

Is It Behavior? Or is it Sensory?

A 5-Post Series from Growing-Hands-On Kids

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All information in this series was given during a continuing education class by Debra Dickson, RPT titled "Is it Sensory? Or is it Behavior?". [Therapy Works, LLC](#). I compiled my notes and relevant studies and information to write and compile this series.

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Is it Behavior? Or is it Sensory?

Have you ever wondered if your child's behavior is truly a behavior issue? Maybe there seems to be an underlying sensory issue going on? Many times it is hard to tell if a behavior is truly a behavior or if your child is reacting to sensory problems in their body. In this 5 post series, I hope to give you some ideas and answers on whether your child's behavior is truly sensory related or not.

Also please note, this series only looks at behavior as linked to sensory responses. There are definitely kids who have a behavior component as well as a sensory component to their responses and behaviors. And kids will be kids. They are going to throw fits over not getting something they wanted, or for seemingly no reasons at all.

That just comes with the territory. I am not a licensed behavior therapist.

If you feel your child's extreme behavior is truly a behavior and not only sensory related, please get in contact with your physician and a behavior therapist. And the same goes for sensory, if you feel your child has major sensory processing problems, again consult your physician and occupational therapist. As I stress in this entire series, every child is different and sensory is NOT a "fix all" type of thing. But it can definitely help, so keep reading.

So is your child's behavior a behavior issue or sensory? The short answer, you may not like is: YES.... and YES! I know you probably don't want to hear that answer, so let me explain it a little bit. The definition of behavior is: "the way in which one acts or conducts oneself, especially toward others" ; "the way in which an animal or person acts in response to a particular situation or stimulus." The definition of sensory is: "of or relating to sensation or the physical senses; transmitted or perceived by the senses."

Notice anything? If sensory is the sensation or physical senses and a definition of behavior is the way in which a person acts in response to a particular "stimulus" (or sensation), then YES, behaviors can happen because of sensory problems. Now does that mean that ALL behavior is sensory related? Well, in a way, yes. Behaviors are actions based upon the following things:

- Current biochemical status - chemical reactions in the brain
- Current neurological status - nerves and the nervous system
- Hard wiring of the brain
- Our perception based on the situation - this could come from past experiences or how our brain is interpreting a situation.

The main thing to gather from this is that no two people have all the same biochemical, neurological, or hard wiring make up. We also don't perceive situations the same! So

what one person may be able to handle without "flipping out" someone else may not be able to.

A good example of this is motion sickness. Many people, my father included, become motion sick at the slightest un-natural movement or sensation to their bodies. So plane rides, boat rides, car rides are not a fun thing for them. They need to take medicine to change the biochemical makeup in their brains to be able to make it through that experience without getting sick. But then there are others, myself included, who do not get sick when on a plane, or in the car, or on a boat. It all has to do with our brain make up and wiring.

For children who are having sensory processing problems, their brains are wired much differently than the average person. Sensory information is hitting their little brains and they don't know how to process this information correctly. It is often mis-interpreted. This puts their body into a huge amount of stress. When your body is in stress, it puts you into a very primal response: fight or flight. Do you need to stand up and fight against this situation or do you need to run away from it? It is all about self preservation.

An example of fight would be the mother who suddenly has super power strength in order to save a child from a dangerous situation. An example of flight would be realizing someone is following you and running for your life. For a child who is not processing the incoming sensory information correctly, their body could be in a state of constant fight or flight mode. When their body is telling them that this situation is not safe they either need to "fight" or "flight". They are going to react with the behavior. The problem for many child is that their bodies are in this constant state of fight or flight for un-natural reasons. Some of these could included:

- Allergies (foods, molds, pollen)
- Sleep
- Nutrition

- Environmental factors
- Brain function

All of these play a factor into how a child is going to react to a situation. For many children, if you take a look at the 5 areas above and address these problem areas, often times a behavior will start to diminish.

But guess what?! Remember how we said, no two people are alike?? That means no two treatment options are alike either. Each person comes with their own experience, hard wiring, brain function, and reaction to stimulus. So that means each person or child needs to be looked at as an individual. Just because one treatment idea worked for one child, does not mean it works for ALL children. This is why behavior plans in schools may work for some children, but not all! In order for a behavior plan to work, stress needs to be alleviated . For stress to be alleviated, you need to look at the 5 factors above. (Allergies, sleep, nutrition, environmental factors, brain function).

I want to stress that these ideas are not to be taken as medical advice. You need to seek the professional advice of your pediatrician or see a physical or occupational therapist who specializes in sensory integration therapy.

Please do not make ANY changes to your child's diet without first consulting a physician or nutritionist. This series is also to not be used as a way "diagnose your child." The only way to find out if your child has a real sensory processing problem is to talk to your physician or Occupational Therapist. I want to also say that knowing your child's behavior is a result of a sensory processing problem does not mean they get a free pass and have no consequences.

What it does mean is that as a parent, you are looking for ways to alleviate the external or internal stressors that could be causing that behavior. I don't know many parents that like to be constantly correcting or giving out consequences for behaviors. The

information in this series is not meant to give excuses, instead it is meant to empower you as a parent to do all you can for your child and to figure out what is causing their behavior.

Before we move on to the next topic, I want to address a few things I have noticed from this series being shared all over social media. These are my disclaimers and personal thoughts, if you will.

First of all, ALL children need boundaries and expectations. You can get all the diagnoses you want, all the treatment options and ideas you want, but if your child does not have boundaries or rules to follow, their behaviors are still going to happen. Even with boundaries and rules, many children will continue to push the envelope. That is just the nature of children and humans in general. Using this information as an excuse for your child's behavior is NOT how I intend for it to be used. Instead, I want it to be empowering for you. To encourage you to do all that you can for your children to provide them with a happy, healthy, and structured childhood.

Yes there are many children who are just plain defiant! You may follow all these tips and suggestions and still have defiant or disobedient kids. This is when your family needs to really sit down and have a heart to heart or a family meeting. Lay out the expectations and stick to the discipline when those expectations have not been met. Even with all the discipline in the world, your child may still be defiant. If you feel you have truly tried everything you can, please consult with your family doctor or a counselor.

Also, trying to find a diagnosis to label your child with is not always the answer. We live in a world where labeling and placing people into diagnosis boxes is common. We all have our little quirks and differences. That does NOT mean there is something wrong with us, or our children. That just means we need to be aware of what affects them and how we can give them an environment and lifestyle that sets them up for the most

success. We all have our own little sensory processing problems and issues. This does NOT mean that we all need a diagnosis in order to function.

IF you feel your child truly has a sensory processing disorder, on the Autism spectrum, ADD/ADHD, then you need to discuss this with your pediatrician or family doctor. There are many children who truly suffer from these syndromes and disorders and need to be diagnosed in order to have access to the care and therapies they need to be able to self regulate.

This series is NOT intended for you to try and diagnose your child. It is to empower you to be aware of your child's needs, environment, nutrition, sleep and so much more that can help set them up for truly successful lives as adults.

How the Vestibular System Affect's Your Child Behavior

The word vestibular tends to throw some people off. If you have never heard of the word before, you are probably wondering what in the world it is and how it affects behavior.

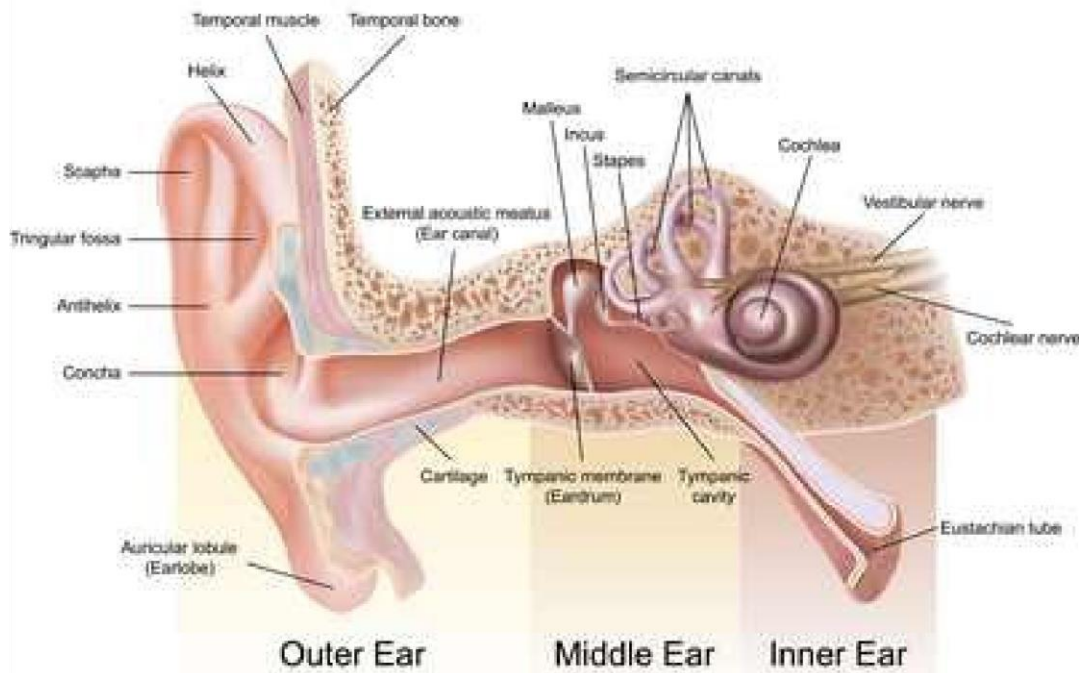
There are 5 main senses that we typically hear about:

- Visual/Eyes
- Auditory/Sound
- Tactile/Touch
- Taste
- Smell/Olfactory

People often joke about someone having a 6th sense, but honestly we ALL have a 6 sense. It is called the Vestibular System and it starts in the middle and inner ear.

The vestibular system equals the sense of balance and movement.

Anatomy of the Ear



I promise I am not going to get all scientific on you. I just want to give you a visual of what I am talking about. As you can see above, the vestibular system includes the middle ear and inner ear. Here are some facts about the vestibular system:

- It is the first system to develop in utero
- It is the first to have a organized response to sensory input
- It is the most protected area of the brain
- **It has a very close relationship to gravity, safety, survival, arousal, and attention**

Do you see what I highlighted in bold there? THAT is how the vestibular system relates to your child's behavior. But more about that in a minute.

Information from the eyes, ears, and vestibular system (balance & movement) combine to give an awareness of yourself in relation to the space around you. So your eyes tell you where you are in the room, your ears tell you what is going on in the room, the

vestibular system recognizes if your body is standing still, moving, if it is balanced etc. All of this information is then filtered through your brain and then your brain provides a response. This affects your arousal, motor and language responses.

When someone has a fairly “normal” or a well developed vestibular system, all of this information is categorized appropriately and the appropriate response is given. It has been said that olympic athletes or people who are constantly moving and putting their body or senses through new experiences have the best developed vestibular systems.

So here is the problem.... kids do not move or experience things like they use to. Many experiences that helped children to build strong vestibular systems are not happening. If your child is in school, their recess and free time to move and explore has been cut down to a bare minimum. Then they come home and go straight to the tv, video games, movies etc or homework. They are not outside and moving like kids 100 years ago were.

Here are just a few things that are important to building a strong vestibular system:

- Rolling
- Crawling
- Tummy time or stomach time
- Climbing
- Jumping
- Swinging (upright, upside down, side to side, spinning)
- Basically moving and putting their bodies, in particular their head in as many different

positions or movements as possible Remember when I said this?

It (the vestibular system) has a very close relationship to gravity, safety, survival, arousal, and attention.

When your child has an under developed vestibular system, their brain is not getting the correct information from their eyes, ears, the sense of gravity or movement in their bodies. This in turn makes their brain and body feel unsafe. When they do not feel safe, their arousal level, attention, and survival mode responses kick in.

Remember the fight or flight response we talked about last week? This is what reaction their body has when it does not feel safe. And if their vestibular system is telling them a situation is not safe, they are going to react to it in this fight or flight response.

Every child has a different thresh-hold or limit of what their vestibular system can handle. Well, really everyone does, even you! Some may have a low thresh-hold, which means any slightest movement or situation could send their vestibular system into fight or flight responses. Some have a very high thresh-hold, which means it takes A LOT of input to their brain for the vestibular system to recognize it. Some practical examples could be:

- Motion sickness (those who get motion sick vs. those who don't)
- Spinning (the slightest motion of spinning could cause one child to feel sick or throw up, while another child could spin for hours and not seem to care)
- Claustrophobia (someone may feel like the room is caving in on them with a lot of people around, they feel anxious and unsafe in small or large rooms filled with people *my husband*. While others may not be affected by this in a least and enjoy being in rooms with a lot of people and thrive *me*)

Honestly, I could go on and on about the vestibular system. It truly fascinates me to learn about.

And as always, my little disclaimer – this information is not to take the place of medical advice from your doctor or pediatrician. If you feel your child has a sensory processing disorder or problem that is adversely affecting their quality of life, then you need to talk to

your doctor and get their advice. Also have an evaluation done by an Occupational Therapist or Physical Therapist that specializes in sensory processing and sensory integration.

I also want to warn you, if your child has a severe reaction to a particular movement (such as spinning, swinging, or any big motor movement) PLEASE stop that movement immediately. Many children who have an under developed vestibular systems may feel sick, throw up, feel faint etc. Also, if your child has a history of seizures please talk to your physician or doctor before doing any new physical movements with your child. Some movements can cause seizure activity depending on the child, so please be aware of that.

How Your Child's Diet Affect's Their Behavior

The saying "You are what you eat" is definitely very true, especially in the case of children. Your child's diet does affect their behavior.

If you have a child who has sensory issues already, plus behaviors and food allergies, it is very easy to see how their diet can affect their behaviors.

Did you know what 1 in every 13 children have food allergies? And over 15 million Americans also have food allergies. (Resource: Food Allergy Research Facts & Stats).

When your body is fighting an allergy, it puts your body into a lot of stress.

Remember when we talked about how stress affects your child's body and the response is a fight or flight behavior? When your child's body is reacting to either a food allergy OR is lacking in basic nutrients from foods, especially green leafy vegetables, the response can often be a fight or flight type behavior.

Their body is under attack, so to speak, and so their bodies begin to respond. Since most little children don't know why their body is responding this way, they will often act out or have adverse behaviors due to what is going happening on the inside.

The perfect example of this is a dairy allergy. My brother and I both had chronic ear infections growing up. It was to the point where we almost needed tubes put in our ears. My mom had just become a vegetarian and had learned that dairy products can cause a lot of problems for children, in particular milk. So she took us off ALL dairy products. Literally within a few weeks, our ear infections went away and we did not have problems with them any more and we didn't need tubes.

I was recently talking to a friend of mine and we were discussing her son's behaviors. She was having a REALLY rough time with him misbehaving, not listening, and overall acting like a "wild man" more than usual. He had just been on vacation out of state and had eaten some dairy products that she typically does not allow him to have at home. She made the comment that she could tell, just by looking at his face, that he was reacting to a food issue. It took him about week to be home and to get the dairy out of his system before he began to calm down and act like his normal self again.

Now, before we go on, I want to stress that I am NOT a dietician. Before you make ANY major changes in your child's diet you need to consult your doctor or a dietician that specializes in food allergies and children's nutrition.

However, I do think that A LOT of our children's behaviors are results of what they are eating. Think of all the dyes, processed ingredients, additives, and other "junk" that is put into our food on a daily basis? And it is deemed fit for human consumption? Obviously there is something to this if we are seeing food allergies on the rise, childhood obesity etc. This is where educating yourself on what is really in our food and how you can avoid those things in your families food is SO important.

As a country, in general, we eat more processed foods, sugars, fats, and oils than we ever have in our nation's history. The reason for this is probably accessibility, as well as a much busier lifestyle. Often times, both parents are working outside the home and we are so busy with life in general that having a well-rounded, nutritious, home cooked meal is not as high on the priority list.

And even if you do make it a priority to make sure your family is eating as healthy as possible, there are still additives, dyes and other added ingredients that a lot of us don't even think of about. GMO's, processed sugars, processed wheat etc. are in foods that most of us would consider healthier options.

And then there are children, who just in general, are hungry. For whatever life circumstances or reason, they come to school each day hungry and often times are only eating because the school provides meals for them! Numerous times, I would ask children I was working with what they had for breakfast that morning. Many times I heard "nothing", or they would say they had a cookie, or some type of sugary breakfast cereal with absolutely NO nutritional value to it at all. And then these children are expected to sit still and learn. Their bodies are literally NOT able to do this because of either hunger or just poor nutrition in general.

In order to learn, your children's brains need fed with the nutrients it needs in order to function properly and be at it's best potential.

This is all really sad to me. I think if people understood what they are really putting in their children's bodies and really monitored what they eat, then we would see a vastly different group of kids.

If you suspect your child is dealing with a food allergy, the best thing to do is to talk to your child's doctor or a dietician. Many times they may ask you to try elimination diets or

do special testing to figure out what your child's is allergy is. Food allergies can start really as soon as a child is born.

My daughter was a very colicky baby. I tried cutting out dairy and a few other foods while breastfeeding to help. We also ended up going to a chiropractor that specialized in gentle techniques for children and we also did probiotics. These two things were definitely a lifesaver for us! Thankfully she does not have any major allergies at the moment, however she does have skin reactions to certain foods (mostly acidic fruits such as strawberries and a couple others). I am going to be discussing this with our doctor at our next well visit check up.

Therapy Works LLC also offers Nutrition Counseling with a Registered Dietician as part of their services. Debra Dickson, RPT is the one who runs Therapy Works LLC and her 2 day workshop for therapists is where I got a lot of the information for this series. She talked in great detail about how important diet and nutrition is as part of the treatment plan for children with behavior and sensory issues. I definitely recommend getting in contact with her company.

How Sleep & Screen Time Affect Your Child's Behavior

We live in the digital age! TV, video games, computers, iPads, iPhones, smart phones and all the other screen devices out there are grabbing for our attention. Children now, have access to technology at a much younger age than most of us adults.

Growing up, I did not have my first cell phone until I was driving, at 18 years old. And it wasn't one of those fancy smart phones of course. It was a black and white text and phone calls only phone. We didn't have a computer in our home until I was 16 or 17 I believe. Our first computer was one of the old DOS computers. It was a huge day when we got an actual desktop with Windows. A whole new world opened up for us.

Did you know that the average American child watches 3-4 hours of TV alone a day? ([source](#)) And that isn't even including video games, phones, iPads, or computers. [Another report stated](#) that the average child is exposed for 50 hours of screen time in one week.

The American Academy of Pediatrics recommends little to no screen time for children under the age of 2. For ages 2 and above they recommend no more than 1-2 hours a day. ([Source](#)) So why is too much screen time so bad for our kids? Here are a list of reasons why:

- Aroused nervous system (which makes falling asleep difficult)
- Sensory overload
- Lack of restorative sleep
- Lack of movement (leading to increase obesity rates)
- Exposure to violence

- Atrophy in gray brain matter (where processing occurs in the brain)
- Addictive tendencies (due to dopamine being released in the system, a hormone which simulates reward processing in the brain and addictions)
- Impaired brain function (decrease in impulse control, abnormal brain activity which leads to poor task performance)

(Sources: [Psychology Today](#) ; [Iowa State University](#) ; [C|Net](#) ; [Mayo Clinic](#))

When your child has too much screen time, their entire mood and behavior is changed. Their brain can actually be damaged from too much screen time.

So how does sleep fit in to this?

When your child has too much screen time, in particular right before bed time, their body is put in to an un-natural state of arousal. This makes it difficult for them to fall asleep. When they do eventually fall asleep, their body does not fall into a normal sleep pattern. Because their body is still un-naturally aroused, even in their sleep, they never enter the 4th stage of sleep which is the deepest and most restful sleep.

When their bodies are not fully rested, their body gets stressed. Remember when we talked about how our bodies react when they are stressed? They react with a fight or flight response! Environments or situations that wouldn't normally bother them, all of a sudden do because their body is trying to deal with the stress of not sleeping, plus dealing with being un-naturally aroused from the screen time.

It turns into a terrible cycle.

The best example I have of lack of sleep was from being a first time mom. My daughter was a terribly colicky baby, from what we found out later was most likely reflux issues. Her body was in a constant state of stress it seemed, which meant lack of sleep for both of us. The first 6 months were honestly a blur. All I remember is not being able to sleep, but somehow managing to survive.

Lack of sleep puts all of us on edge. I can definitely tell that being on the computer or watching tv right before bed makes it difficult for me to fall asleep. When I don't get that restful sleep, I am a "bear" the next morning. Little things that my daughter does, that don't normally push my buttons all of a sudden bother me. I find myself tolerating less and also being more cross and using a raised voice.

So now imagine how your child feels, who may already be dealing with sensory processing problems. Add in the screen time, which affects the sleeping patterns, which affects an already not functioning sensory processing system and you are getting nowhere fast.

It is obviously very hard to completely avoid screen time. But here are some tips you can use in your home to help:

- Remove all screens and electronic devices from your child's bedroom (the bedroom should be a place to relax and wind down, no screens allowed)
- Do not allow screen time for at least 1-2 hours before bedtime (this gives the brain a chance to come down out of that un-natural state of arousal and allows your child to relax before bed)
- Limit screen time to the recommended 1-2 hours a day (or even less) for children 2 years old and older
- Very limited to NO screen time for children under 2 years old (I realize this is not always practical, I struggle with this in our home as well. You are not alone, so don't feel like I am bashing you for letting your toddler watch TV).
- Encourage physical activity and play time away from computer or TV screens
- Encourage reading before bed
- Have a consistent bedtime routine and time (in our home we get into PJ's, brush teeth, read a few stories, pray, and then I rock her for about 5 minutes while singing a few songs. Then I place her in the crib and typically she is asleep within half an hour of so. Bedtime is as close to 8:00pm as we can get each night. We started this routine at birth).

*Note: Many children with sensory processing disorders can also have sleep disturbances. If you feel your child may have a sleeping disorder, please consult your physician and see about having a sleep study or other tests done to rule out any of these issues.

Problem Solving Discipline and Sensory Processing

The last four chapters we have looked at how behavior can be influenced by sensory processing. But even if your child has sensory processing problems, they still need structure, discipline, and rules. How do you balance disciplining your child with sensory processing problems along with trying to decrease those behaviors through addressing their sensory processing problems?

Now we are going to talk about how discipline might look, ideas on how to problem solve and find solutions for your family.

I want to start off by saying, I am in NO WAY a parenting expert or have all the answers on how to discipline children! We are just starting to enter the “terrible 2’s” at our house, so I am sure my parenting will change with each situation. However, there are some general ways to problem solve behaviors and ways to go about discipline that won’t make the situation worse and will help to decrease the behaviors your child may have.

The first thing is realizing that discipline will look different for every family and for every child. There is no “this is the only way to discipline” or “5 easy ways to discipline your child”. What works for one child, may not or will not work for a different one. You have to take into consideration your child’s temperament, behaviors, and responses to discipline into consideration before coming up with an appropriate response.

The next step is to set up your family rules, house rules or guidelines. I would definitely do this together as a family. That way everyone has input on what the rules and consequences would be.

So here is where your ideas of consequences may need to change from your original ideas. Typically, children with sensory processing problems do not always respond to consequences the same as children without sensory processing problems.

I recently read a great article on this from Nancy Peske, co-author of *Raising a Sensory Smart Child*. Here is a quote from her article:

“When a child’s behavior is due to sensory processing disorder, punishment and reward do not work as motivators.” – Nancy Peske, co-Author of *Raising a Sensory Smart Child*.

Yikes! Nancy goes on to say that many children with sensory processing problems and disorders are reacting with behaviors due to their sensory processing. So instead of punishment or rewards, they need to be taught self regulation and proper social behaviors.

Something else that Nancy Peske mentions, and also something I want to stress is that sensory kids still have just plain old kid behaviors! They are still going to act out in the grocery line because they see something they want and don’t get it. Sometimes it is a little tricky to figure out if a behavior is truly a behavior or based on a sensory processing reaction.

I highly suggest you read Nancy Peske’s article: [Parenting with Sensory Smarts – Friends & Family](#) for more ideas on how to give consequences and problem solve behaviors of children with sensory processing problems or disorders.

I know I said there isn’t a magic formula to giving out consequences for behaviors or figuring out if it is really a behavior or sensory processing. But here are 5 questions I think you can ask yourself to get started...

1. Could my child have an underlying sensory processing problem? The only way to figure this out is to have a visit with your physician or pediatrician and also be evaluated by an Occupational Therapist that specializes in sensory processing. There are some

signs and symptoms you can be on the look out for, which you can read about in my Sensory Processing Disorder series.

2. Has my child eaten something that could be affecting their behavior? It could be an allergy, too much sugar, not enough green leafy vegetables, not enough minerals or vitamins from food, eating too much processed foods and not enough whole foods, dyes or pesticides in the foods etc. You will also want to talk to your physician about any possible testing for food allergies and also a nutritionist or dietician about how foods could be affecting your child's behavior. I highly recommend getting in contact with [Therapy Works CT](#) and talking to the nutritionist and dietician they have on staff.

3. Has my child had too much screen time today/week, especially right before bed? You can read more about how screen time affects your child's behavior in my previous post. The average American child is exposed to 50 hours of screen time a week. And the recommended amounts are MUCH less than that.

4. How much sleep is my child getting? And what is affecting their sleep? We are all grouchy when we don't get enough sleep! Kids are no exception. Most of us can tell when our kids need more sleep. Do we need to change our routines so that the kids get to bed earlier? Does your child need a special routine to help signal that it is time for sleep?

5. Do I need to change how I am reacting to my child's behaviors? Sometimes the way we react can make the behavior even worse. Do we need to change the way we react to a certain behavior? That is something only you can answer for yourself.

For more resources on behavior and sensory processing visit my Child Behavior Resource Page:
<http://growinghandsonkids.com/child-behavior-resources>