

# *Turning Point: Some Pivotal Insights into Behavior and Learning*

## By Judith Bluestone

### **“Sit Still and Listen”**

One common mistake teachers make is to direct children to “*Sit still and listen.*” Without getting into the technicalities of nervous system structure and function, let me explain briefly why, for some children, those are two contradictory statements. There are actually several explanations, depending on the nature of the movement the child is exhibiting.

#### **ONE SCENARIO:**

**The behaviors you see:** The child is stretching, yawning, pushing off from the table, bouncing her head around, rocking from side to side in her chair, getting up and jumping from time to time, or engaging in other fast and sudden movements. She is telling you something important.

**What this might mean:** This child is saying that her vestibular functions<sup>1</sup> are too weak to simultaneously serve awareness of body in space, looking, and listening. She knows that what you really want and what is important for her to learn is that she listen. And so she moves and bounces to keep her vestibular system alert, energized, so she can listen. If she were to heed the first part of the direction and sit still, then she would tune out, and miss the learning that is taking place.

**What you can do:** If the movements are truly bothersome to the class (not just to the teacher), then build in some form of movement before and during any activity that requires sustained listening. The children might jump to their seats from the doorway or from work at various centres in the room. Rhythmic body response might be built into the lesson, or you might simply request from the child to nod or shake her head vigorously every time she agrees or disagrees with a statement. You should also probably refer the child for sensory-integration therapy or to a program that will provide her activities that will strengthen her weak vestibular functions.

#### **A SECOND SCENARIO:**

**Behaviors you see:** The child just can't sit still. He is always squirming in his chair, and more frequently than not has only the slightest bodily contact with the chair. Occasionally he appears to sit on the chair, and then immediately puts one leg under him. He then periodically shifts the leg underneath him, as it begins to fall asleep from his body pressure. He probably also keeps playing with his clothes. All his teachers complain that he can't sit still. Yet if he stretches out to listen to a story or watch a program on television, he is quiet.

**What this might mean:** This child probably can't sit still because he is hypersensitive to touch, particularly in the area along his sciatic nerve (buttocks and legs). The fabric of his clothing rubbing against the chair and into the back of his leg (especially behind his knee) is downright ticklish. He may not even realize this, since he has been trying to block that sensation and pay attention to the lesson for most of his life. He might be able to sit a little stiller on some days--maybe he is wearing softer or tighter clothing, maybe his diet has not aggravated an allergic skin response, etc.

**What you can do:** If the child has no serious problems of visual or auditory acuity, “seat” him in the back of the room, and allow him to stand, or to move in his seat as needed. That will minimize the distraction of his activities for the rest of the class. Suggest that his family get help to desensitize him through diet control, comfortable clothing, special massage, etc.

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*Vestibular functions - refer to activities related to and dependent on reception of and adaptation to stimulation of organs primarily in a labyrinth-like system of semi-circular canals, and in the otolith organs, in the inner ear. The combined perceptions of this system give us three-dimensional organization in space. Stimulation of the system is induced not only by sound, but more significantly by movement (in particular rotational movement), responses to gravity, and altered kinaesthetic states. The three major functions of the vestibular system include postural control (frequently over-simplified as balance), eye movements, and conscious awareness of space. The eighth cranial nerve (vestibular) transmits the stimuli directly to the cerebellum, which is therefore integrally included in any reference to the vestibular system. Through its effect on the reticular activating system, the vestibular system also effects mood, activity level, and general focusing of attention. Of course, since the vestibular system includes the inner ear and is stimulated by sound, listening and auditory discrimination are also included in the functions this system supports.*

### ***A THIRD SCENARIO:***

**Behaviors you see:** The child is sitting relatively still, but her hands are not. They are frequently drumming on the table, clicking retractable pens, in her mouth, pulling on her face near her mouth. It is disturbing to those around her, and her books and papers are always a mess since her hands move directly from inside her mouth onto the papers.

**What this might mean:** This child is telling us that she is being sensorily overloaded by the listening activity. She wants to sustain listening so that she will learn, and so that she will be part of the group. Her body is seeking a means to balance the sensory over-load. It is providing her intense sensory-cortex stimulation through the highly represented areas of finger tips and mouth. This is counter-balancing the intense auditory stimulation, and allowing her to stay with the lesson.

**What you can do:** Allow the child to use an agreeable fidget toy, such as digging holes with her fingers in an eraser, using silly putty on the surface of her desk, engaging two paper clips in various ways. Also allow her to chew something (a small wad of cloth might do if gum is disallowed). Try to punctuate the discussion with brief periods of writing or drawing so that her system can unwind. Discuss the phenomena with her parents. There are a number of new therapies that help vestibular functions not get into overload, and some that deal specifically with concerns of auditory overload.

### ***A FOURTH SCENARIO:***

**Behaviors you see:** Another child can't sit still for long. Some time into the lesson he begins to rock back and forth in his chair. Sometimes he is rocking hard enough that his chair makes noise. You even fear that he may fall over backwards in the rocking. He seems to be tuned out while he is rocking and for a short period afterwards.

**What this might mean:** This child is exhibiting another reaction to auditory overload. His systems are not satisfied with finding a sensory balance through tactility, as the previous child. Or perhaps, he views those behaviours as bad. In any case, after listening for a while, he becomes overloaded. He rocks back and forth, since that is the only movement that is calming to the vestibular system. He may in fact rock enough that he tunes out, both from his listening and from his attention to body in space. If he falls over, that is a certain indication that he has lulled his vestibular system "to sleep." He might be able to sit still and listen a little longer on some days -- maybe his diet has not aggravated his systems, maybe he has had more sleep, or maybe he has had more quiet in other classes prior to yours.

**What you can do:** If the child has no serious problems of visual or auditory acuity, seat him in the back of the room, and allow him to rock in his seat as needed, being sure that the wall behind him keeps him from falling over. Understand this child's needs, and allow him to tune out on occasion, without embarrassing him by calling his name to answer a question, etc. Try to present a synopsis of the lesson at the beginning of extended listening, so if he tunes out, he will be missing embellishment and not main points. This child also would probably benefit from treatment, similar to the child above.

### ***A FIFTH SCENARIO:***

**Behaviors you see:** The child just can't sit upright for long. She almost always starts to lean back in her chair, and stay there, balanced precariously until her chair clunks back down forward. She keeps leaning back in it, sometimes even inserting the toes of her shoes under the front of the chair to help balance it.

**What this might mean:** This child is telling us that her muscle tone is particularly weak. She does not have a strong enough vestibular system to support muscle tone and body-in-space, and at the same time look and listen. She decides that if she is to be a learning member of the group, listening and looking are the priorities. Therefore she conserves her energy by tipping the chair in order to support her large muscles almost effortlessly (the "lazy boy").

**What you can do:** Allow the child to sit as she needs. In fact, you might even have tips put on the front legs of her chair so it leans back securely without her needing to try to balance it. If the child has no serious problems of visual or auditory acuity, "seat" her in the back of the room, if her sitting posture is truly distracting to others. Encourage the family to check on nutritional reasons why muscle tone may be weak. Also encourage them to consider sensory-integration or similar therapies to work on muscle tone through vestibular strengthening and special massage.

## ***“Turn Around and Look at Me When I’m Talking to You.”***

Another frequent complaint of parents and teachers is that children seem to purposefully look away from them when they are talking with them. Some may view this as bashful behaviour, while others may feel the child is being non-compliant. Actually, there are several different neurodevelopmental reasons why a person might have to counter this request.

### **ONE SCENARIO:**

**The behaviors you see:** The child is seemingly facing you, but does not seem focused on you and even appears to be thinking about something else. You tell him to “Turn around, and look at me when I’m talking to you” and he turns away, looking at something at right angles to you.

**What this might mean:** This child is saying that his visual system works differently than most. He is probably reliant on peripheral vision. When he is facing you, he is in fact visually tuned in to things on his sides. When he turns, and seems to look away from you, he is actually then taking you in, or viewing what you want him to look at.

**What you can do:** This child needs to be allowed to reposition himself so that he sees things from his peripheral vision. This may mean seating him at the end of a table, so that his turning from side to side does not disturb others seated next to him. The parents should be consulted. This child may benefit greatly from vision therapy. He might even learn to use focal vision better through guided ball sports and/or playing a musical instrument.

### **A SECOND SCENARIO:**

**The behaviors you see:** The child faces you momentarily, and then glances away or closes his eyes. He may put his head down, or tip his head up and focus somewhere else. (The same child might frequently rub his eyes, or look away from most visual material.)

**What this might mean:** This child, too, is saying that his visual system works differently than most. He is probably unable to sustain convergence (focus of both eyes simultaneously) on a given target. It is very disconcerting to see faces double, or to see them disfigured and dismembered in the event that the child engages in alternating suppression of one eye or the other. And so the child looks away into oblivion. Looking at you while you speak would be distracting, and might even cause the child to giggle as he receives weird visual images.

**What you can do:** This child needs to be allowed to look away, after getting a quick visual take on the important visual items related to the task or discussion. He may frequently turn back to see if anything has changed, but again, cannot be expected to stay focused. If you are trying to teach this child reading, a sight vocabulary on cards flashed at a relatively high speed would help this child. This child is a logical candidate for vision therapy. Since the problem is one of visual function, and not structure or disease of the eye (for which an ophthalmologist would be the correct referral), you would not be remiss making a referral to a developmental optometrist. There are several trained developmental/behavioural optometrists in most metropolitan areas. One activity that you can “prescribe” which will increase the child’s ability to converge and sustain convergence is to have him drink through a crazy straw (several times a day). Two of our twelve pairs of cranial nerves help to strengthen vision as a result of strong sucking (or blowing) with an instrument cantered between our lips. It honestly does help, and it certainly can’t hurt! Playing a wind instrument might also increase binocular convergence.

### **A THIRD SCENARIO:**

**The behaviors you see:** The child faces you on occasion, and occasionally looks away, or covers her eyes, or puts a piece of paper between her eyes and your face (or the item you want her to attend to). She frequently seems to use her hand as a visor, and sometimes has difficulty copying or reading from books and whiteboards. She becomes fidgety during periods when the A-V equipment is being used in a darkened room.

**What this might mean:** This child, as well, is saying that her visual system works in an unusual manner. She is most likely sensitive to light. When you are standing against a light or bright surface, or wearing light or bright clothing, or when there are extreme contrasts of light and dark in the room, this child has visual hallucinations-- things may move, disappear, appear covered with swirling coloured shapes, etc. Frequently people, who are sensitive to light, also have an underlying problem of binocular functions, so that each eye is processing light differently. Some people have what Helen Irlen has called Specific Scotopic Sensitivity Syndrome. Some

children have both. In any case, the child is doing what she can to make sense of her visual world. She cannot sustain eye contact with such distortions, since they disturb her concentration and perception.

**What you can do:** This child needs to be allowed to do whatever is comfortable and acceptable to the group so she can sustain total attention. If wearing a cap with a visor is not allowed, then tipping her head, or using her hands as visors, or holding up “screens” should be accepted. The teacher or parent should try to stand away from glaring surfaces, and should wear clothes that are not terribly bright or reflective. Many synthetic materials catch the light in unusual ways, as do some patterns, such as herring-bones. Colours in the yellow family (in particular) are difficult for light sensitive persons to see when they are on a whiteboard. This child also should be referred to a developmental/behavioural optometrist for screening. She may need separate or coordinated evaluation and recommendations by a professional trained in scotopic sensitivity screening. Meanwhile, she might be aided by having her worksheets photocopied onto a pastel coloured paper (usually green, blue, or gray) and using coloured writing paper. An interim “therapy” of choice is again a crazy straw. Drinking through it several times a day not only strengthens convergence, it also works in a remarkable way to help the pupils of the eyes dilate and contract more responsively to light.

#### **A FOURTH SCENARIO:**

**Behaviors you see:** The child sits in a group circle, sitting straight and not bothering his neighbours until the teacher begins to hold up placards and/or begin to speak. Every time the teacher begins to make a presentation, he turns around and puts his feet on the child in front of him, and leans back onto the child behind him. At times during the circle discussion, he sits straight, sometimes reverses this posture, placing his feet on the other neighbour, but consistently adopts this posture when the teacher is talking. Of course, the teacher stops the lesson to discipline him, but to no avail.

**What this might mean:** This child has some reason for having a particular side turned toward the source of attention. He may have reduced visual or auditory acuity in the eye or ear on that side. Most likely you would have noticed that the child asks for repetitions of spoken communication if the problem were auditory, or has difficulty playing ball and similar feats, if the problem were visual in nature. Assuming this is not the problem, the child may simply have a severe problem of midline crossing, and he needs to have his dominant side facing “the action.”

**What you can do:** Of course, you should consult the child’s health records and the child’s parents to rule out sensory loss on the suspected side. Try seating the child in such a way that his opposite side is toward “the action.” In addition, you should consult with the parents, and consider occupational/physical therapy or other structured activities that would encourage midline crossing. During activities that are not important to academic achievement, try to encourage the child to rotate through and reach across the midline. But don’t forget to provide compensation during activities where academic learning and self-esteem issues are involved.

**What these scenarios tell us:** In all of these scenarios, the children involved are not being obstinate. They perceive your direction as setting them up for failure, and try to salvage what they can. They rightly perceive that their main task is to focus on the auditory or visual demands in whatever way they can, so they can learn. Their behaviours only help show us what irregularities exist in their processing. With that understanding, we can be more flexible in our approach to these children. They will respond enthusiastically. They have not been understood up to this point. And they have not understood that other people do not perceive things as they do, but just tolerate them better. Some are willing to adopt our perceptions of their behaviour as being naughty, although they know that it was not intentional. No, these children are not non-complaint, nor do they have a low frustration tolerance. They experience extreme daily frustrations, and when they try to compensate themselves for them, they are berated as behaving improperly. With understanding, we can turn this situation into a win-win!

**One general rule:** Rhythm and music not only stimulate the vestibular system, they also enhance memory. Try to incorporate them whenever possible.

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