

THE TEN BEST

# OUT-OF-THE-BOX

STRATEGIES FOR IMPROVING  
YOUR CHILD'S SCHOOL RESULTS



# The Ten Best Out-of-the-Box Strategies for Improving Your Child's School Results

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# Introduction

Welcome to *The Ten Best Out-of-the-Box Strategies for Improving Your Child's School Results*.

This concise guide introduces the best nonschool solutions and proven concepts that have come from research and clinical experience. It is by no means meant as the definitive guide to learning problems.

The intention is to open your eyes and mind to more complete solutions for your son or daughter's learning challenges. The strategies presented are the result of the past 20 years that I have spent working closely with children who were dealing with a variety of school problems for which, in many cases, no direct solution could be found.

Through the clinical application of neuroscientific findings and insights, many, if not most, such children are now able to experience less profound challenges in their school career. And in case you are wondering: This guide is meant both for those children with a diagnosis that has direct relation to their capability at school but also (this is actually the biggest group) for those struggling without a diagnosis.

In the next pages you will learn about the most common undetected underlying problems that pose, when unaddressed, serious obstacles to your child's ability to learn and to develop mentally and physically.

Although great progress has been made and much knowledge has been gained to detect and assist with problems, this progress is in reality only one side of the story. It is very likely that many other underlying issues have not been fully addressed in your child's situation.

I know from experience that, no matter what kind of challenge your child has with learning or related issues, uprooting the often hidden causes that are presented in this paper will benefit your child.

Kind regards,

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Specialty in the clinical application of neuroscience for children with learning and developmental disorders, postural expert.

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Strategy 1:

***Uncover any developmental delays that are causing your child to struggle.***



## Strategy 1:

Uncover any developmental delays that are causing your child to struggle.

Development delays, together with the functional imbalances that we see in specific brain areas (this we will cover later) are probably the most common underlying factors found in children with learning problems, either diagnosed or undiagnosed.

Somehow the brain's development is partly or completely lagging behind, leading to inability of the nervous system to fully develop those higher brain areas needed for progression through the school system. You can say that some areas in your child's nervous system have not matured enough. So even if your child is 7 years old, parts of the nervous system, for example those that regulate emotions or language, have developed only to the 5-year-old level. As you can imagine, this child, compared to peers, will struggle more at school when faced with the same tasks as his or her classmates.

In contrast to what many believe, these developmental delays will not subside once the child gets older and catches up. Rather, they will be compensated for. This will cost a lot of extra energy and expenditure of effort. Whenever a child has any form of developmental delay, it may be seen in a combination of the cognitive, motoric and/or emotional control aspects.

Result: In certain areas, there will always be struggles, and certain tasks – for example, at school, in sports, or in daily life – cost more energy. So how do you know, and how can you see this in your child? Signs can be very diverse other than the obvious learning challenges. An example is the child who comes down a slide and constantly hits his or her head or cannot correct himself or herself when hitting the playground because the automatic postural reflexes have not formed properly.

Another example is the child that has to sit in a very awkward pose to be able to write because some of the postural reflexes have not developed fully. Normally when you turn your head towards either the right or left arm the arm remains steady. A child with retained (more) primitive postural reflexes will start to bent his/her arm in this case which poses a challenge when attempting to write.

Below you will find a list of life events, signs, and symptoms that may indicate the presence of these developmental delays.

A score of seven or more yes answers indicates developmental delays and warrants further examination:

- Is there any history of learning difficulties in your immediate family?
- Were there any medical problems during the pregnancy?
- Was the birth process unusual or prolonged in any way? E.g. Caesarian-section, forceps, etc.
- Was your child born early or late for term (more than two weeks early or more than 10 days late)?
- Was your child's birth weight below 5 pounds?
- Did your child have any difficulty feeding in the first weeks of life or in keeping food down?
- Was your child extremely demanding in the first six months of life?
- Did your child miss the "motor stage" of crawling on his or her tummy and creeping on hands and knees?
- Was your child late learning to walk? (Sixteen months or later would be considered late.)

- Did your child have difficulty in learning to dress himself or herself, for example, do up buttons or tie shoelaces beyond the age of 6-7 years?
- Does your child suffer from allergies?
- Did your child have an adverse reaction to any of his or her vaccinations?
- Did your child suck his or her thumb beyond the age of 5 years?
- Did your child continue to wet the bed, albeit occasionally, above the age of 5 years?
- Does your child suffer from travel sickness?
- Did your child find it very difficult to learn to tell the time from a traditional (as opposed to digital) clock?
- Did your child have an unusual degree of difficulty learning to ride a bicycle?
- Did your child suffer from frequent ear, nose, throat or chest infections at any time in development?
- In the first 3 years of life, did your child suffer from any illnesses involving extremely high temperatures, delirium or convulsion?
- Does your child have difficulty catching a ball, doing forward rolls/somersaults and stand out as 'awkward' in PE classes?
- Does your child have difficulty sitting still for even a short period of time?
- If there is a sudden unexpected noise, does your child over-react?
- Does your child have reading difficulties?
- Does your child have writing difficulties?
- Does your child have copying difficulties?
- Has your child had a diagnosis?

Research and clinical experience have shown that addressing these developmental delays on their own will especially benefit children with learning difficulties and/or any developmental delay. To address such delays, you can contact any professional specializing in child development and the remediation of developmental delays. For a start, contact any INPP (Institute for Neuro Physiological Psychology)-trained professional or functional neurologist or ergotherapist with neurodevelopmental specialization.

Typically, pediatricians will look at the related signs but will have to refer the child for remediation and training.

As you will notice, most of these out-of-the-box solutions deal directly or indirectly with the nervous system. This is not strange, since learning is a brain-based and body oriented activity. What is often forgotten, is that children actually learn with their whole body.

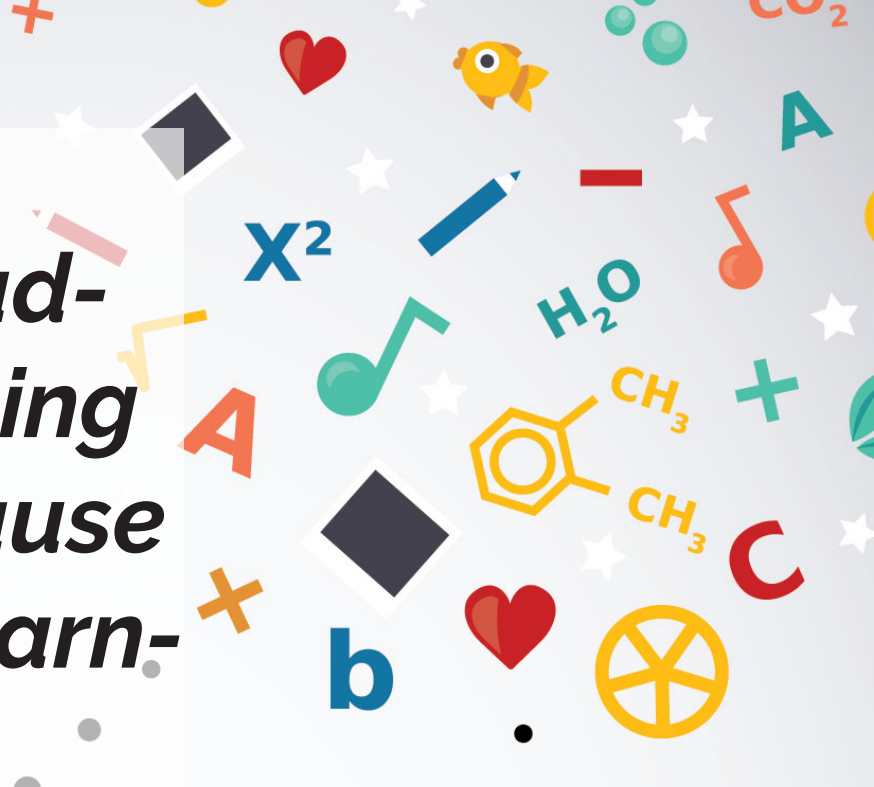
When movements become more complex and purposeful, the complexity of what the brain can deal with increases as well. Learning is a two-sided activity. When one part struggles, the other struggles (either brain or body movement) as well.

In the school system, this concept is hardly considered, despite the fact that much research points out that optimal brain function, development, and endurance are the basis for learning.

The next strategy can be the direct result of the developmental delays that we have been speaking of so far. It can be tightly linked to imbalances and underperformance in specific brain parts, as you will find out later.

Strategy 1:

***Identify and address processing issues that cause your child's learning problems.***





## **Strategy 2:**

Identify and address processing issues that cause your child's learning problems.

Although everyone has their own unique combination of learning strategies and styles — visual, auditory or kinesthetic (a whole-body tactic), or a combination of those — it is likely that your child is struggling with one or more of them.

Somewhere in the process of taking in information from the environment to be interpreted in your child's brain, there is a delay or an over- or underinterpretation of the information. This can be caused by anything disrupting the optimal function of the nervous system, including developmental delays, imbalances in function in specific or global brain areas, immune issues, poor oxygenation or fuel delivery, and/or activation of brain tissue.

I emphasize that in most cases these are functional and not disease-related processes. For example, your child may have a visual processing problem without you knowing it. The result: Your child may seem slower than normal because he or she has to rely predominantly on auditory and kinesthetic styles of learning, which are good strategies in themselves, with advantages, but they're a lot slower. Compare this situation to a fine-tuned, ultra-clear picture on your television, where all the processing takes place as it should, contrasted with a blurred, grainy picture on one of the first televisions, where you constantly had to fine-tune the antenna. This is what happens with the information transfer in your child's brain.

Or your child has auditory processing challenges because somewhere in the pathway between the ear and the temporal lobe (where language is processed), there is a delay or slowing down in function. Your child, then, in most cases, will rely more on a visual learning style and has to compensate for the parts missed when given oral instructions. Sixty percent of children with a classic dyslexic profile have some form of auditory processing issue.

The third form of processing disorder is the so-called sensory processing disorder (SPD), where your child has difficulty dealing with one or a variety of stimuli, and either taking in sensory input from the environment or interpreting the input poses a problem. All senses can be involved to various degrees, from mild to severe: sight, sound, touch, taste, and smell, as well as movement and balance, body position, and muscle control. This is the more complex disorder, because there is not one set problem, other than that something in the processing sequence in the nervous system does not function as it should.

**Difficulty taking in or interpreting sensory information can lead to profound consequences with:**

- interactions with others
- daily functioning
- social and family relationships
- behavioral challenges
- regulating emotions
- self-esteem
- learning

In most cases, you will not necessarily know whether any processing disorder is present, because these are functional problems, not part of a disease. Although you normally do not have to worry about any major health issues, the results for the learning process can be far reaching.

So how do you know? You can begin to look at some of the characteristics that your child may display in day-to-day life:

In case any of the following parts have more than two or three items that apply to your child this may indicate an underlying processing disorder.

### **Signs that may indicate auditory processing difficulties:**

- Is your child easily distracted or unusually bothered by loud or sudden noises?
- Are noisy environments upsetting to your child?
- Does your child's behavior and performance improve in quieter settings?
- Does your child have difficulty following directions, whether simple or complicated?
- Does your child have reading, spelling, writing, or other speech-language difficulties?
- Are verbal (word) math problems difficult for your child?
- Is your child disorganized and forgetful?
- Are conversations hard for your child to follow?

### **Signs that may indicate auditory processing difficulties:**

- Doesn't pay attention to visual tasks
- Is easily distracted by too much visual information
- Is restless or inattentive during video or visual presentations
- Lacks interest in movies or television
- Has difficulty with tasks that require copying (taking notes from a board)
- Reverses or misreads letters, numbers and words
- Bumps into things
- Has difficulty writing within lines or margins
- Has trouble spelling familiar words with irregular spelling patterns
- Can't remember phone numbers
- Has poor reading comprehension when reading silently
- Can't remember even basic facts that were read silently
- Skips words or entire lines when reading, or reads the same sentence over
- Complains of eye strain or frequently rubs eyes
- Has below-average reading comprehension and writing skills, despite strong oral comprehension and verbal skills
- Has weak math skills; frequently ignores function signs, omits steps, and confuses visually similar formulas
- Routinely fails to observe or recognize changes in bulletin board displays, signs or posted notices

### **The checklists for sensory processing disorder are so extensive that they are added as an appendix (Appendix A)**

Note that any form of processing difficulties being it sensory processing disorder, auditory or visual processing disorder do not just present as part of learning disorders but can be part of other disorders such as ADHD, Autism spectrum disorder or other less common underlying

problems like depression or the result of a traumatic brain injury (keep this one in mind).

After checking all the possibilities you will realise that everyone has periods where we temporarily have trouble dealing with processing information, this can be due to a cold, tiredness, low bloodsugar etcetera. This can be considered normal when signs and symptoms disappear again. When signs and symptoms appear over and over again and persist and disrupt aspects of daily life, included learning, it is very important to get them checked. Check, hearing, eyesight or a full (functional)neurological work up to rule out any underlying disfunction or disease that may cause the processing problem.

From ther on there are many possibilities to decrease and aid improvement and regulate processing to appropriate levels



Strategy 3:

*Perhaps it is time to cut down  
on computer and tablet time.*



## Strategy 3:

### Perhaps it is time to cut down on computer and tablet time.

This may actually be the toughest one to implement. Even if your child is not spending most of his or her time watching TV and playing games, it's worth looking into what happens when too much time is devoted to the digital wonders.

If your child is at most spending two to 2 1/2 hours a day (I know this may come as a shock) in total at the television, tablet, computer, and smartphone and is spending most of the time outside engaged in a variety of outdoor activities, you can skip this section if you like.

Although it is not necessarily a bad thing to spend some time building digital skills, the downside of doing so is waiting around the corner. Let me explain. What your child is gaining in concentration and gaming skills is an enhanced capacity to shift from topic to topic or scene to scene very rapidly in a hyper linear way. This is, however, the opposite of the skills you need to learn school material. For this, you need sustained attention, something you build up away from the computer and TV, when engaging with your environment physically, or emotionally, in a person-to-person situation (and no, not through social media!). On top of this, digital devices have a linear way of stimulating your brain. Your child's capacity to deal with multiple pieces of information and to best deal with the environment is compromised.

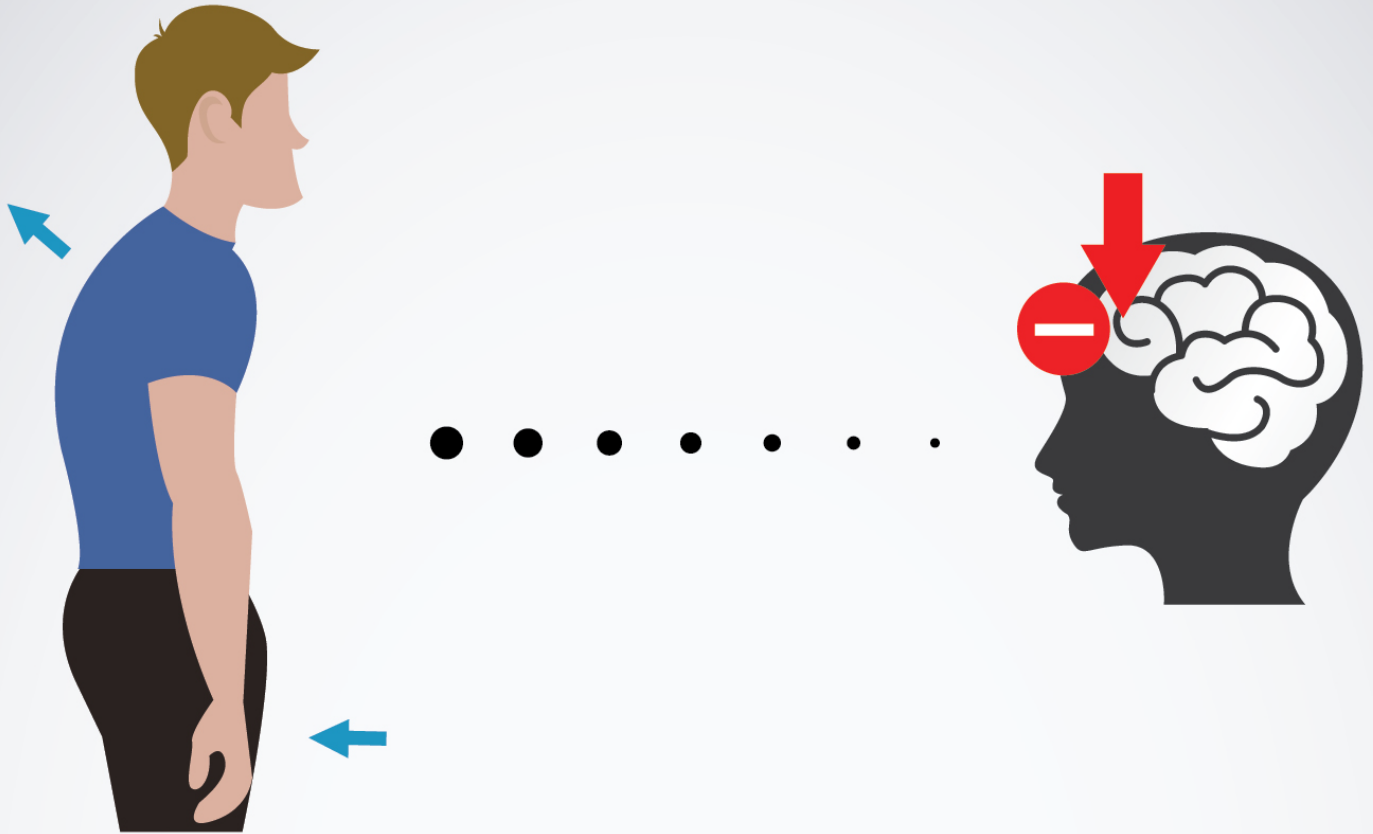
Side note: True dyslexics may not prefer activities like these because the parts of the brain most stimulated are a challenge to engage, so the above strategies may not apply to them. Because the majority of children struggling at school do not have the classical dyslexic profile, the strategies and cutting down on digital media time, especially applies to them ... and to you, since children copy behavior. If a parent sits in front of the television or computer today or hides behind a smart phone this will seem normal to them (I know, I struggle with this as well).

This is one of the biggest downsides of all the advances made in the digital arena, and a big one at that.

I am not the only one saying this. Some of the world's foremost neuroscientists, like Susan Greenfield, share this point of view and have even written books on the topic.

The point that remains is, of course, how to deal with it, because computers and digital information are here to stay. There is a simple solution. First of all, it requires a mind shift in us parents. We will have to become more strict about the total time spent on digital devices (2 1/2 hours per day max). We will also have to make sure that something called the slouched forward posture that you adopt when engaging in these activities (which we will cover later, because it has an impact on your child's brain's capacity) is royally compensated. If your child wants more time on the game console or smartphone, that can be earned by doing jobs outside or being physically active. It will require some getting used to, but trust me, it's worth it (my own children's results show this)!

This restriction can be part of a set of house rules that all family members have to agree on, as well as agreeing to the consequences of not keeping the rules.



Strategy 4:

***Watch over your child's posture.....poor posture means decreased IQ.***



## Strategy 4:

### Watch over your child's posture.....poor posture means decreased IQ.

Bad posture is becoming epidemic, and it may well be that it is one of the not-so-good habits that your child has adopted. Why does this have to do with school results? First, for the brain to function properly, it needs fuel, oxygen, and activation (mainly through input from the postural system). Posture, therefore, has direct impact on learning capacity. Learning, cognition (learning new things, thinking, retrieval from memory), and behavior are, after all, brain-based processes.

Poor posture affects all three basic requirements (fuel, oxygen and activation). It compromises the delivery of oxygen, because breathing becomes more shallow; Less than optimal posture has an effect on how well the vital organs work, and the control of the nerves to the vessels of the head can become imbalanced because of unnatural mechanical stress around the neck. On top of this, the postural system drives basic brain activity and the capacity of the brain to bind complex processes in different regions at the same time. In children there is also a fourth aspect that has big influence on the development of learning capacity, and that is the crucial role that optimal function and development of the postural system play in the development of higher brain function needed for schoolwork.

The use of tablets and smartphones, as well as the unnecessary sitting that our children do (our bodies are not designed for sitting), promotes a forward head position and slumped posture. The terms "test neck" and "tablet neck," new words in the dictionary, bear witness to the epidemic of bad posture.

Even if a conscious strong posture throughout life (you do have a choice) will not necessarily correct your child's whole learning problem, it is one of the fundamental requirements for optimal brain capacity and vitality.

How to check your child's posture:

When you look at your child from the front and back, shoulders should be level and the pelvis should be level; when the child stands with feet slightly apart, the chin and navel should be centered and not off to one side.

When looking from the side, notice if there is a straight line from the middle of the ear through the shoulder, the hip, and the middle of the knee to the bony protuberance at the ankle.

This is normal posture. Any deviation forward, backward or sideways requires investigation by a postural and spinal expert.

**Teaching your child to check posture in the mirror:** Get your child to perform a posture self-check in the mirror each morning. What does the reflection show? Good, strong, confident posture? Or slouched-forward and closed posture? Instruct the child to adjust his or her posture before leaving the house,- just as you would do yourself when your hair is out of order.

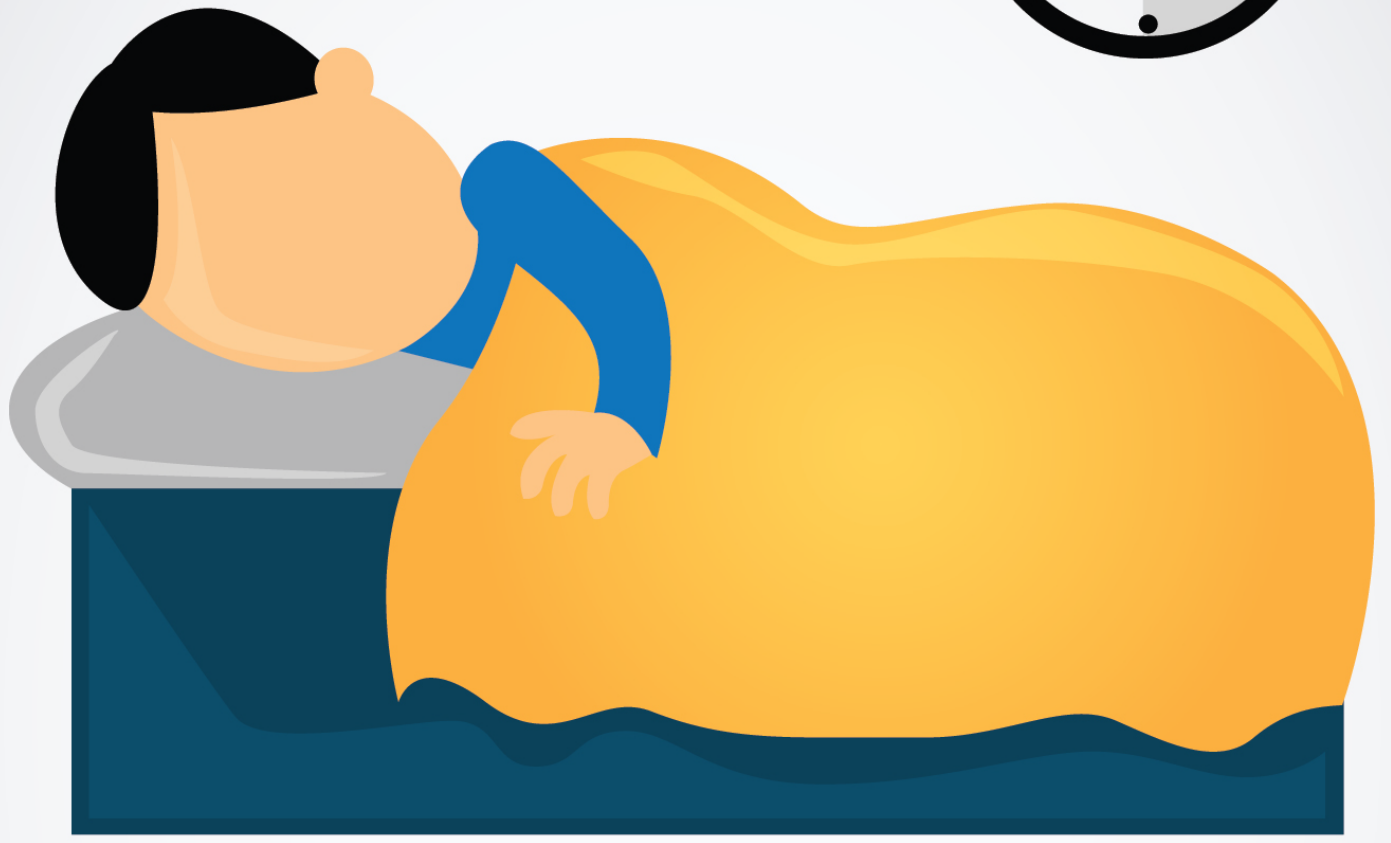
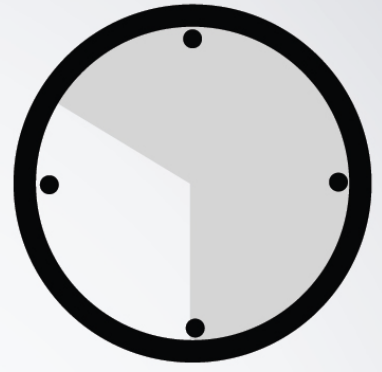
**Perform the "Wall Test":** To test your standing posture, take the wall test. Stand with your head, shoulder blades and buttocks touching a wall, and have your heels about 5 to 10 cm

timeters away from the wall. Reach back and slide your hand behind the curve in your lower back, with your palm flat against the wall. Ideally, you'll feel about one hand's thickness of space between your child's back and the wall. If there's too much space, tighten your abdominal muscles to flatten the curve in your back. If there's too little space, arch your back so that your hand fits comfortably behind your child's back.

**Three signals of bad posture in your child:** If your child experiences any of the following three symptoms you should schedule an appointment for a spinal and postural checkup. These signals indicate that the posture is not correct, and there is likely a misalignment of the spine and postural system.

- Incapable of sitting for an hour or more without pain
- Incapable of standing for an hour or more without pain
- Experiencing pain, tightness, rigidity upon waking up in the morning





- ★ ★ ★ ★ ★
- ★ ★ ★ ★
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- ★

Strategy 5:  
***Does your child  
get quality  
sleep?***

## Strategy 5:

### Does your child get quality sleep?

This sounds like a no-brainer when it comes to performance at school. Still, as a society, we sleep less and less, and this has big consequences.

Consider this: Sleep is the only time that your organs and brain rejuvenate and recover. It also has a big impact on how you store what you have learned and how well and speedily tasks can be accomplished the next day. Not enough sleep means that your child's capacity to concentrate and to retrieve and store information is severely compromised, as well as how well the child can control emotions and actions.

How your child sleeps in or wakes up tells a lot as well. Having problems sleeping in often is a sign of a restless mind, frequently seen in children who have attention problems. Does your child wake up in the middle of the night or have trouble getting out of bed or perhaps nod off during the day, perhaps even at school? All are telltale signs that sleep, recharging, and the brain's recovery are not optimal.

There are some golden rules when it comes to your child's sleep quality:

Make sure that you have set routines before going to bed and that bedtimes are on the house rule list. Reading to the child and storytelling before bed can be a part of the routine for small children, and reading is fine for older children.

It's very important that your child sleep in a well-aerated room with low light. Dim the light at least half an hour before bedtime. The blue light emitted by computers, tablets and smartphones is a sleep killer. At the end of the day, you need light in the red spectrum. This light stimulates the release of the sleeping hormone melatonin.

No computers, tablets, or TV at least an hour before sleeping is best. You can install an app (for example f.lux) on the computer that regulates the type of light emitted by the screen for daytime use. Computers normally emit more light in the blue spectrum. In the evening natural light is more on the red side of the light spectrum which helps the brain to prepare for sleeping. The app makes sure that the computer emits less blue spectrum light.

Listening to easygoing instrumentals — for example, classical music (such as Mozart or Vivaldi) — can help as well. Most children like this music, and it has been shown to stimulate sleep. Being outside at the end of the day helps as well, as there is more natural red light at this time.

Furthermore, make sure that the bedroom is cool and that all light from outside, including the hallway, is blocked as much as possible. Any form of light stimulates waking up too early.

A quick reference guide to minimum sleep requirements:

#### **3-6 Years Old: 10-12 hours per day**

Children at these ages typically go to bed between 7 and 9 p.m. and wake up around 6 to 8 a.m., just as they did when they were younger. At age 3, most children are still napping, while at age 5, most are not. Naps gradually become shorter, as well. New sleep problems do not usually develop after age 3.

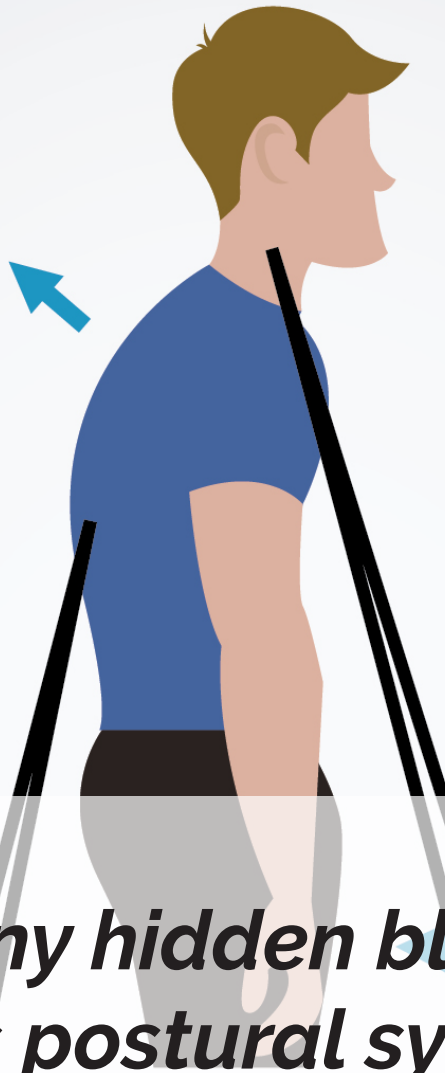
**7-12 Years Old: 10-11 hours per day**

At these ages — with social, school, and family activities — bedtimes gradually become later and later, with most 12-years-olds going to bed about 9 p.m. There is still a wide range of bedtimes, from 7:30 to 10 p.m., as well as total sleep times, from nine to 12 hours, although the average is only about ten hours.

**12-18 Years Old: 8-9 hours per day**

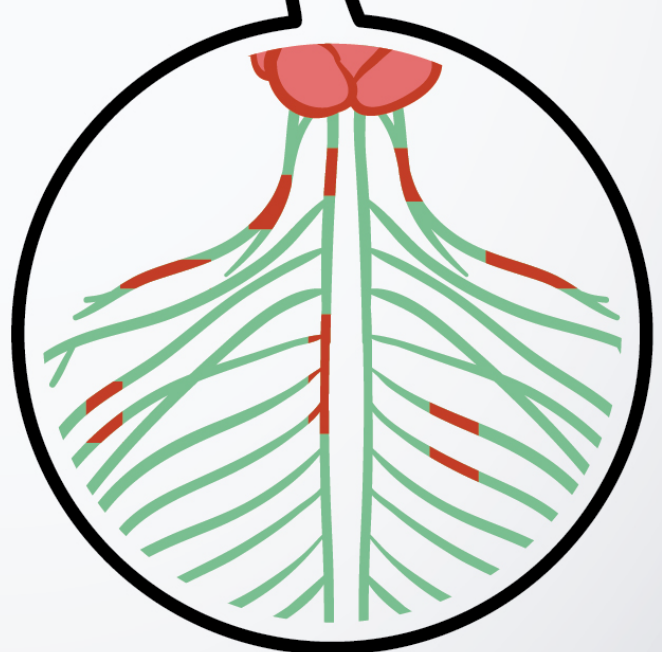
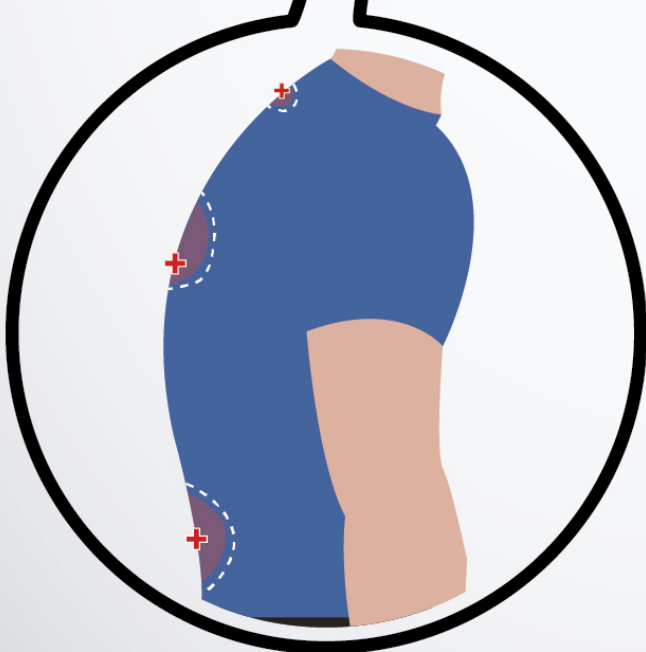
Sleep needs remain just as vital to health and well-being for teenagers as when they were younger. Many teenagers actually may need more sleep than in previous years. However, for many teenagers, social pressures conspire against getting the proper amount and quality of sleep.

As with your child's posture, it comes down to routines. Once your child knows the routines, it will become easier and easier.



Strategy 6:

***Are there any hidden blockages in your child's postural system and/or central nervous system because of old, forgotten injuries?***



## **Strategy 6:**

**Are there any hidden blockages in your child's postural system and/or central nervous system because of old, forgotten injuries?**

Remember what I said about the system that drives basic alertness and activity in your child's brain? Your child's postural system, more specifically the small muscles around his or her spine, are responsible for most of this activity.

Recent studies have shown that any blockages or overmobility in spinal segments has a profound effect on how the brain is capable of performing.

Although this may not be the main cause of your child's difficulties at school or an overall lack of development in combination with learning problems (which occurs in smaller subsection of all the children experiencing challenges at school), it has clinically been found to be one of the main reasons that children can't perform to their full capacity.

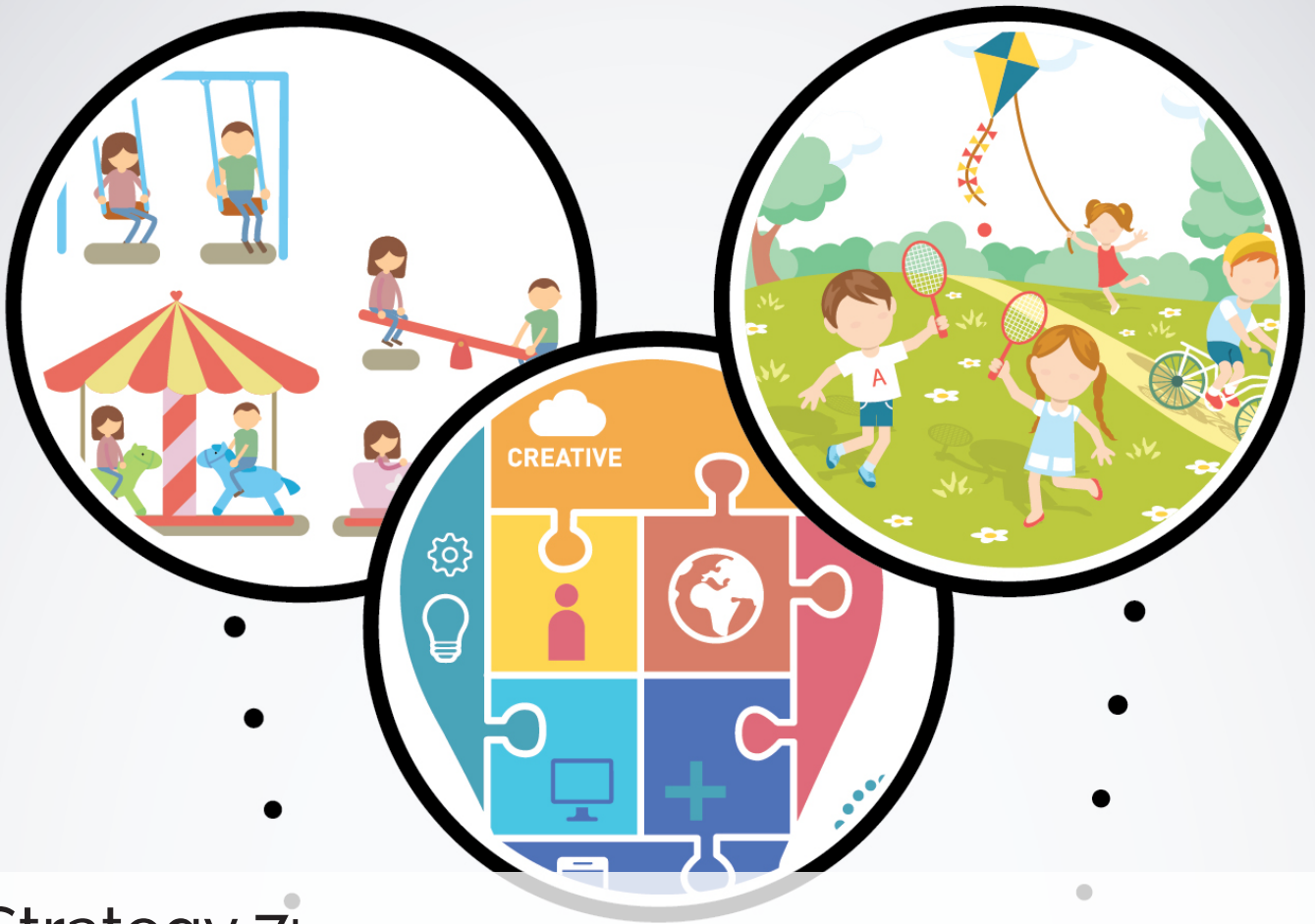
Especially if your child has experienced any form of trauma, with breaks or snaps of tendons or concussions or has been unconscious or has generally been very inactive or is very active with sports, there may be dysfunctions somewhere in the musculoskeletal system, especially the spine, that inhibit the child's ability to learn and thrive.

The correction of these blockages can result in a profound and rapid turnaround on school performance. This turnaround depends on how long these blockages in function have existed. The problem is, most children and parents will not be aware if this blockage plays a major role or are just the result of other processes, such as brain imbalances, inactivity, poor posture and/or developmental delays. All of these can have a major effect on how your child's spine functions, but the spinal blockages are in these cases a secondary effect, not the primary cause of the underperformance of your child's nervous system. The underperformance or development of parts or the whole of the central nervous system has a strong influence how well the spine functions and can thus cause problems because of to high or low muscle tone, activation or faulty orientation of the body.

So how do you know? First of all, seek out a health professional who specialized in children with spinal, developmental and postural issues. Very important. This can be a specialized chiropractor, a board-certified chiropractic neurologist, an osteopath, or a manual therapist.

Note what your child shows or tells you and what has happened in the arena of accidents in the past (the body compensates, especially when you are young, but does not forget).

Any recurrent headaches, neck or back pains, soreness, stiffness, recurrent injuries, or growth pains warrant that your child's postural system and spine in particular are checked.



Strategy 7:

***Create circumstances and activities that make your child more mindful.***



## Strategy 7:

Create circumstances and activities that make your child more mindful.

You are probably aware that mindfulness is a buzzword at the moment. There is a good reason for this. Mindfulness is not just for stressed-out adults. Mindfulness is a state of active, open attention on the present. When you're mindful, you observe your thoughts and feelings from a distance, without judging them good or bad. Instead of letting your life pass you by, mindfulness means living in the moment and awakening to experience. It has been proven that the practice of mindfulness among others activates important networks in the brain that are needed for feeling good, paying attention and selfregulation.

In our modern living environment, it is oh-so-easy to get distracted and bogged down by an overwhelm of information. Because your child's brain is hardwired to do one thing at a time very well, this situation creates an almost constant conflict and an overactive brain. It immediately poses a problem when something needs to be learned, rehearsed, or put in memory or the child needs to come up with novel ways of approaching a situation or solving a complex situation.

Basically our brains are usually working too hard in overdrive, which is not the state your child wants to be in, especially when he or she is struggling with school.

There is a big catch to this situation. First of all, it is mostly man-made, in our constant quest for progress, and we as parents are trapped in it as well. To get our children out of this trap, we, as the primary role models, will have to set an example and destress and relax our brains more. A challenge, for sure.

There are, however, multiple ways to achieve a more peaceful state of mind from which you and your child can accomplish more, feel better and healthier, and generally deal better with challenges in the environment, because you are not constantly in fight-or-flight mode. A high percentage of high performers in this world make a conscious choice to be more mindful. How they do it? Through forms of meditation, exercise, and cutting out distractions as a lifestyle habit. Not just on occasion.

Start a habit.

How can you start encouraging mindfulness with your child?

**Exercise is No. 1.** Your brain's optimal state for learning, memorizing, recalling, being creative, and being at ease with your surroundings is the so-called alpha wave state, a level of activity in the brain in which the different brain parts are perfectly synchronized for higher level thinking (in contrast to where we are most of the time, in the more active Beta wave state) and focus is very clear).

This is the state that you can be in, for example, when waking up by yourself after a good night's sleep, before the hustle and bustle of the day. This is exactly where you can start practicing being more mindful. How? Sit yourself and your child at the edge of the bed. Together, lightly pinch the index finger and thumb together and, with the eyes closed, start counting back from 100, or any number that is easy for your child.

Do this for a couple of days. Then reduce counting back from 100 to 80 and count down. After two or three days, reduce the number to 60 and count backward, with the eyes

closed. Repeat this process until you just have to count back from 20 or 10 to zero. All the time staying focused on the act of counting down.

Now your child's brain remembers this ritual, and he or she can use it in any stressful situation — for example, before taking a test or studying a difficult subject. Just sit down, close the eyes, pinch the finger and thumb together, and count back. Your child's brain remembers the technique and immediately kicks into a more helpful state of mind. Practice makes perfect.

Two other helpful methods to aid your child's (and your own) brain are gratitude and visualization. These are easy exercises. For best results, they should be done every day at a set time, for example, before going to bed or after waking up.

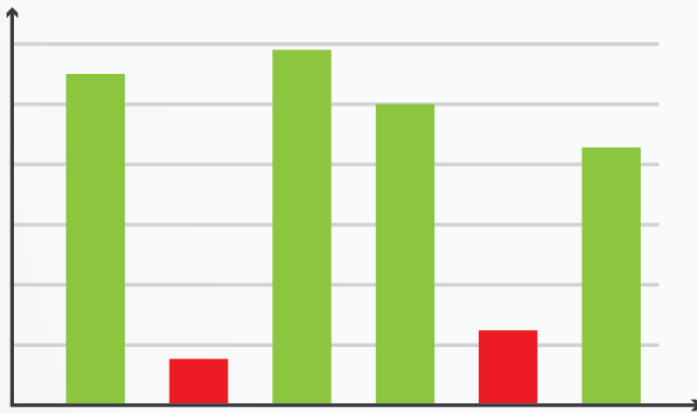
**Gratitude — Exercise No. 2:** Have your son or daughter think of all the pleasant moments they experienced during the day. If that proves too hard, they can think about the last two or three days. Have them do this for two minutes, starting with less time and building up. Again, make this a habit. It is one of the most powerful things you can do for you as parent to help your own brain and your child's brain to function at a higher level.

**Exercise No. 3:** Visualize the next day or the day ahead, depending on the time of day when you're doing the exercise. Try to make your child see on the inside that the day will run smoothly and that everything that lies ahead will take a turn for the best, and that he or she will succeed at everything undertaken. In addition, your son or daughter can add elements that he or she would like to happen in the future. Try to do this every day. It will take some practice and may prove hard in the beginning, but the gains of this ritual are tremendous. Try it for at least 30 days and see what happens.

If none of these exercises is helpful, you can look into the many forms of mindfulness training for children. Just google it.

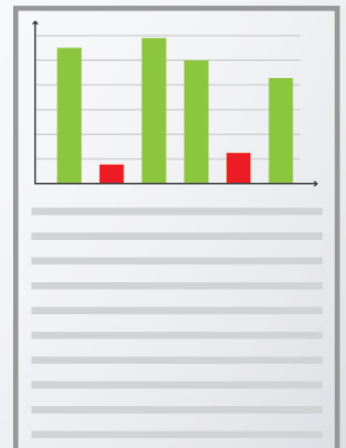
You have been presented three exercises that have been proven scientifically to have a deep effect on improving children's brain capacity and tranquility. This is not some mumbo-jumbo advice: First of all, see for yourself what they do for you, and, secondly consider the fact that many of highly effective and successful people use these methods to perform at the highest level. They really are worth trying.





Strategy 8:

***Imbalances in brain function are one of the most overlooked underlying causes of learning problems.***



## **Strategy 8:**

**Imbalances in brain function are one of the most overlooked underlying causes of learning problems.**

I have left this topic toward the end of the top 10 not because of its ranking but because you now have a little better understanding of what is required for your child's brain to perform better. Imbalances in brain function are one of the most overlooked and unaddressed underlying problems that your child may be dealing with.

The relevance of addressing this somewhat difficult topic is great. Some groundbreaking research has shown that addressing functional imbalances (not caused by disease) in the brain's function by performing specific tasks and exercises has a significant effect on learning potential and results. These results are lasting.

Most children that we see in our clinics have some form of imbalance. Such imbalances can be inherited or caused by trauma or developmental delays, or the causes are often unknown. The most important thing is to understand that they can, even in the face of genetic predisposition, be influenced in a positive way and often reversed by specific stimulation of the weaker functioning parts of the brain.

Before I explain, it is important to understand the following: Everyone has a built-in ceiling that dictates to what extent and ease we can develop our cognitive, emotional and physical capacity. The way such development takes place and circumstances like nutrition, toxins, psychological well-being, and physical activity greatly influence to what extent we will eventually rise. Research has proven that, with the right circumstances, some people with a low capacity can rise way above their expected capacity and the opposite, where someone with the right background, capacity and talent does not reach their full potential because they do not challenge, cultivate and improve their brains function, for example by choosing to not educate beyond high school and/or taking care of the right amount of beneficial nutrients, exercise.

So, given the right circumstances, everyone can improve brain capacity. The problem with imbalances in brain function is that the imbalance itself causes the biggest problem; it creates an internal conflict between the two halves of the brain. If one area of the brain is suppressed in function (for example, a part that deals with language formation), and another part is strong (for example, the part that deals with nonverbal communication, such as gesturing), the strong part will take over and the person will start to prefer gesturing as means of communication unless he or she deliberately trains the weaker area. Imbalances remain in place and will not disappear by themselves.

Now, everyone has some weaker functional areas in their brains, be it by circumstance (for example, ear infections may force you to rely on visual parts of the brain) or by birth. Some learning difficulties, such as some forms of dyslexia, run in families. In these families, however, the expression of the problem varies widely, having to do with the capacity of the brain to reshape itself. Even if there are weak areas, they can be made stronger.

Some examples of obvious imbalances: the dyslexic child who has perfect body control and awareness, making her a top athlete in the making. It just comes naturally. The language processing parts in the left brain are relatively weak, and the body picture and spatial awareness, as well as control over the big muscles, are strong and dominating on the right side of the brain. This is a brain imbalance.

Another example: the child who is easily distracted and cannot keep overview in complex situations because the frontal parts on the side of the right half of the brain (hemisphere) are relatively weak. This child can have a great love for anything that has to do with computers and games, which is a linear, step by step, left-brain task. Because of the relative dominance of the left brain, he can be completely hung up on details and know everything there is to know about all the characters in *The Lord of the Rings*. This is like many imbalances that we see within the autistic spectrum.

So how can you find out if imbalances in brain function are playing a role in your child's situation? Check out the concise right and left brain weakness list below and see if anything jumps out. The more characteristics you find on one side of the brain, the greater the imbalance.

### **Imbalances in the left brain may cause:**

- Is your child easily distracted or unusually bothered by loud or sudden noises?
- Are noisy environments upsetting to your child?
- Does your child's behavior and performance improve in quieter settings?
- Does your child have difficulty following directions, whether simple or complicated?
- Does your child have reading, spelling, writing, or other speech-language difficulties?
- Are verbal (word) math problems difficult for your child?
- Is your child disorganized and forgetful?
- Are conversations hard for your child to follow?

### **Imbalances in the right brain may cause:**

- Difficulties with social boundaries
- Inability to finish things once they're started
- Poor spatial awareness
- Clumsiness
- Avoidance of sports
- Difficulty paying attention
- Poor interpretation of social situations
- Problems with eye contact
- Failure to see the big picture while zooming in on details
- Failure to pick up nonverbal cues
- Tendency to be over- or hyperactive
- Anxiety
- Easily crossing other people's boundaries
- Poor organization
- Poor multitasking
- Getting stuck in repetitive behaviors like tics, repeated thoughts and repeated procedures

We have found that it pays off to address any imbalance. In case there are no obvious imbalances using the other strategies offered here will often be enough to enhance your child's learning capacity.

Strategy 9:

***Is your child's brain in a constant fog?***



## Strategy 9:

### Is your child's brain in a constant fog?

- Does your child's head seem to be foggy?
- Does your child have constant and recurrent unclear thoughts?
- Does your son or daughter have low brain endurance and cannot keep up with the activities he/she is doing?
- Is he or she battling with slow and varied mental speeds?
- Has your child had a loss of brain function after trauma?
- Does your child suffer from brain fatigue and poor mental focus after meals?
- When your child has an infection, it has a profound effect on how fast your child's brain fatigues?
- Is your child's brain fatigue exacerbated by chemicals, scents, and pollutants?

If any of these points apply to your child there may be a whole different reason that your child is not functioning at his or her full capacity. Both hidden food intolerances and chronic low-grade inflammatory processes in the gut and brain may be causing part or all of your problems.

Let me explain: Although the gut, immune system and brain do not at first seem to be related to each other, let alone that the gut and immune system are involved in learning, remember that learning, behavior, and motoric control problems are considered functional problems of the brain. So anything that affects optimal function of the brain can have an influence on learning as well.

The brain and gut are closely related. The brain controls what is happening in the gut, and what happens in the gut has a direct influence on the brain. Stomach problems can directly lead to depression, and some intestinal problems have been shown to be involved with other psychiatric conditions. In addition, what happens in the gut can greatly influence what is happening in your child's immune system.

This is not the place to describe in detail what chronic immune reactions in the gut and brain can cause your child to suffer from brain fog, slowed mental functions, and general brain fatigue, which expresses as a chronic or easily brought-on tiredness, lack of concentration, or incapacity to learn complex new things. It is important that you are aware that these immune reactions can underlie or be part of the process that is causing your child to struggle at school.

Science is showing more and more that these processes may play a role in a variety of disorders, including some that also have a learning difficulty component (for example, autism spectrum disorders).

Common scenarios in which the brain's function can become compromised are: Hidden food intolerances. Delayed immune reactions against certain food types such as dairy, gluten and/or egg are often overlooked. These immune reactions do not necessarily cause gut discomfort but can lead to unclear thinking, headaches, and slower processing speeds in your child's brain.

Chronic immune reactions in the intestines can eventually lead to more severe systemic reactions and even low-grade brain inflammatory reactions, once the blood brain barrier (which is not fully developed in children) is breached. The problem with these reactions in

the brain, which can be caused by a knock to the head, is that they cannot be turned off, only reduced and controlled by lifestyle, nutritional, and other supplementary changes. The following elements predispose your child to chronic overactive immune reactions and/or an overactive immune system in the brain.

- Diabetes and high-carbohydrate diets, leading to the production of unwanted end products, which activate the immune cells of the brain
- Lack of oxygen from poor circulation, lack of exercise, chronic stress response, any lung disorder, anemia
- Previous head trauma
- Autoimmune reaction to neurological tissue like PANDAS
- Consumption of dietary gluten by those who are gluten intolerant
- Low brain antioxidant status
- Environmental pollutants (which may include cleaning products used in and around the house)
- Systemic inflammation like fever or "mononucleosis"
- Inflammatory bowel conditions caused by excess use of antibiotics

If this is an area that you have never looked into and you have tried pretty much everything, it may very well be the missing link in your child's quest for better school results.

Best advice: Contact someone who knows how to assess and address these underlying problems and can order lab tests to rule them out if they're not present.

Seek out a pediatrician who specialized in immune issues. Or seek out one of the physicians trained in functional medicine and immune issues. Alternatively, you may seek out a chiropractor trained in functional neurology with a pediatric or nutritional specialization.



Strategy 10:  
***Outdoor time increases  
brain capacity.***

## **Strategy 10:** **Outdoor time increases brain capacity.**

This may be the easiest to implement of all the 10 strategies. Or not. Just consider the fact that a 10-year-old child is supposed to be at the peak of his or her physical endurance. A physically fit adult would struggle to keep up with this child. At least, that's the theory, and it may have been the case 40 or 50 years ago, when television hardly existed and children really spent most of their time outside. Did you know that the average child is supposed to be physically active for at least three hours a day?

That does not mean walking from the sofa to the kitchen and back. Oops — reality check. I am struggling to get my kids more active, too.

As mentioned before, for the child's brain and body control to develop — along with his or her learning skills, mental capacity, memory, recollection, and ability to deal with events in the environment — your child will have to use his or her body. Problem ... This is happening less and less and may, as some researchers suggest, be the reason that many children mature at a much later age than decades ago. Problematic, yes — in most cases physical inactivity automatically means that many children's brains may not have matured enough for the school tasks that are matched with their age. Struggling is the result.

So on top of all the other possible underlying issues that may be only partly addressed, physical inactivity is a major factor that can influence your child's school performance. Luckily, it can be reversed

Although it may require some reorganization of daily routines (and I realize that living in the city does not make it easier), walking to school with your kids, at least part of the way, may be a great start. On the weekend, you can plan outdoor activities. Make it a habit to include physical tasks around the house on your list of rules. Your child will thank you later.

Banning the computer for most of the day will be the hardest, but it will have an effect on multiple levels, as you have seen in the previous strategies.

I realize that it will be greatly dependant on you to make this lifestyle change and that it may include a turnaround for you as well.

Oxygenation, fuel delivery, and activation for optimal function, growth, and development all depend on using your body as it was meant to be used: various types of movement all day long. From a prevention standpoint, diabetes, overweight, degenerative disease, and the likes will be kept away as a bonus.

Good luck with implementing this last out-of-the-box solution for learning problems.



**EPILOGUE**

## Epilogue:

I hope that this concise overview of solutions has not discouraged you in taking action to change your child's situation. I realize that it may have been a little overwhelming at times, with all the different factors that can have a partial influence on your child's school performance. And this approach is outside the regular approach, where we predominantly look at learning and behavioral aspects.

There is hope, and with all the strategies presented, there are real possibilities of addressing and greatly improving the specific underlying problems.

Identifying the strategy that applies in your child's case is the first step.

Whatever you do with this information, realize that science is showing that much more is possible, and there are more factors at fault than previously known when it comes to learning problems. I hope that by now you realize that learning involves the whole body, in particular the brain, and that as such any learning problem should be addressed by looking at the circumstances under which the brain develops and has to function. All aspects that have an influence on the central nervous system — from schooling to parenting to environmental influences and everything that has an effect on proper functioning and development of the organs — make us who we are.

I would like to wish you the best. At the least, I trust I have given you some new insights through which you may help your child further in his or her journey to improve the situation and to succeed at school — but above all else, to be his or her own best self.

Yours in health,

### **Arjan Kuipers**

Chiropractic neurologist, postural expert, and specialist in the clinical application of neuroscience for children with neurodevelopmental disorders.

# APPENDIX

# Appendix

This checklist is adapted from the Sensory processing Disorder Resource Center's checklist.

NB. This checklist is not definitive and is just a guideline. Even if many boxes may be ticked, if consequences are not found back in daily life or are not noteworthy, this may not be as meaningful as one box ticked and this one sign disrupts a child's life completely.

**Tactile Sense:** input from the skin receptors about touch, pressure, temperature, pain, and movement of the hairs on the skin.

## Signs Of Tactile Dysfunction:

### 1. Hypersensitivity To Touch (Tactile Defensiveness)

- Becomes fearful, anxious or aggressive with light or unexpected touch
- As an infant, did/does not like to be held or cuddled; may arch back, cry, and pull away
- Distressed when diaper is being, or needs to be, changed
- Appears fearful of, or avoids standing in close proximity to other people or peers (especially in lines)
- Becomes frightened when touched from behind or by someone/something they can not see (such as under a blanket)
- Complains about having hair brushed; may be very picky about using a particular brush
- Bothered by rough bed sheets (i.e., if old and "bumpy")
- Avoids group situations for fear of the unexpected touch
- Resists friendly or affectionate touch from anyone besides parents or siblings (and sometimes them too!)
- Dislikes kisses, will "wipe off" place where kissed
- Prefers hugs
- A raindrop, water from the shower, or wind blowing on the skin may feel like torture and produce adverse and avoidance reactions
- May overreact to minor cuts, scrapes, and or bug bites
- Avoids touching certain textures of material (blankets, rugs, stuffed animals)

- Refuses to wear new or stiff clothes, clothes with rough textures, turtlenecks, jeans, hats, or belts, etc.
- Avoids using hands for play
- Avoids/dislikes/aversive to "messy play", i.e., sand, mud, water, glue, glitter, playdoh, slime, shaving cream/funny foam etc.
- Will be distressed by dirty hands and want to wipe or wash them frequently
- Excessively ticklish
- Distressed by seams in socks and may refuse to wear them
- Distressed by clothes rubbing on skin; may want to wear shorts and short sleeves year round, toddlers may prefer to be naked and pull diapers and clothes off constantly
- Or, may want to wear long sleeve shirts and long pants year round to avoid having skin exposed
- Distressed about having face washed
- Distressed about having hair, toenails, or fingernails cut
- Resists brushing teeth and is extremely fearful of the dentist
- Is a picky eater, only eating certain tastes and textures; mixed textures tend to be avoided as well as hot or cold foods; resists trying new foods
- May refuse to walk barefoot on grass or sand

## **2. Hyposensitivity To Touch (Under-Responsive)**

- May crave touch, needs to touch everything and everyone
- Is not aware of being touched/bumped unless done with extreme force or intensity
- Is not bothered by injuries, like cuts and bruises, and shows no distress with shots (may even say they love getting shots!)
- May not be aware that hands or face are dirty or feel his/her nose running
- May be self-abusive; pinching, biting, or banging his own head
- Mouths objects excessively
- Frequently hurts other children or pets while playing
- Repeatedly touches surfaces or objects that are soothing (i.e., blanket)

- Seeks out surfaces and textures that provide strong tactile feedback
- Thoroughly enjoys and seeks out messy play
- Craves vibrating or strong sensory input
- Has a preference and craving for excessively spicy, sweet, sour, or salty foods

### **3. Poor Tactile Perception And Discrimination:**

- Has difficulty with fine motor tasks such as buttoning, zipping, and fastening clothes
- May not be able to identify which part of their body was touched if they were not looking
- May be afraid of the dark
- May be a messy dresser; looks disheveled, does not notice pants are twisted, shirt is half un tucked, shoes are untied, one pant leg is up and one is down, etc.
- Has difficulty using scissors, crayons, or silverware
- Continues to mouth objects to explore them even after age two
- Has difficulty figuring out physical characteristics of objects; shape, size, texture, temperature, weight, etc.
- May not be able to identify objects by feel, uses vision to help; such as, reaching into backpack or desk to retrieve an item

**Vestibular Sense:** input from the inner ear about equilibrium, gravitational changes, movement experiences, and position in space.

## Signs Of Vestibular Dysfunction:

### 1. Hypersensitivity To Movement (Over-Responsive):

- Avoids/dislikes playground equipment; i.e., swings, ladders, slides, or merry-go-rounds
- Prefers sedentary tasks, moves slowly and cautiously, avoids taking risks, and may appear "wimpy"
- Avoids/dislikes elevators and escalators; may prefer sitting while they are on them or, actually get motion sickness from them
- May physically cling to an adult they trust
- May appear terrified of falling even when there is no real risk of it
- Afraid of heights, even the height of a curb or step
- Fearful of feet leaving the ground
- Fearful of going up or down stairs or walking on uneven surfaces
- Afraid of being tipped upside down, sideways or backwards; will strongly resist getting hair washed over the sink
- Startles if someone else moves them; i.e., pushing his/her chair closer to the table
- As an infant, may never have liked baby swings or jumpers
- May be fearful of, and have difficulty riding a bike, jumping, hopping, or balancing on one foot (especially if eyes are closed)
- May have disliked being placed on stomach as an infant
- Loses balance easily and may appear clumsy
- Fearful of activities which require good balance
- Avoids rapid or rotating movements

## **2. Hyposensitivity To Movement (Under-Responsive):**

- In constant motion, can't seem to sit still
- Craves fast, spinning, and/or intense movement experiences
- Loves being tossed in the air
- Could spin for hours and never appear to be dizzy
- Loves the fast, intense, and/or scary rides at amusement parks
- Always jumping on furniture, trampolines, spinning in a swivel chair, or getting into upside down positions
- Loves to swing as high as possible and for long periods of time
- Is a "thrill-seeker"; dangerous at times
- Always running, jumping, hopping etc. instead of walking
- Rocks body, shakes leg, or head while sitting
- Likes sudden or quick movements, such as, going over a big bump in the car or on a bike

## **3. Poor Muscle Tone And/Or Coordination:**

- Has a limp, "floppy" body
- Frequently slumps, lies down, and/or leans head on hand or arm while working at his/her desk
- Difficulty simultaneously lifting head, arms, and legs off the floor while lying on stomach ("superman" position)
- Often sits in a "W sit" position on the floor to stabilize body
- Fatigues easily!
- Compensates for "looseness" by grasping objects tightly
- Difficulty turning doorknobs, handles, opening and closing items
- Difficulty catching him/her self if falling
- Difficulty getting dressed and doing fasteners, zippers, and buttons
- May have never crawled as an baby



- Has difficulty licking an ice cream cone
- Seems to be unsure about how to move body during movement, for example, stepping over something
- Difficulty learning exercise or dance steps
- Has poor body awareness; bumps into things, knocks things over, trips, and/or appears clumsy
- Poor gross motor skills; jumping, catching a ball, jumping jacks, climbing a ladder etc.
- Poor fine motor skills; difficulty using "tools", such as pencils, silverware, combs, scissors etc.
- May appear ambidextrous, frequently switching hands for coloring, cutting, writing etc.; does not have an established hand preference/dominance by 4 or 5 years old
- Has difficulty licking an ice cream cone
- Seems to be unsure about how to move body during movement, for example, stepping over something
- Difficulty learning exercise or dance steps

**Proprioceptive Sense:** input from the muscles and joints about body position, weight, pressure, stretch, movement, and changes in position in space.

## **Signs Of Proprioceptive Dysfunction:**

### **1. Sensory Seeking Behaviors:**

- Seeks out jumping, bumping, and crashing activities
- Stomps feet when walking
- Kicks his/her feet on floor or chair while sitting at desk/table
- Bites or sucks on fingers and/or frequently cracks his/her knuckles
- Loves to be tightly wrapped in many or weighted blankets, especially at bedtime
- Prefers clothes (and belts, hoods, shoelaces) to be as tight as possible
- Loves/seekes out "squishing" activities
- Enjoys bear hugs
- Excessive banging on/with toys and objects
- Loves "roughhousing" and tackling/wrestling games
- Frequently falls on floor intentionally
- Would jump on a trampoline for hours on end
- Grinds his/her teeth throughout the day
- Loves pushing/pulling/dragging objects
- Loves jumping off furniture or from high places
- Frequently hits, bumps or pushes other children
- Chews on pens, straws, shirt sleeves etc.

### **2. Difficulty With "Grading Of Movement":**

- Misjudges how much to flex and extend muscles during tasks/activities (i.e., putting arms into sleeves or climbing)
- Difficulty regulating pressure when writing/drawing; may be too light to see or so hard the tip of writing utensil breaks

- Written work is messy and he/she often rips the paper when erasing
- Always seems to be breaking objects and toys
- Misjudges the weight of an object, such as a glass of juice, picking it up with too much force sending it flying or spilling, or with too little force and complaining about objects being too heavy
- May not understand the idea of "heavy" or "light"; would not be able to hold two objects and tell you which weighs more
- Seems to do everything with too much force; i.e., walking, slamming doors, pressing things too hard, slamming objects down
- Plays with animals with too much force, often hurting them

# Signs Of Auditory Dysfunction: (no diagnosed hearing problem)

## 1. Hypersensitivity To Sounds (Auditory Defensiveness):

- Distracted by sounds not normally noticed by others; i.e., humming of lights or refrigerators, fans, heaters, or clocks ticking
- Fearful of the sound of a flushing toilet (especially in public bathrooms), vacuum, hairdryer, squeaky shoes, or a dog barking
- Started with or distracted by loud or unexpected sounds
- Bothered/distracted by background environmental sounds; i.e., lawn mowing or outside construction
- Frequently asks people to be quiet; i.e., stop making noise, talking, or singing
- Runs away, cries, and/or covers ears with loud or unexpected sounds
- May refuse to go to movie theaters, parades, skating rinks, musical concerts etc.
- May decide whether they like certain people by the sound of their voice

## 2. Hyposensitivity To Sounds (Under-Registers):

- Often does not respond to verbal cues or to name being called
- Appears to "make noise for noise's sake"
- Loves excessively loud music or TV
- Seems to have difficulty understanding or remembering what was said
- Appears oblivious to certain sounds
- Appears confused about where a sound is coming from
- Talks self through a task, often out loud
- Had little or no vocalizing or babbling as an infant
- Needs directions repeated often, or will say, "What?" frequently

# Signs Of Oral Input Dysfunction:

## 1. Hypersensitivity To Oral Input (Oral Defensiveness):

- Picky eater, often with extreme food preferences; i.e., limited repertoire of foods, picky about brands, resistive to trying new foods or restaurants, and may not eat at other people's houses)
- May only eat "soft" or pureed foods past 24 months of age
- May gag with textured foods
- Has difficulty with sucking, chewing, and swallowing; may choke or have a fear of choking
- Resists/refuses/extremely fearful of going to the dentist or having dental work done
- May only eat hot or cold foods
- Refuses to lick envelopes, stamps, or stickers because of their taste
- Dislikes or complains about toothpaste and mouthwash
- Avoids seasoned, spicy, sweet, sour or salty foods; prefers bland foods

## 2. Hypersensitivity To Oral Input (Oral Defensiveness):

- May lick, taste, or chew on inedible objects
- Prefers foods with intense flavor; i.e., excessively spicy, sweet, sour, or salty
- Excessive drooling past the teething stage
- Frequently chews on hair, shirt, or fingers
- Constantly putting objects in mouth past the toddler years
- Acts as if all foods taste the same
- Can never get enough condiments or seasonings on his/her food
- Loves vibrating toothbrushes and even trips to the dentist

# Signs Of Olfactory Dysfunction (Smells):

## 1. Hypersensitivity To Smells (Over-Responsive):

- Reacts negatively to, or dislikes smells which do not usually bother, or get noticed, by other people
- Tells other people (or talks about) how bad or funny they smell
- Refuses to eat certain foods because of their smell
- Offended and/or nauseated by bathroom odors or personal hygiene smells
- Bothered/irritated by smell of perfume or cologne
- Bothered by household or cooking smells
- May refuse to play at someone's house because of the way it smells
- Decides whether he/she likes someone or some place by the way it smells

## 2. Hyposensitivity To Smells (Under-Responsive):

- Has difficulty discriminating unpleasant odors
- May drink or eat things that are poisonous because they do not notice the noxious smell
- Unable to identify smells from scratch 'n sniff stickers
- Does not notice odors that others usually complain about
- Fails to notice or ignores unpleasant odors
- Makes excessive use of smelling when introduced to objects, people, or places
- Uses smell to interact with objects

# Signs Of Visual Input Dysfunction (No Diagnosed)

## 1. Hypersensitivity To Visual Input (Over-Responsiveness)

- Sensitive to bright lights; will squint, cover eyes, cry and/or get headaches from the light
- Has difficulty keeping eyes focused on task/activity he/she is working on for an appropriate amount of time
- Easily distracted by other visual stimuli in the room; i.e., movement, decorations, toys, windows, doorways etc.
- Has difficulty in bright colorful rooms or a dimly lit room
- Rubs his/her eyes, has watery eyes or gets headaches after reading or watching TV
- Avoids eye contact
- Enjoys playing in the dark

## 2. Hyposensitivity To Visual Input (Under-Responsive Or Difficulty With Tracking, Discrimination, Or Perception):

- Has difficulty telling the difference between similar printed letters or figures; i.e., p & q, b & d, + and x, or square and rectangle
- Has a hard time seeing the "big picture"; i.e., focuses on the details or patterns within the picture
- Has difficulty locating items among other items; i.e., papers on a desk, clothes in a drawer, items on a grocery shelf, or toys in a bin/toy box
- Often loses place when copying from a book or the chalkboard
- Difficulty controlling eye movement to track and follow moving objects
- Has difficulty telling the difference between different colors, shapes, and sizes
- Often loses his/her place while reading or doing math problems
- Makes reversals in words or letters when copying, or reads words backwards; i.e., "was" for "saw" and "no" for "on" after first grade
- Difficulty finding differences in pictures, words, symbols, or objects
- Difficulty with consistent spacing and size of letters during writing and/or lining up numbers in math problems

- Difficulty with jigsaw puzzles, copying shapes, and/or cutting/tracing along a line
- Tends to write at a slant (up or down hill) on a page
- Confuses left and right
- Fatigues easily with schoolwork
- Difficulty judging spatial relationships in the environment; i.e., bumps into objects/people or missteps on curbs and stairs
- Complains about "seeing double"

## **Auditory-Language Processing Dysfunction:**

- Unable to locate the source of a sound
- Difficulty identifying people's voices
- Difficulty discriminating between sounds/words; i.e., "dare" and "dear"
- Difficulty filtering out other sounds while trying to pay attention to one person talking
- Bothered by loud, sudden, metallic, or high-pitched sounds
- Difficulty attending to, understanding, and remembering what is said or read; often asks for directions to be repeated and may only be able to understand or follow two sequential directions at a time
- Looks at others to/for reassurance before answering
- Difficulty putting ideas into words (written or verbal)
- Often talks out of turn or "off topic"
- If not understood, has difficulty re-phrasing; may get frustrated, angry, and give up
- Difficulty reading, especially out loud (may also be dyslexic)
- Difficulty articulating and speaking clearly
- Ability to speak often improves after intense movement



# Social, Emotional, Play, And Self-Regulation Dysfunction:

## Social:

- Difficulty getting along with peers
- Prefers playing by self with objects or toys rather than with people
- Does not interact reciprocally with peers or adults; hard to have a "meaningful" two-way conversation
- Self-abusive or abusive to others
- Others have a hard time interpreting child's cues, needs, or emotions
- Does not seek out connections with familiar people

## Emotional:

- Difficulty accepting changes in routine (to the point of tantrums)
- Gets easily frustrated
- Often impulsive
- Functions best in small group or individually
- Variable and quickly changing moods; prone to outbursts and tantrums
- Prefers to play on the outside, away from groups, or just be an observer
- Avoids eye contact
- Difficulty appropriately making needs known

## Play:

Difficulty with imitative play (over 10 months)

Wanders aimlessly without purposeful play or exploration (over 15 months)

Needs adult guidance to play, difficulty playing independently (over 18 months)

Participates in repetitive play for hours; i.e., lining up toys cars, blocks, watching one movie over and over etc.

## Self-Regulation:

Excessive irritability, fussiness or colic as an infant

Can't calm or soothe self through pacifier, comfort object, or caregiver

Can't go from sleeping to awake without distress

Requires excessive help from caregiver to fall asleep; i.e., rubbing back or head, rocking, long walks, or car rides

## Internal Regulation (The Interoceptive Sense):

- Becoming too hot or too cold sooner than others in the same environments; may not appear to ever get cold/hot, may not be able to maintain body temperature effectively
- Difficulty in extreme temperatures or going from one extreme to another (i.e., winter, summer, going from air conditioning to outside heat, a heated house to the cold outside)
- Respiration that is too fast, too slow, or cannot switch from one to the other easily as the body demands an appropriate respiratory response
- Heart rate that speeds up or slows down too fast or too slow based on the demands imposed on it
- Respiration and heart rate that takes longer than what is expected to slow down during or after exertion or fear
- Severe/several mood swings throughout the day (angry to happy in short periods of time, perhaps without visible cause)
- Unpredictable state of arousal or inability to control arousal level (hyper to lethargic, quickly, vacillating between the two; over stimulated to under stimulated, within hours or days, depending on activity and setting, etc.)
- Frequent constipation or diarrhea, or mixed during the same day or over a few days
- Difficulty with potty training; does not seem to know when he/she has to go (i.e., cannot feel the necessary sensation that bowel or bladder are full)
- Unable to regulate thirst; always thirsty, never thirsty, or oscillates back and forth
- Unable to regulate hunger; eats all the time, won't eat at all, unable to feel full/hungry
- Unable to regulate appetite; has little to no appetite and/or will be "starving" one minute then full two bites later, then back to hungry again (prone to eating disorders and/or failure to thrive)