Autism

A NeuroDevelopmental Perspective

By: Certified NeuroDevelopmentalists

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By Cyndi Ringoen, BA, BS, NeuroDevelopmentalist, Copyright 1999

Autism is one of the most complicated and confusing labels that a child can be given. It is so confusing because it is a symptomatic label. This means there is no disease, as such, of autism, there are only unexplained symptoms manifested, and if a child displays enough of these symptoms, they will receive the label. There is also an entire continuum of labels related to autism such as hyperlexic, PDD (Pervasive Developmental Delay), ASD (autism spectrum disorder), High Functioning Autism, and Aspergers. What children with any of these labels usually have in common is sensory dysfunction. One or more of their senses are not functioning normally. It does no good to treat the symptoms when the underlying causes creating the symptoms are ignored. It is my belief that there are as many different combinations of reasons for the symptoms as there are children labeled. This is why I do not believe there will ever be a magic "cure". There are many circumstances and combinations that cause autistic symptoms. In this article we will look at some of the more common ones.

Hearing:

Many children with these labels function with hypersensitive hearing. They are actually able to hear more than the average person. Some of them can hear sounds at such a high level it is actually painful. This can cause the child to cover his ears, withdraw from the situation, or respond with very negative behavior. Even when hearing is not overtly painful, it is often confusing. In a room full of people and activity, not being able to filter out the important sounds from the background noises becomes extremely bewildering. In order to learn to process auditory input, you must first have access to consistently good quality auditory input. These children have never even had the opportunity to have good auditory input. For many, auditory input is a negative experience; therefore, they learn to "tune out" even more.

Symptoms of low auditory processing ability can include lack of speech, lack of communication, lack of intonation in the voice, inability to follow directions, and difficulty conversing and understanding conversation. Behavior problems will be prevalent if the child is still experiencing auditory pain and also if they are unable to sequentially process according to their age level. For example, if you have an eight year old child with the processing ability of a two year old, you will experience the behavior problems you would expect to see with a two year old.

The underlying causes of the problems in the auditory system need to be addressed. There is an avenue to pursue in order to eliminate the strange symptoms displayed. It may include taking care of ear fluid or infections that could be contributing to the hearing ability, as well as doing daily activities that will improve the sequential processing ability and normalize the hypersensitive hearing.

Vision:

Some children with this label tend to do strange things with their vision. Many engage in something called sensory play. This can include spinning, twirling, rocking things while watching, shaking their head, tilting their head, sitting too close to the television screen, flipping book pages, and many other types of repetitive activities. They seem to never look right at you, but right through you instead. This is often a symptom of overdeveloped peripheral vision and underdeveloped detail vision. Peripheral vision is what we use to see out to the sides. When most people look at a picture, they notice the picture in detail. A person with overdeveloped peripheral vision can appear to be looking at the picture, but they are actually seeing all the surrounding area and the picture itself is the background. So when a child with this problem looks at you, they are only seeing you when they are not looking right at you.

Detail or central vision is what we use to learn almost everything. When this is not developed properly, a child cannot attend to or process important information. Instead, they focus on the irrelevant. Peripheral vision tunes in to edges and movement. This is why sensory play activities are so 'fun' for the child. They are playing with their vision--the vision channel that is working. This is also detrimental. The more they enhance the peripheral vision or broken sensory channel, the more the central vision will suffer.

It is necessary to eliminate all visual, sensory play and work to improve the ability to use the central/detail vision. As this improves, you will notice better eye contact, and then better attention in visually to the environment surrounding the child.

Touch:

Often, the children I see with these labels come with hypersensitive or hyposensitive touch sensations. Generally, they tend to be hypersensitive to soft touch and this can manifest itself in tactile defensiveness. They might not like to be hugged or to be in close physical contact with others. This is not a rejection of people; it is a physically uncomfortable sensation from the contact. They may also have a high or low sensitivity to hot or cold. Some will not like the feel of water etc. On the other hand, many are not able to feel deep pressure. When you get past the rejection of the surface touch and go deeper, you may discover an inability to feel at all. This is why some children are easily frustrated, and why some cry when you barely touch them but then fail to notice when they are seriously hurt after a fall.

Again, it is necessary to address the underlying causes of these problems and help to normalize the brain's ability to interpret touch sensations in an appropriate way. Inputting information is the key to improving all of the above functions. When the brain has received enough information through the senses, it can then organize it into meaningful information. When it begins to correctly interpret sensory information, the outward symptoms of 'autism' begin to disappear.

Taste and Smell:

Taste and smell can interfere with eating as well as cause general discomfort. Many children do not have a taste sensation; therefore, they tend to eat inappropriate items such as rocks, dirt, etc. On the other hand, some receptors may be hypersensitive, causing children to reject certain tastes and textures of food, which will eventually restrict their diets. Hypersensitive smell can also cause eating problems, as well as behavior problems in public if the smells are overwhelming or make the child feel ill. For each function that is hyper- or hypo-sensitive it is necessary to identify it and make a specific plan to change it. As it changes, the Autistic symptoms begin to go away. Almost all of the children I see with these labels are very intelligent. They just do not have access to their intelligence because of the severity of their sensory distortions.

Metabolic Problems:

The current research in Autism is finding more and more metabolic problems in connection with these kids. I am thoroughly convinced that almost 100% of the children with this label have some type of problem with nutritional and/or physiological deficits. The problem many parents face is the constant news of a new remedy, a new "magic pill" to cure Autism. As parents try one thing after another, they become frustrated because the "solutions" do not work like "magic" for their child. I am positive that these "simple solutions" do not work because there are as many different physiological problems as there are children.

So, what is a parent to do? It is extremely important to address the metabolic problems, but how can one possibly figure it all out? I was glad to come across a program which I believe is the most individual and comprehensive of its kind for dealing with a plethora of nutritional problems—Autism being one of the specialties. It is called Life Balances. Through individual blood tests, they can help you to gradually balance the totality of your child's metabolic function. It completes the deficiencies of building blocks and decreases the excesses, thus allowing the system to function normally.

The Path to Normalcy (whatever that is)

Children with this label are highly complicated. There are no easy, quick fixes, yet there is hope and there is a way to bring them as close to reaching their full potential as possible. It requires much dedication, consistency, and hard work from the parents. The rewards are immeasurable. Most programs available focus on one area of symptomology, i.e. sensory integration, behavioral modification, etc. The reality is for the child to improve overall, every area must be assessed and addressed with an integrated type of program. All we know for sure is that if we do little, little will be accomplished. If we do much, more will be accomplished. The rest is up to God and His great wisdom.

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Auditory Processing

By Jan Bedell, PhD

Many people wonder why so many children are being labeled with learning disabilities, today. Some say that we have better testing capability than ever before and that explains the dramatic rise in labeling our children with ADD and other learning challenges like poor auditory processing. Other groups, like Brain Sprints that recommend The NeuroDevelopmental Approach to Life, point to changes in our society and environmental factors as significant influences causing these challenges to exist.

Low auditory processing has been found to be a significant influence in the labeling of individuals with ADD or ADHD. What is ADD exactly? It stands for Attention Deficit Disorder. A common definition is "a developmental disorder that is marked especially by persistent symptoms of inattention (such as distractibility, forgetfulness, or disorganization) or by symptoms of hyperactivity and impulsivity (such as fidgeting, speaking out of turn, or restlessness) or by symptoms of all three and that is not caused by any serious underlying physical or mental disorder." (www.merriam-webster.com) Dr. Rick Nauert, a PhD with over 25 years' experience in clinical, administrative and academic healthcare, stated that there has been a 66% increase in the diagnosis of ADD/ADHD since 2000.

Auditory processing is the ability to hold pieces of information in one's short term memory. Challenges with this ability is also on the rise to the extreme of receiving its own label, CAPD (Central Auditory Processing Disorder). From the perspective of a medical model, these diagnoses are from a list of symptoms (a check sheet if you will) typically gleaned from parents and teachers. The medical/psychological recommendations are characteristically - coping, compensating and medicating.

What are parents to do? Their child is struggling, there is tension in the home and classroom, the good natured otherwise obedient child feels bad about herself and the list of undesirables goes on. Parents are left not knowing whether the negative behaviors in their home are really behavioral/heart issues or beyond the child's control. The angst and uncertainty of how to help their child weighs heavy on their hearts. Many parents are opting out of the medication route because of the many side-effects and rightly so. This leaves uncertainty nagging at their heart and parents are left to search on their own through confusing and often opposing views. Some think, "If I only had a diagnosis, everything will be okay."

Most parents, I have talked with, have been disappointed in the results of testing for labels. The solutions offered usually include a few general recommendations and medication that are often disheartening, disappointing and certainly not the solutions they were hoping for. Let's look at the other side of the same coin for at least one possible cultural reasons for the rise in symptoms that are common to both ADD and low auditory processing.

Many years ago, when our educational system was developed, we were an auditory society. We ate together as a family three times a day and TALKED (no one was on a devise). We read

as a family in the evenings or LISTENED to radio broadcasts for hours. We developed our auditory processing ability by listening. Today, our society has become primarily visual with electronic gadgets dominating our daily landscape.

Auditory sequential processing is the ability to hold pieces of information together in short-term memory, matching the order it was given. This short-term processing has to happen before information can be transferred to long-term memory. How is this skill foundational to a person's function? Well, it is vital to reading comprehension - holding the details of the story together; vital to the ability to learn to read with a phonics approach – holding specific sounds together long enough to get the word out; vital to interpreting social cues – putting all the pieces of spoken words, inferences and body language together to understand the full meaning of the communication; and vital to understanding cause and effect - grasping the big picture and realizing the ramifications of current actions. When this understanding is not in place, impulsivity often follows. Parents are dumbfounded by the seeming lack of consideration for others by a child acting on a whim without thinking of the consequences. Developmental deficits in language processing as well as in reading recognition and spelling have also been attributed to auditory deficits. These and more indicators too numerous to mention here, are symptoms listed on the ADD checklist, available through any internet search. These are skills essential to success in school and life.

Even behavior is an area greatly influenced by auditory processing. For example, if a 12- year-old processes more like a 4-5-year-old, he will act like a much younger child causing considerable conflict in the home and with peers. Interrupting conversations or not following conversations well causes one to say things that are viewed as inappropriate. These socially challenging interactions are common occurrences, when auditory processing is low. Let me be clear, this has nothing to do with intelligence! It is a developmental issue and fortunately can be changed.

ADD and low auditory processing share many of the same symptoms but auditory processing is not the over-arching reason for all of the symptoms. Neurodevelopmentalists look for any reason that a symptom might exist. For instance, there might be a metabolic reason (internal chemistry of the body- gut issues, allergies…) why a child can't sit still. The disorganization of papers, notebooks, room, etc. could be caused by a disorganized central nervous system. You can't expect organized actions from a disorganized brain but that is unknowingly what we do! A child might feel defeated in school work because the information seems to "get lost in his brain" and doesn't want to come out. This poor or inconsistent retrieval of information may be a dominance issue (hand, eye, ear or foot) that causes the filing system in the brain to fail.

The bottom line is, the brain controls everything we do so we need to look there to change the function. Since the brain is dynamic and ever changing, much can be done to change the processing ability, dominance or central nervous system organization of any person at most any age. If parents only knew what to do to change the brain pathways and did those activities, the results could be dramatic! One example of this brain change is a young man named Aaron T. who had been labeled ADD and put on Ritalin from the 3rd -7th grade. The medication seem to

help him cope with the demands of school. After applying the activities based on The NeuroDevelopmental Approach for one year, he was able to finish high school very successfully without the use of medication or modification. He got his associates degree and today Aaron is a dedicated Christian husband and father of four as well as a part owner in a successful small business.

I have been in the field of education for over 30 years. Never have I seen anything so substantial in changing lives as NeuroDevelopment. In my opinion, medication can only mask symptoms. To obtain lasting change we can choose a drug-free solution: The NeuroDevelopmental Approach to Life. The brain is complex and all the reasons for the rise in the label of ADD and low auditory processing cannot be expanded on here. Moms are traditionally good researchers when it comes to struggles of their children. The good news is that there is a way to change the brain so any curriculum or school experience will be successful. I encourage you to find out more about NeuroDevelopment through the many podcasts at: www.Brain Coach Tips.com* or find this same information with added graphics on the YouTube channel - Brain Coach Tips.*

The facts are, if you exercise the brain with specific stimulation, it produces better function. With practice, any person's auditory processing can be raised and the majority of the symptoms on the ADD and CAPD checklist will be diminished or eliminated altogether. Get a free test kit to discover the current auditory processing levels for your entire family.This one skill, auditory processing, even though it is not the full reason for labeling children and adults with low auditory processing type labels, can be life-changing!

*Little Giant Steps is getting a new name: Brain Sprints

AUTISM – A Neurodevelopmental Approach

By Kay Ness, ICAN Certified Neurodevelopmentalist, Copyright 2005

We serve a God of hope. In I Corinthians 10:13, our Lord promises that our trials will not be too great and that He will provide a way of escape. We, at ICAN, firmly believe that part of this hope that the Lord has provided for parents of children with a diagnosis of autism lies in the very nature of our created being.

What does this diagnosis of Autism mean, anyway?

Autism is a very confusing diagnosis that can strike fear and dread into the heart of parents. In seeking answers for their children, parents are faced with a wide range of information and approaches about what to do. A further parental burden comes when trying to train a difficult child with many confusing, conflicting, odd and unexplained behaviors. As they seek out experts, the advice ranges from no hope to glimmers of promise. Families take on additional burdens of time, education and finances in the desperate hope- that despite the negative prognosis, there is something they can do to help their child.

Autism is a diagnosis that is more prevalent today than ever before. According to CDC numbers, 1 in 166 children will be diagnosed with autism (or on the autism spectrum) with the prevalence in boys 4 times higher than in girls. (1) This compares to the 1 in 10,000 incidence of autism diagnosis just 20 years ago. When something increases at such an alarming rate, it deserves much attention. Because the increase in diagnosis cannot be explained away by simply improved screening (2), logic demands that something environmental must be going on that is 'causing' increased autism. If underlying causes can be found, then treatment is possible. Unfortunately, most research money is going into genetic research trying to identify genes or sets of genes that 'cause' autism susceptibility. Again, logic demands that the gene pool does not change so drastically in 20 years to result in such a large increase in autism.

About the diagnosis of Autism:

Diagnosis of Autism is made based on the DSM IV scale of behavioral and functional characteristics (3) which is both symptomatic and subjective. Children can display a wide range of functional issues and still fall within the broad criteria, making this diagnosis even more confusing to parents. Diagnosis based on the DSM IV does not in any way indicate the cause or the treatment needed to achieve normal function. Some children do not talk, some talk in an echolalic or scripted fashion. Some children cannot read; others read very early and well, but in an obsessive way. All children within this diagnosis have some type of social impairment, and most have repetitive behaviors. Is there anything that can explain such a wide range of functional disturbances? The answer is Yes! The commonality that all these children have is sensory dysfunction, meaning one or more of their senses are not functioning normally. This is why it is imperative to find and treat the root causes and not the symptoms.

Depending on the model with which children are evaluated, different solutions to problems are forthcoming. As neurodevelopmentalists, we do not try to diagnosis or label, but we evaluate each child as an individual. The Doman/Delacato developmental profile was derived by a dedicated, eclectic group of individuals lead by the famous neurosurgeon, Dr. Temple Fay, who were researching ways to improve the function of individuals with brain injury. (4) We use a modification of the Doman/Delacato developmental profile to assess the major sensory input pathways (tactile, visual and auditory) to the child's central nervous system. It is also used to evaluate the major motor output pathways (gross motor, fine motor and expressive speech and language) for the purpose of understanding developmentally each child's strengths and weaknesses. (5) With this model of

hierarchical development and the fact of neuroplasticity (the ability of the central nervous system to be 'rewired' with stimulation) (6), it is found that parents can be empowered with the information to help their children progress. This is the key. Specific stimulation of sensory pathways with the appropriate frequency, intensity and duration can normalize them.

Dr. Carl Delacato, in his groundbreaking work, The Ultimate Stranger (7), describes his path of discovering to the distorted sensory system as the basis of explanation for some of the odd behaviors of Autistic children. A genius can be described as someone who looks at the same things everyone else sees and yet finds something new. This is certainly the case with Dr. Delacato. After working to help develop ways to improve the function of children with brain injury, he took on the new task of improving extreme behavior of autistic children. He saw the same type of repetitive behaviors in blind and deaf children that were seen in autistic children. In the case of blind and deaf children, these were called 'blindisms' and 'deafisms', not Autism. This led him to explore the sensory system of autistic children to see if this was a root cause of the odd and repetitive behaviors. And indeed, he did find distorted sensory input and was successful at stimulating those sensory pathways in many children to resolve the issues and bring about improved function. He found sensory inputs of auditory, visual and tactility being either too sensitive (hypersensitive), not sensitive enough, (hyposensitive), or what he described as 'white noise input,' a scrambled message that cannot be interpreted well by the brain.

Since sensory input is the way we gain information about the world, it is the basis of our learning, discovering and intellectual growth. Without clean, consistent sensory input, the world is strange, unpredictable and even painful. So the odd behaviors of children with autism do not have to be explained by psychosis. These children are trying to make the best sense of the world that they perceive. Our job is to help them by careful observation of their function, which will then indicate which sensory channels are distorted so that we can provide appropriate stimulation to normalize their pathways and improve function.

Autistic behavior based on a neurosensory model.

We describe response to sensory issues as the basis of the diagnosis. The odd behaviors of autistic individuals, the accompanying repetitive behaviors and sensory play, give us clues as to how that individual perceives his environment. Based on Dr. Delacato's observations and our work with thousands of children with autism, we have concluded that sensory issues are at the heart of the diagnoses of autism.

In the area of tactile input to the brain, there are general patterns we see. Children with a label of autism often have a very high pain tolerance, low muscle tone and a lack of coordination. These children crave deep pressure and repetitively hit themselves, or bang into things trying to get the deep sensation that they are missing. These same children are often overly sensitive on the skin surface. They resist being held, are irritated by textures, and annoyed by light touch. The children can be overly sensitive to temperature changes, or not be able to perceive hot and cold well at all. Smell distortions may result in a child seeking strong or disgusting smells and engaging in disturbing behaviors. Mouth sensitivity problems are common, causing the children to resist foods based on textures and temperature. Distortion of tastes and smells cause many children to make very limited food choices. Limiting food choices not only distresses their parents greatly, but also negatively affects their health and nutrition.

The auditory pathways to the brain are often distorted in children with autism. Though audiograms may show good or very good hearing, some children interpret sounds as painful and simply shut down to auditory stimulation. Parents often take their children for a hearing test as the first sign that something is wrong, because the child is not responding to his name or is not talking. This is because

the children do not have a lack of hearing acuity; they have tonal distortion in their interpretation of auditory information. These are children whose behavior can break down in noisy or confusing environments like malls or large stores. Sounds that seem normal to us may be painful to children with such issues. Their hands are often covering their ears, or the children act as if they are deaf.

Interventions such as AIT, Tomatis, and a plethora of other sound therapies have helped many, many children improve function by remediation of sensory issues and normalization of auditory disturbances. Our experience is that the most consistent results are obtained with the superior technology of Samonas Sound Therapy, which not only addresses the auditory pathways to the brain but works on the spatial aspects of sound interpretation. This unique Samonas technology and recording, with superb attention to quality and technological innovation, presents only in this system of intervention. (8)

Lack of expressive communicative language is another quality often seen in a child with autism. Normalizing the auditory pathways so that the tonal processing can be clear and consistent is of the utmost importance for developing language. After this is addressed a child can then begin to develop sequential processing or auditory short term memory. In our experience, regardless of chronological age, a person must have an auditory short term memory of at least 2 before language will begin to grow in ouput. (9)

Visual disturbances are another area we often see in children on the autism spectrum. Parents often report little to no eye contact, fascination with spinning wheels or mirrors, engagement in visual sensory play by dangling objects in their peripheral visual field, or odd finger play. On evaluation of these children we find them to be overusing (hypersensory) their peripheral vision and underusing (hyposensory) their central detail vision. This child lives in a world of peripheral vision which perceives edges and motion, and which attends to the irrelevant information in the environment.

Our experience is that interrupting and stopping sensory play is vital to improvement of the individual while we then work to stimulate that sensory pathway in order to normalize it, thereby decreasing the drive to do sensory play. (10) Basing our work on Dr. Delacato's findings, many neurodevelopmentalists in the past 30 years have worked on the same model and helped many children improve function. Other professionals have taken up the idea of sensory dysfunction and developed new methods of identifying and stimulating a dysfunctional sensory system to try to achieve normalcy. Dr. Jean Ayres' work on sensory integration (11) is an example of the occupational therapy world taking up this battle and applying their own knowledge to help more children.

Metabolic issues in Autism.

In trying to understand the 'whys' of sensory dysfunction in children labeled with Autism, many have explored the realm of environmentally caused metabolic disturbances with fruitful results. Many children with autism have major metabolic disturbances and are actually physically sick. This is a huge area of research. Many clinicians have helped improve the lives of children with autism in the areas of: implementation of special diets; supplementation for nutritional deficiencies; correction of disturbed metabolic pathways; chelating of heavy metals; identifying and eliminating environmental toxins, yeast, and other pathogen overgrowth in the guts of these children, including even live viruses and lesions in the intestinal tract. (12) Parents often report major reactions to foods, chronic diarrhea or constipation, impaired sleep pattern, strange rashes, fevers and temperature disturbances, and so forth. Parents spend hundreds and thousands of dollars in searching for answers to metabolic issues for their children. Our experience has shown that the best results have been obtained with Chembalance (13), which is a unique approach to balancing blood chemistry and pH. We also have seen the most consistent and significant 'healing' with the use of the Specific Carbohydrate Diet if

further intervention is needed. (14) Metabolic intervention is often an important step in piecing together a solution for the autistic child's issues.

A note about ABA

ABA has been touted as the only scientifically proven method of helping children overcome autism. (15) The intensive one-on-one behavioral methodology is widely used at great expense to parents and school districts. Reports of recovery using ABA vary from 46% in the original work by Dr. Lovaas to more generally 10-20% in parent discussion lists. Some parents are mortgaging their homes and going in debt to provide this intensive intervention for their children. Such is the heart that our Lord has given parents for their children.

Because the diagnostic criterion for autism is behavioral, a behavioral answer is the world's response to this diagnosis, and ABA is THE behavioral answer. Some children indeed have improved using ABA. Through the eyes of a neurodevelopmentalist, we can see why this would be so. A child that is doing 20 – 60 hours per week of ABA has no time to engage in sensory play, and as we stated earlier, reducing or stopping sensory play is vital in getting progress in development. Therefore, by not reinforcing negative activities the child is allowed to progress instead of being stuck in his own sensory world. ABA also provides much on-on-one input and attention; certain skills can be taught, especially with lots of repetition. ABA is often able to move a child from the inability to follow any directions to the ability to follow one step and some two step directions. From our perspective, how you use your brain and sensory system can actually change the function and structure of that system. Therefore, these initial gains can change the function of the child to some degree. However, by not directly intervening in the sensory system and addressing the metabolic issues, the underlying root causes of autism may not be addressed.

So, though ABA can be helpful at teaching autistic children specific skills and getting some to begin initial talking and engaging, it has severe gaps in the intervention, and thus we have found it to be less generally helpful than a more eclectic approach. The neurodevelopmental approach is focused on changing the entire system from the foundation up, so that skills are acquired naturally because the system is progressing in a natural developmental hierarchy. This is very different from a skill by skill teaching approach which can tend toward isolated skill development.

Parent-driven research into alternative therapies, using ABA with other approaches, is outlined in such books as Facing Autism, by Lynn Hamiliton and Sound of Falling Snow, edited by Annabel Stehli. As an alternative to the rigorous and expensive ABA approach, many of the parents we have worked with have found great success using the techniques of Dr. James MacDonald. He trains parents to become communicating partners with their children. (16) This natural interactive methodology has helped many children improve in language, communication and social skills in a very playful way.

Behavioral training

Our standards for behavior of children with Autism are very high. God's call to parents to minister to and train their children is not negated by a diagnosis of Autism. In the book, Too Wise to be Mistaken, Too Good to be Unkind, Cathy Steere relates the journey of discovering that her son was Autistic and helping him improve. It is heartening to read of the faith and courage that Cathy Steere had in standing by God's Word and training her son to be obedient and controlled even though it was hard for him and for his parents (17). Training a child with Autism to be well behaved and obedient must be done with firmness and mercy: firmness in having high Biblical standards, and mercy by realizing that certain situations are causing great fear or pain and helping control the environment to reduce stress to the child. But a child must be trained to follow his parents' directions in order to implement a neurodevelopmental program.

A Conclusion of Hope

Most children can be helped to improve and some can recover to the point that they lose their diagnosis. As more and more research is done, we pray that causes of the diagnosis are found, the upward trend of increased injury to children is stopped, and that more and more children are helped to reach their full God-given potential.

Ultimately, our continued prayer is that all children are viewed as made in the image of God, not valued by what they can and cannot do, but based on their inherent value as human beings. All children deserve to receive the help they and their parents need, and to be held up in prayer and the support of the church and community to help them run the gauntlet of the diagnosis of autism. As we learn more and move forward to help more families with children who have Autism, we must never forget the ultimate source of our knowledge and strength, which is Christ.

Philippians 3:14 *"I can do all things through Christ who strengthens me"*

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Sensory Play

By Neurodevelopmentalists Marilee Nicoll Coots, B.A. and Cyndi Ringoen, B.S., B.A.

Sensory play, self-stimulating behavior, or “stimming” are all terms used to describe a group of behaviors seen in many delayed children. It is repetitive, it often appears compulsive, and it can occur using any of the senses. Parents usually describe it as something that does not seem quite right.

As Neurodevelopmentalists, we view sensory play as negative, self-perpetuating, self-isolating behavior. High functioning children and adults do not engage in significant amounts of sensory play, but low functioning individuals do. Our goal, and the goal of the parents we work with, is to help each individual develop to their highest potential. Therefore, we discourage any behavior that will be counter-productive to high function.

Sensory play is a learned behavior that an individual develops for several reasons. Primarily, it feels good and so the behavior is repeated. With typical young children, playing with toes and fingers is pleasurable. Developmentally, it is important as connections are made in the brain about where their body is, but the child soon moves on to the next exciting step in development. When senses are delayed or impaired, the child can become stuck and the behavior becomes obsessive and can actually stop development.

You may have heard some say that sensory play is beneficial, calming, a communication attempt, or even a type of psychological mechanism. It is possible that on an unconscious level, some children use stimming to control their environment or to avoid the things they wish not to do. For example, if a child stims he may be able to avoid uncomfortable social situations. It is important to consider that many adults engage in various behaviors for the same reasons--- some to note are smoking, drinking, drugs, overwork, etc. Just because a behavior has a purpose does not mean the behavior is healthy or developmentally helpful.

There is often a metabolic component to stimming. When children are out of balance metabolically, their stimming is increased. Appropriate metabolic intervention can often reduce stimming and occasionally halt it.

Repetitive sensory play creates endorphins, “happy,” “feel good” chemicals in the brain, much the same as the “runner’s high.” These chemicals become addictive, causing the individual to repeat the activity in order to renew the good feeling. Thus, the child becomes trapped in a compulsive behavior. Development stops progressing, becoming more and more delayed, and for many children actually begins regressing.

We seek to stop sensory play, not as an end in itself, but as part of an overall treatment plan, which includes addressing the underlying neurodevelopmental causes of the behavior. The causes often relate to dysfunction in one or more sensory channels. To address sensory dysfunction, we need to determine why the sensory information is not going into the brain correctly (where it would organize and progress to the next level), stop the sensory play, and address the root cause of the dysfunction with specific, appropriate neurodevelopmental activities.

In order to stop a child from stimming we first need to be able to recognize it. The behavior will appear strange and repetitive, and there is often a compulsive element to it. Typically, a child who is stopped from stimming will become quite angry. Stopping stimming is equivalent to breaking an

addiction such as smoking or drinking caffeine. The intensity of the anger can be a clue to parents as to how “stimmy” a behavior is.

To stop sensory play, parents can redirect the behavior, distract the child and get them engaged in other activities, or remove the implements the child is using to stim. It is usually best not to try to explain or attach a negative feeling to the stim. Nagging does not work and can sometimes intensify the behavior.

When the quantity of stimming has been reduced, it can sometimes be refined into something more appropriate. An example is teaching a child who makes strange throat noises to form words.

The following is a list of stims in which children have engaged. This list is not a complete list of all possible stims. It is designed to give parents an idea of what behaviors function as sensory play.

The “Stim” List

VISUAL:

dangling strings
shaking toys
wiggling fingers—
in front of or to the side of face
usually in exactly the same spot
lining up toys
excessively, repeatedly stacking toys
and knocking them down
spinning wheels on toy cars/trucks
pushing toy trucks and cars
while tilting head to watch wheels
watching out the window at cars driving by
staring out window
watching dust specks in the air
watching ceiling fans
staring at dining room lights
looking sideways and/or upside down at TV
nose on TV
flipping pages without looking at pictures
flipping toys
wall walking
opening/shutting drawers and doors
spinning bowls
spinning toys
walking in patterns
pacing
splashing
watching water
running sand/beans etc.
through hands while watching
spinning coins
looking at maps with nose about 1" away
following roads on map with nose
box hopping or lining up chairs, laundry baskets,
boxes and storage containers in a path
and stepping from one to another
rocking: from foot to foot back and forth
back and forth while sitting
side to side while sitting
repeatedly throwing or dropping toys
throwing toys over shoulder
picking fuzz
shredding paper
looking out car window
with peripheral vision (while giggling)
walking down hall with head to one side
standing on head on furniture
running in circles
rewind video while watching it rewind
excessive drawing
rubbing pencils together
watching own reflection in doorknobs, toasters,
windows at night, oven door, shiny faucets,
TV screen when off, clean cars, blank computer
screens and mirrors
holding up small toys (usually characters) in front of
TV while video is going
perseverating on Thomas the Tank or other train stuff
turning head in light patterns made by blinds
obsessively pouring a "slinky" from hand to hand
watching a yoyo with peripheral vision over and over
multiple cartwheels frequently and excessively
head shaking
spinning own body or twirling around
twirling self under own arm which is against a wall
dangling pieces of grass or twigs
twirling long hair or braids (girls) in peripheral vision

VERBAL or AUDITORY:

blurting out loud and/or high pitched noises

repetition of odd noises/sounds
talking to self-- excessive and nondirective
echolalia of phrases, movies, songs.....
humming
nose humming
banging on everything
throat sound--compulsive
pounding toys or books
excessive giggling
excessive pretend play
electronic games that repeat
inappropriate giggling (often a sign of stimming)
repeating a video scene over and over
telling the same story over and over
constantly singing
reciting alphabet over and over

TACTILE:
chewing on insides of cheeks
rubbing clothing between fingers
biting fingernails
chewing fingernails
scratching obsessively/to bleeding
head banging
teeth grinding
spitting
grabbing someone's arm
    with both hands and squeezing
    with head against arm
rubbing face/hands
bobbing up and down with
    top part of body while sitting in chair
sucking on tongue

VESTIBULAR:
spinning
rocking
swinging

OTHER:
excessive pretending
acting out a movie scene repeatedly
sharpening pencils over and over
writing numbers over and over

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