him an opportunity to interact with the community. However, taking steps prior to the errand can ensure smooth sailing. This is an ideal opportunity to write a social story tailor made to the situation. Using pictures and words, provide a step-by-step list of what the errand will entail. For example, where you are going, how you will get there, and what to expect when there. Also include behavior expectations for the person. In addition, alerting the individual of potential sensory issues in advance can help eliminate the fear of the unknown and put them more at ease. It is also useful to bring objects, such as fidget toys, which can occupy their interest while on the errand, in addition to providing a controlled sensory input. If noise is a major issue, ear plugs or headphones with music may be helpful.

Although it may seem daunting to a parent or caregiver to take these steps every time they go out in public with their child, prevention is the best cure. As the individual with autism becomes familiar with these expeditions, he will not need to be prepped as thoroughly every time.

INCORPORATING SENSORY INPUT INTO DAILY ACTIVITIES

- **Bath time:** Scrub with washcloth or bath brush, try a variety of soaps and lotions for bathing, play on the wall with shaving cream or bathing foam, rub body with lotion after bath time (deep massage), sprinkle powder onto body and brush or rub into skin.
- **Meal preparation or baking:** Let your child mix ingredients, especially the thick ones that will really work those muscles. Let child mix and roll dough and push flat. Allow child to help you carry pots and pans, bowls of water or ingredients (with supervision, of course). Let your child tenderize meat with the meat mallet.
- **Grocery shopping:** Have your child push the heavy cart (as long as the weight is within their capability). Let your child help carry heavy groceries and help put them away.
- **Mealtime:** Encourage eating of chewy foods and drinking out of a straw. Try having your child sit on an air cushion to allow some movement. A weighted lap blanket may be helpful as well.
- **Household chores:** Allow the child to help with the vacuuming or moving the furniture. Let the child help carry the laundry basket or the detergent. Let the child help with digging for gardening or landscaping.
- **Play time:** Reading books in a rocking chair or bean-bag chair may be beneficial. You can help your child make up obstacle courses in the house or yard using crawling, jumping, hopping, skipping, rolling, etc. Listen to soft music. Play the sandwich game (child lies in between two pillows and pretends to be the sandwich, while you provide pressure to the top pillow to the child's desired amount). Ask them "harder or softer?" as you push on the pillow. Some children will like much more pressure than you would expect. You can also go for a neighborhood walk with a wagon and have your child pull it (make it semi-heavy by loading it with something the child would like to pull around). You can do the same with a baby-doll carriage. Swimming in a pool is a wonderful activity if you have that available, as are horseback riding and bowling. Mini or full-size trampolines are excellent for providing sensory input as well. Make sure the child is using them safely. Sandboxes, or big containers of beans or popcorn kernels can be fun play-boxes. too, if you add small cars, shovels, cups, etc.
- **Errands and appointments:** Before visiting the dentist or hairdresser try deep massage to the head or scalp (if tolerated), or try having your child wear a weighted hat. Try chewy foods or vibration to the mouth with an electric toothbrush. Let your child wear a heavy backpack (weighted to their liking with books and with the straps padded as needed). Be sure to give the child ample warning before any changes in routine or any unscheduled trips or errands. Many children with SPD need predictability.

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VISUALS