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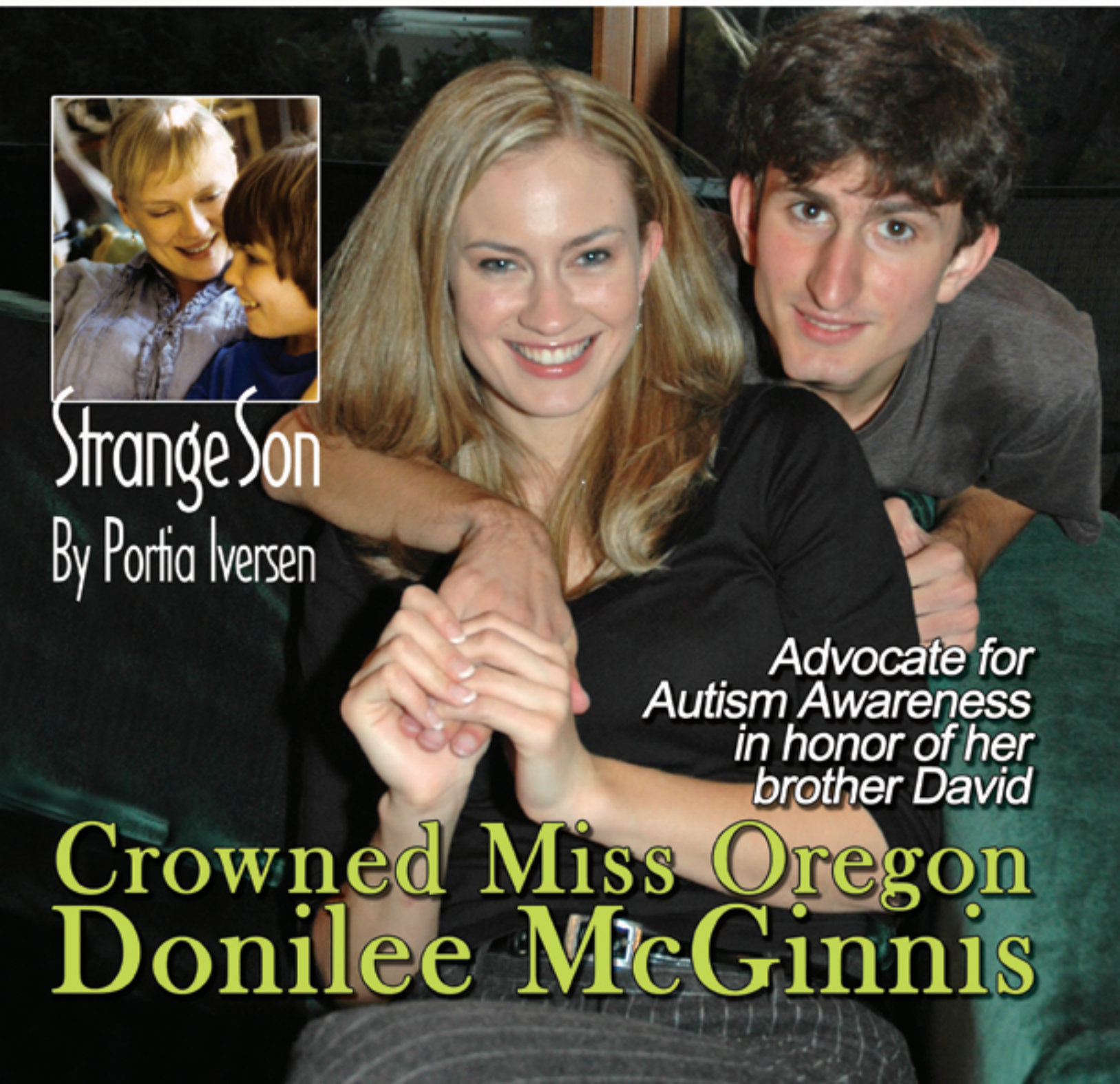
m a g a z i n e
TAP INTO IT.
The
AUTISM
perspective



Strange Son
By Portia Iversen

*Advocate for
Autism Awareness
in honor of her
brother David*

**Crowned Miss Oregon
Donilee McGinnis**



SENSORY TIPS

By
Cris Rowan,
Pediatric
Occupational
Therapist



Lesson Two

The Vestibular System

“My son actually seems to fear movement. He hates going up or down stairs or walking over uneven ground, and forget swings, slides or playgrounds...they make him scream. Yet he will spin or rock himself for hours and never seems to get dizzy!” “My daughter seems so clumsy, always falling down and bumping into things. She sits on my lap so hard, with so much force it sometimes hurts! She falls out of her chair, breaks things constantly, and holds her head in this rigid position, like it’s going to fall off her neck.” These comments by parents indicate that something might be wrong with their child’s sensory system, in particular, their child’s vestibular sensory system.

This is the second article in a six-part series called “Sensory Tips.” Sensory Tips is designed to help parents and teachers understand how to use a sensory processing approach to “see” children and interpret their actions. Understanding a child’s sensory processing system can help parents and teachers create homes and classrooms that offer children safe and respectful environments, which are necessary for optimal learning and behavior. It is also designed to help parents and teachers understand what can often be confusing and disturbing behaviors.

The vestibular system helps children know where their body is in space, and where their body is in relationship to other people and objects. The vestibular system works through activating muscles that control postural tone, muscles that keep us upright

against gravity. When a child’s vestibular system is not developing properly or is not integrating with other sensory systems, such as vision, the child may feel uncomfortable or sick, anxious and even scared, resulting in behaviors that are often difficult for parents and teachers to understand. The reason why some children refuse to put their heads under water is that they may be relying on the visual system to compensate for a malfunctioning vestibular system.

The vestibular system is located inside our brain, and is a series of semicircular canals filled with fluid that “swooshes” around each time we move our head. These canals are positioned in three dimensional planes, thereby detecting rotational, linear and horizontal movements. The vestibular system also has unique organs called otoliths that detect linear acceleration. Children with ves-

tibular problems have difficulty with using both sides of the body together, called bilateral integration, and are unable to stand on one leg, manipulate items with both hands, or play off their midline. These children also have great difficulty coordinating eye and hand movements, as the eye muscles are not coordinated.

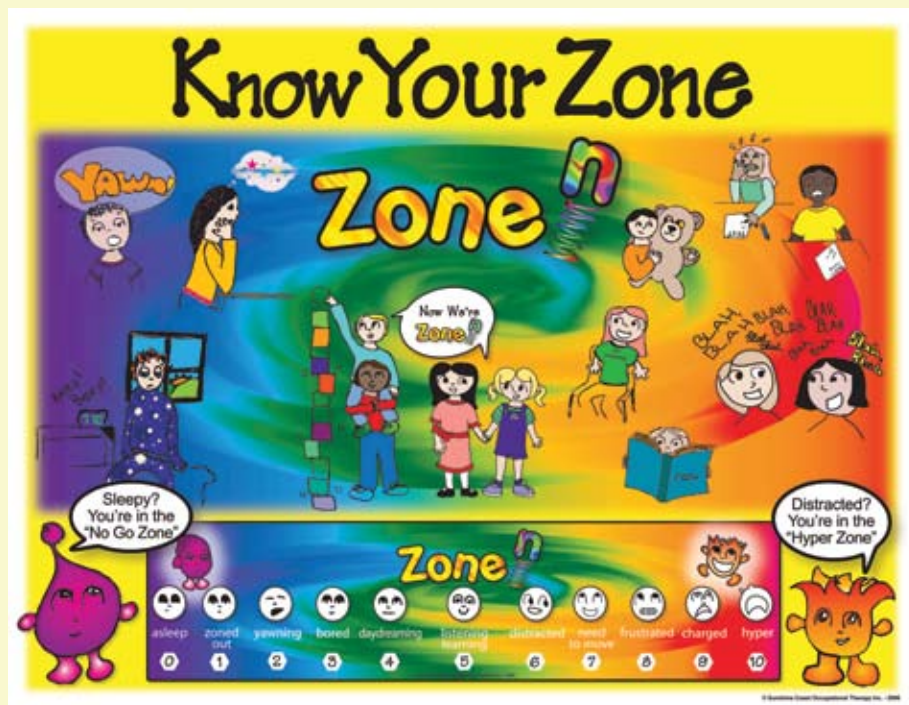
So why do children have vestibular processing disorders? Let’s look at what has happened over the past 20 years with the explosion of media technology, with subsequent profound changes in children’s development and their ability to play and learn. Lack of movement, combined with media technology’s crazy sensory stimulation, is a possible cause as to why we are seeing an unprecedented rise in ADHD and autism-related diagnoses, as well as a multitude of behavioral disorders, often resulting in

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medication of our children. For hundreds of thousands of years, human beings needed to move to survive, and movement was a large part of a child's daily existence and integral to a child's developing vestibular system. Children were often engaged in heavy work: chopping wood, hauling water and plowing fields. The ill effects of TV-related sedentary lifestyles has caused the American Pediatric Society to issue a warning that children under the age of two should not watch TV, or they are at risk of having neurological (sensory and motor) delays. One thing that you can do as a parent or teacher is to encourage children to "unplug" from their TV, videogame and computer worlds, and "plug into" movement and vestibular-based activities (e.g., playing outside). Now...back to vestibular processing disorders!

How do you know if your child has a vestibular disorder? Following is a list of some common traits of children with vestibular processing disorders that you can easily identify by watching your child move about in their environment:

- Unable to lie on stomach and do a "Superman" (i.e., arms and legs stretched out and lifted off the ground).
- Low muscle tone or weakness in trunk, neck, arms or legs.
- Unable to sit in mid-line; is always falling over.
- Excessively avoids or alternately craves vestibular stimulation, e.g., swinging,



spinning, rocking, running, jumping.

- Postural or gravitational insecurity, e.g., excessive fear of movement of any kind.

So what can you do to help? The general principles of treatment for a vestibular processing disorder are to gradually introduce your child to movement-based activities, allowing your child's vestibular system to slowly begin to accommodate to different types of movement. Always start with an activity that is favorable to your child, and begin close to the ground. The parent should be physically close to the child, providing a sense of security and safety, offering physical supports when needed, and then gradually moving away. The parent would then gradually introduce new challenges for movement through space, within the comfort parameters of the child. It's best to use the child's interests as motivation, and to make treatments in the form of fantasy play. The type of equipment you use can be found on a playground, or can be as simple as jumping on a pile of couch cushions. Suspended swinging equipment such as traditional swings, platform swings (have the child lie on his/her stomach), frog, pod-type, or tire

swings can be very effective in helping a child's vestibular system develop.

Never push a child to do vestibular stimulating activities, as this can be very fearful and disorganizing for the child, and may even make them feel sick. If you can, try to consult the services of an occupational therapist (OT) who specializes in sensory integration techniques, as they would be trained to perform a standardized assessment and treatment protocol specific to your child's needs. If you do not have access to OT services, be sure to begin slowly, offering support and safety, and eventually being able to watch your child become more secure in their gravitational environment. **TAP**

Cris Rowan has been an Occupational Therapist for 20 years, working in schools for the past eight years. Cris has recently developed two new educational programs, Zone'in and Move'in, for use in schools and at home. Zone'in is derived from sensory integration theory, and helps children get their energy "Zone'in to Learn." Move'in is based on fine motor development theory and is designed to help children print and read by taking them on a "Printing Adventure."