

Chapter 1 : 10 Signs and Symptoms of Autism - RM Healthy

Autism is a complex neurobehavioral condition that includes impairments in social interaction and developmental language and communication skills combined with rigid, repetitive behaviors. Because.

Where can I get more information? What is autism spectrum disorder? Autism spectrum disorder ASD refers to a group of complex neurodevelopment disorders characterized by repetitive and characteristic patterns of behavior and difficulties with social communication and interaction. The symptoms are present from early childhood and affect daily functioning. Some children and adults with ASD are fully able to perform all activities of daily living while others require substantial support to perform basic activities. A diagnosis of ASD includes an assessment of intellectual disability and language impairment. ASD occurs in every racial and ethnic group, and across all socioeconomic levels. However, boys are significantly more likely to develop ASD than girls. Even as infants, children with ASD may seem different, especially when compared to other children their own age. They may become overly focused on certain objects, rarely make eye contact, and fail to engage in typical babbling with their parents. In other cases, children may develop normally until the second or even third year of life, but then start to withdraw and become indifferent to social engagement. The severity of ASD can vary greatly and is based on the degree to which social communication, insistence of sameness of activities and surroundings, and repetitive patterns of behavior affect the daily functioning of the individual. Social impairment and communication difficulties Many people with ASD find social interactions difficult. The mutual give-and-take nature of typical communication and interaction is often particularly challenging. Children with ASD may fail to respond to their names, avoid eye contact with other people, and only interact with others to achieve specific goals. Often children with ASD do not understand how to play or engage with other children and may prefer to be alone. People with ASD may have very different verbal abilities ranging from no speech at all to speech that is fluent, but awkward and inappropriate. Some children with ASD may have delayed speech and language skills, may repeat phrases, and give unrelated answers to questions. In addition, people with ASD can have a hard time using and understanding non-verbal cues such as gestures, body language, or tone of voice. For example, young children with ASD might not understand what it means to wave goodbye. People with ASD may also speak in flat, robot-like or a sing-song voice about a narrow range of favorite topics, with little regard for the interests of the person to whom they are speaking. Repetitive and characteristic behaviors Many children with ASD engage in repetitive movements or unusual behaviors such as flapping their arms, rocking from side to side, or twirling. They may become preoccupied with parts of objects like the wheels on a toy truck. Children may also become obsessively interested in a particular topic such as airplanes or memorizing train schedules. Many people with ASD seem to thrive so much on routine that changes to the daily patterns of life “ like an unexpected stop on the way home from school “ can be very challenging. Some children may even get angry or have emotional outbursts, especially when placed in a new or overly stimulating environment. Certain known genetic disorders are associated with an increased risk for autism, including Fragile X syndrome which causes intellectual disability and tuberous sclerosis which causes benign tumors to grow in the brain and other vital organs “ each of which results from a mutation in a single, but different, gene. Recently, researchers have discovered other genetic mutations in children diagnosed with autism, including some that have not yet been designated as named syndromes. While each of these disorders is rare, in aggregate, they may account for 20 percent or more of all autism cases. People with ASD also have a higher than average risk of having epilepsy. Children whose language skills regress early in life “ before age 3 “ appear to have a risk of developing epilepsy or seizure-like brain activity. About 20 to 30 percent of children with ASD develop epilepsy by the time they reach adulthood. Additionally, people with both ASD and intellectual disability have the greatest risk of developing seizure disorder. ASD symptoms can vary greatly from person to person depending on the severity of the disorder. Symptoms may even go unrecognized for young children who have mild ASD or less debilitating handicaps. Autism spectrum disorder is diagnosed by clinicians based on symptoms, signs, and testing according to the Diagnostic and Statistical Manual of Mental Disorders-V, a guide created by the American

Psychiatric Association used to diagnose mental disorders. Children should be screened for developmental delays during periodic checkups and specifically for autism at and month well-child visits. Very early indicators that require evaluation by an expert include: A comprehensive evaluation requires a multidisciplinary team, including a psychologist, neurologist, psychiatrist, speech therapist, and other professionals who diagnose and treat children with ASD. The team members will conduct a thorough neurological assessment and in-depth cognitive and language testing. Because hearing problems can cause behaviors that could be mistaken for ASD, children with delayed speech development should also have their hearing tested. Scientists believe that both genetics and environment likely play a role in ASD. There is great concern that rates of autism have been increasing in recent decades without full explanation as to why. Researchers have identified a number of genes associated with the disorder. Imaging studies of people with ASD have found differences in the development of several regions of the brain. Studies suggest that ASD could be a result of disruptions in normal brain growth very early in development. These disruptions may be the result of defects in genes that control brain development and regulate how brain cells communicate with each other. Autism is more common in children born prematurely. Environmental factors may also play a role in gene function and development, but no specific environmental causes have yet been identified. The theory that parental practices are responsible for ASD has long been disproved. Multiple studies have shown that vaccination to prevent childhood infectious diseases does not increase the risk of autism in the population. Twin and family studies strongly suggest that some people have a genetic predisposition to autism. Identical twin studies show that if one twin is affected, then the other will be affected between 36 to 95 percent of the time. There are a number of studies in progress to determine the specific genetic factors associated with the development of ASD. In families with one child with ASD, the risk of having a second child with the disorder also increases. Many of the genes found to be associated with autism are involved in the function of the chemical connections between brain neurons synapses. Researchers are looking for clues about which genes contribute to increased susceptibility. In some cases, parents and other relatives of a child with ASD show mild impairments in social communication skills or engage in repetitive behaviors. Evidence also suggests that emotional disorders such as bipolar disorder and schizophrenia occur more frequently than average in the families of people with ASD. The mutation then occurs in each cell as the fertilized egg divides. These mutations may affect single genes or they may be changes called copy number variations, in which stretches of DNA containing multiple genes are deleted or duplicated. Autism risk also increases in children born to older parents. There is still much research to be done to determine the potential role of environmental factors on spontaneous mutations and how that influences ASD risk. For many children, symptoms improve with age and behavioral treatment. During adolescence, some children with ASD may become depressed or experience behavioral problems, and their treatment may need some modification as they transition to adulthood. People with ASD usually continue to need services and supports as they get older, but depending on severity of the disorder, people with ASD may be able to work successfully and live independently or within a supportive environment. There is no cure for ASD. Therapies and behavioral interventions are designed to remedy specific symptoms and can substantially improve those symptoms. The ideal treatment plan coordinates therapies and interventions that meet the specific needs of the individual. Most health care professionals agree that the earlier the intervention, the better. In these interventions therapists use highly structured and intensive skill-oriented training sessions to help children develop social and language skills, such as applied behavioral analysis, which encourages positive behaviors and discourages negative ones. In addition, family counseling for the parents and siblings of children with ASD often helps families cope with the particular challenges of living with a child with ASD. Antipsychotic medications are used to treat severe behavioral problems. Seizures can be treated with one or more anticonvulsant drugs. Medication used to treat people with attention deficit disorder can be used effectively to help decrease impulsivity and hyperactivity in people with ASD. Parents, caregivers, and people with autism should use caution before adopting any unproven treatments. The mission of the National Institute of Neurological Disorders and Stroke NINDS is to seek fundamental knowledge about the brain and nervous system and to use that knowledge to reduce the burden of neurological disease. Department of Health and Human Services agencies, the Department of Education, and other

governmental organizations, as well as public members, including individuals with ASD and representatives of patient advocacy organizations. Such biomarkers could aid in understanding how and why ASD occurs in some children but not others, and help to identify patients who might benefit from early intervention. Other ACE centers and networks are investigating early brain development and functioning; genetic and non-genetic risk factors, including neurological, physical, behavioral, and environmental factors present in the prenatal period and early infancy; and potential therapies. NINDS funds additional research aimed at better understanding the factors that lead to ASD, including other studies on genetic disorders associated with ASD, such as TSC, Fragile X Syndrome, Phelan-McDermid syndrome which features such autism-like symptoms as intellectual disability, developmental delays, and problems with developing functional language, and Rett syndrome a disorder that almost exclusively affects girls and is characterized by slowing development, intellectual disability, and loss of functional use of the hands. Many of these studies use animal models to determine how specific known mutations affect cellular and developmental processes in the brain, yielding insights relevant to understanding ASD due to other causes and discovering new targets for treatments. For example, NINDS-funded researchers are investigating the formation and function of neuronal synapses, the sites of communication between neurons, which may not properly operate in ASD and neurodevelopmental disorders. Other studies use brain imaging in people with and without ASD to identify differences in brain connectivity and activity patterns associated with features of ASD. Researchers hope that understanding these alterations can help identify new opportunities for therapeutic interventions. The goals of the consortium are to understand shared mechanisms across these syndromes, which may suggest common approaches to their treatment. NINDS supports autism spectrum disorder research through clinical trials at medical centers across the United States to better our knowledge about ASD treatment and care. Additional studies can be found at www. People should talk to their doctor before enrolling in a clinical trial.

Chapter 2 : Does My Child Have Autism? Recognizing the Early Signs and Symptoms of Autism

Helping Your Child with Autism Thrive Parenting Tips, Treatments, and Services That Can Help. There are many things parents can do to help children with Autism Spectrum Disorder (ASD) overcome their challenges.

Being emotionally strong allows you to be the best parent you can be to your child in need. These parenting tips can help by making life with an autistic child easier. No parent is ever prepared to hear that a child is anything other than happy and healthy, and an ASD diagnosis can be particularly frightening. You may be unsure about how to best help your child, or confused by conflicting treatment advice. Or you may have been told that ASD is an incurable, lifelong condition, leaving you concerned that nothing you do will make a difference. While it is true that ASD is not something a person simply "grows out of," there are many treatments that can help children acquire new skills and overcome a wide variety of developmental challenges. With the right treatment plan, and a lot of love and support, your child can learn, grow, and thrive. Guide to Symptoms and Diagnosis on the Autism Spectrum As the parent of a child with ASD or related developmental delays, the best thing you can do is to start treatment right away. The earlier children with autism spectrum disorder get help, the greater their chance of treatment success. When your child has autism Learn about autism. Educate yourself about the treatment options, ask questions, and participate in all treatment decisions. Become an expert on your child. What does your child find stressful or frightening? Accept your child, quirks and all. Feeling unconditionally loved and accepted will help your child more than anything else. Like everyone else, people with autism have an entire lifetime to grow and develop their abilities. Helping your child with autism thrive tip 1: Provide structure and safety Learning all you can about autism and getting involved in treatment will go a long way toward helping your child. Additionally, the following tips will make daily home life easier for both you and your child with ASD: For example, your child may use sign language at school to communicate, but never think to do so at home. Explore the possibility of having therapy take place in more than one place in order to encourage your child to transfer what he or she has learned from one environment to another. Stick to a schedule. Children with ASD tend to do best when they have a highly-structured schedule or routine. Again, this goes back to the consistency they both need and crave. Set up a schedule for your child, with regular times for meals, therapy, school, and bedtime. Try to keep disruptions to this routine to a minimum. If there is an unavoidable schedule change, prepare your child for it in advance. Also look for other ways to reward them for good behavior, such as giving them a sticker or letting them play with a favorite toy. Create a home safety zone. Carve out a private space in your home where your child can relax, feel secure, and be safe. This will involve organizing and setting boundaries in ways your child can understand. Visual cues can be helpful colored tape marking areas that are off limits, labeling items in the house with pictures. You may also need to safety proof the house, particularly if your child is prone to tantrums or other self-injurious behaviors. You communicate by the way you look at your child, by the tone of your voice, your body language and possibly the way you touch your child. Your child is also communicating with you, even if he or she never speaks. You just need to learn the language. Look for nonverbal cues. If you are observant and aware, you can learn to pick up on the nonverbal cues that children with ASD use to communicate. Figure out the motivation behind the tantrum. Throwing a tantrum is their way of communicating their frustration and getting your attention. Make time for fun. A child coping with ASD is still a child. For both children with ASD and their parents, there needs to be more to life than therapy. Schedule playtime when your child is most alert and awake. Many children with ASD are hypersensitive to light, sound, touch, taste, and smell. What does your child find stressful? Create a personalized autism treatment plan With so many different treatments available, it can be tough to figure out which approach is right for your child. Making things more complicated, you may hear different or even conflicting recommendations from parents, teachers, and doctors. When putting together a treatment plan for your child, keep in mind that there is no single treatment that works for everyone. Each person on the autism spectrum is unique, with different strengths and weaknesses. A good treatment plan will: You can do that by asking yourself the following questions: What behaviors are causing the most problems? What important skills is my

child lacking? How does my child learn best – through seeing, listening, or doing? What does my child enjoy and how can those activities be used in treatment and to bolster learning? Finally, keep in mind that no matter what treatment plan is chosen, your involvement is vital to success. You can help your child get the most out of treatment by working hand-in-hand with the treatment team and following through with the therapy at home. This is why your well-being is essential!

Choosing autism treatments

When it comes to autism treatment, there are a dizzying variety of therapies and approaches. Some autism therapies focus on reducing problematic behaviors and building communication and social skills, while others deal with sensory integration problems, motor skills, emotional issues, and food sensitivities. With so many choices, it is extremely important to do your research, talk to autism treatment experts, and ask questions. This often requires a combined treatment approach that incorporates several different types of therapy. Common autism treatments include behavior therapy, speech-language therapy, play-based therapy, physical therapy, occupational therapy, and nutritional therapy. But keep in mind that the routine is important and the program should be designed in a way that can be sustained. You should think about what skills and behaviors are most essential and treat those first. It may not be possible to tackle everything at once. Find help and support

Caring for a child with ASD can demand a lot of energy and time.

There may be days when you feel overwhelmed, stressed, or discouraged. There are many places that families of children with ASD can turn to for advice, a helping hand, advocacy, and support:

- **ADS support groups** – Joining an ASD support group is a great way to meet other families dealing with the same challenges you are. Parents can share information, get advice, and lean on each other for emotional support.
- **Respite care** – Every parent needs a break now and again. And for parents coping with the added stress of ASD, this is especially true. In respite care, another caregiver takes over temporarily, giving you a break for a few hours, days, or even weeks.
- **How to Choose Individual, marital, or family counseling** – If stress, anxiety, or depression is getting to you, you may want to see a therapist of your own. Marriage or family therapy can also help you work out problems that the challenges of life with an autistic child are causing in your spousal relationship or with other family members.

Under this provision, children in need and their families may receive medical evaluations, psychological services, speech therapy, physical therapy, parent counseling and training, assisted technology devices, and other specialized services. Children under the age of 10 do not need an autism diagnosis to receive free services under IDEA. If they are experiencing a developmental delay including delays in communication or social development, they are automatically eligible for early intervention and special education services. Early intervention services birth through age two

Infants and toddlers through the age of two receive assistance through the Early Intervention program.

In order to qualify, your child must first undergo a free evaluation. If the assessment reveals a developmental problem, you will work with early intervention treatment providers to develop an Individualized Family Service Plan IFSP. For autism, an IFSP would include a variety of behavior, physical, speech, and play therapies. It would focus on preparing kids with ASD for the eventual transition to school. Early intervention services are typically conducted in the home or at a child care center. To locate local early intervention services for your child, ask your pediatrician for a referral or use the resources listed in the Resources section at the end of the article.

Special education services age three and older

Children over the age of three receive assistance through school-based programs. Children with ASD are often placed with other developmentally delayed kids in small groups where they can receive more individual attention and specialized instruction. However, depending on their abilities, they may also spend at least part of the school day in a regular classroom. The goal is to place kids in the "least restrictive environment" possible where they are still able to learn. An IEP outlines the educational goals for your child for the school year. Additionally, it describes the special services or supports the school will provide your child in order to meet those goals.

National Center for Learning Disabilities Your Local School District

- **Overview of special services for autistic children and advice for parents navigating the educational system.**
- **Autism Speaks How is Autism Treated?**
- **Autism Speaks Support and advocacy services**
- **Autism Source** – Search a national directory of local autism resources, support groups, healthcare professionals, and service providers.

Chapter 3 : National Autism Association | Providing real help and hope for the autism community since

What is autism spectrum disorder? Autism spectrum disorder (ASD) refers to a group of complex neurodevelopment disorders characterized by repetitive and characteristic patterns of behavior and difficulties with social communication and interaction. The symptoms are present from early childhood and.

Kids with autism may have trouble understanding the world around them. A kid with autism might have trouble: A kid with autism may have a little trouble with these things, or a lot. Some kids need only a little bit of help, and others might need a lot of help with learning and doing everyday stuff. Autism is something people are born with. No one knows exactly what causes it. How Is Autism Diagnosed? Doctors check babies and little kids for signs of autism at every checkup. A parent may think that something is wrong and tell the doctor. When a doctor thinks a kid might have autism, he or she will work with a team of experts to see if it is autism or something else. How Is Autism Treated? There is no cure for autism, but treatment can make a big difference. The younger kids are when they start treatment, the better. Doctors, therapists, and special education teachers can help kids learn to talk, play, and learn. Therapists also help kids learn about making friends, taking turns, and getting along. What if My Friend Has Autism? It can be hard for kids with autism to make friends. Because they seem different, kids with autism may be teased, bullied, or left out. If you see someone teasing or bullying a friend with autism, stand up for your friend and tell an adult. Ask your friend to join in when you are playing. He or she may need a little extra help, but remember to be patient and kind.

Chapter 4 : Teaching Tips for Children and Adults with Autism

How to Teach Autistic Children. In this Article: Using Strategies to Help with Communication Using Strategies to Help with Social and Behavioral Issues Using Strategies to Help with Sensory Issues Understanding the Law and Best Practices Community Q&A.

Other aspects, such as atypical eating, are also common but are not essential for diagnosis. Noted autistic Temple Grandin described her inability to understand the social communication of neurotypicals , or people with normal neural development , as leaving her feeling "like an anthropologist on Mars". Autistic infants show less attention to social stimuli, smile and look at others less often, and respond less to their own name. Autistic toddlers differ more strikingly from social norms ; for example, they have less eye contact and turn-taking , and do not have the ability to use simple movements to express themselves, such as pointing at things. However, they do form attachments to their primary caregivers. Making and maintaining friendships often proves to be difficult for those with autism. For them, the quality of friendships, not the number of friends, predicts how lonely they feel. Functional friendships, such as those resulting in invitations to parties, may affect the quality of life more deeply. The limited data suggest that, in children with intellectual disability, autism is associated with aggression, destruction of property, and tantrums. In the second and third years, children with autism have less frequent and less diverse babbling, consonants, words, and word combinations; their gestures are less often integrated with words. Both autistic groups performed worse than controls at complex language tasks such as figurative language, comprehension and inference. As people are often sized up initially from their basic language skills, these studies suggest that people speaking to autistic individuals are more likely to overestimate what their audience comprehends. Repetitive movements, such as hand flapping, head rolling, or body rocking. Time-consuming behaviors intended to reduce anxiety that an individual feels compelled to perform repeatedly or according to rigid rules, such as placing objects in a specific order, checking things, or hand washing. Resistance to change; for example, insisting that the furniture not be moved or refusing to be interrupted. Unvarying pattern of daily activities, such as an unchanging menu or a dressing ritual. This is closely associated with sameness and an independent validation has suggested combining the two factors. Interests or fixations that are abnormal in theme or intensity of focus, such as preoccupation with a single television program, toy, or game. Behaviors such as eye-poking, skin-picking , hand-biting and head-banging. Autistic individuals may have symptoms that are independent of the diagnosis, but that can affect the individual or the family. Selectivity is the most common problem, although eating rituals and food refusal also occur; [53] this does not appear to result in malnutrition. Although some children with autism also have gastrointestinal symptoms , there is a lack of published rigorous data to support the theory that children with autism have more or different gastrointestinal symptoms than usual; [54] studies report conflicting results, and the relationship between gastrointestinal problems and ASD is unclear. However, they reported lower levels of closeness and intimacy than siblings of children with Down syndrome ; siblings of individuals with ASD have greater risk of negative well-being and poorer sibling relationships as adults. Typically, autism cannot be traced to a Mendelian single-gene mutation or to a single chromosome abnormality , and none of the genetic syndromes associated with ASDs have been shown to selectively cause ASD. Some such as the MMR vaccine have been completely disproven. This has led to unsupported theories blaming vaccine "overload" , a vaccine preservative , or the MMR vaccine for causing autism. How autism occurs is not well understood. Its mechanism can be divided into two areas: It is not known whether early overgrowth occurs in all children with autism. It seems to be most prominent in brain areas underlying the development of higher cognitive specialization. An excess of neurons that causes local overconnectivity in key brain regions. Children with autism have been found by researchers to have inflammation of both the peripheral and central immune systems as indicated by increased levels of pro-inflammatory cytokines and significant activation of microglia. The MNS operates when an animal performs an action or observes another animal perform the same action. In people with autism the two networks are not negatively correlated in time, suggesting an imbalance in toggling between the two networks,

possibly reflecting a disturbance of self-referential thought. Hypo-connectivity seems to dominate, especially for interhemispheric and cortico-cortical functional connectivity. The first category focuses on deficits in social cognition. An extension, the extreme male brain theory, hypothesizes that autism is an extreme case of the male brain, defined psychometrically as individuals in whom systemizing is better than empathizing. In his review, Kenworthy states that "the claim of executive dysfunction as a causal factor in autism is controversial", however, "it is clear that executive dysfunction plays a role in the social and cognitive deficits observed in individuals with autism". One strength of this theory is predicting special talents and peaks in performance in autistic people. These deficits are present in early childhood, typically before age three, and lead to clinically significant functional impairment. The disturbance must not be better accounted for by Rett syndrome, intellectual disability or global developmental delay. Two are commonly used in autism research: If warranted, diagnosis and evaluations are conducted with help from ASD specialists, observing and assessing cognitive, communication, family, and other factors using standardized tools, and taking into account any associated medical conditions. Girls are often diagnosed later than boys. The increasing popularity of drug treatment options and the expansion of benefits has given providers incentives to diagnose ASD, resulting in some overdiagnosis of children with uncertain symptoms. Conversely, the cost of screening and diagnosis and the challenge of obtaining payment can inhibit or delay diagnosis. In this article, autism refers to the classic autistic disorder; in clinical practice, though, autism, ASD, and PDD are often used interchangeably. Autism can also be divided into syndromal and non-syndromal autism; the syndromal autism is associated with severe or profound intellectual disability or a congenital syndrome with physical symptoms, such as tuberous sclerosis. The validity of this distinction remains controversial; it is possible that regressive autism is a specific subtype, [14] [41] [1] [] or that there is a continuum of behaviors between autism with and without regression. Delay in referral for such testing may delay early diagnosis and treatment and affect the long-term outcome". No gesturing pointing, waving, etc. No single words by 16 months. No two-word spontaneous, not just echolalic phrases by 24 months. Any loss of any language or social skills, at any age. The United States Preventive Services Task Force in found it was unclear if screening was beneficial or harmful among children in whom there is no concerns. In contrast, in the UK, children whose families or doctors recognize possible signs of autism are screened. It is not known which approach is more effective. Autism therapies A three-year-old with autism points to fish in an aquarium, as part of an experiment on the effect of intensive shared-attention training on language development. In general, higher IQs are correlated with greater responsiveness to treatment and improved treatment outcomes. Studies of interventions have methodological problems that prevent definitive conclusions about efficacy. Despite the recent development of parent training models, these interventions have demonstrated effectiveness in numerous studies, being evaluated as a probable efficacious mode of treatment.

Chapter 5 : Autism - Wikipedia

Autism spectrum disorder (or ASD) is distinguished by a wide variation of social, communication, and cyclical behaviors that are considered somewhat out of character for children. Every autistic individual will experience these symptoms differently, and on a mild to severe spectrum. However, the.

December Good teachers helped me to achieve success. I was able to overcome autism because I had good teachers. From an early age I was taught to have good manners and to behave at the dinner table. Children with autism need to have a structured day, and teachers who know how to be firm but gentle. I had 45 minutes of one-to-one speech therapy five days a week, and my mother hired a nanny who spent three to four hours a day playing games with me and my sister. When we made a snowman, she had me roll the bottom ball; and then my sister had to make the next part. At mealtimes, every-body ate together; and I was not allowed to do any "stims. The combination of the nursery school, speech therapy, play activities, and "miss manners" meals added up to 40 hours a week, where my brain was kept connected to the world. Many people with autism are visual thinkers. I think in pictures. I do not think in language. All my thoughts are like videotapes running in my imagination. Pictures are my first language, and words are my second language. Nouns were the easiest words to learn because I could make a picture in my mind of the word. To learn words like "up" or "down," the teacher should demonstrate them to the child. For example, take a toy airplane and say "up" as you make the airplane takeoff from a desk. Some children will learn better if cards with the words "up" and "down" are attached to the toy airplane. The "up" card is attached when the plane takes off. The "down" card is attached when it lands. Avoid long strings of verbal instructions. People with autism have problems with remembering the sequence. If the child can read, write the instructions down on a piece of paper. I am unable to remember sequences. If I ask for directions at a gas station, I can only remember three steps. Directions with more than three steps have to be written down. I also have difficulty remembering phone numbers because I cannot make a picture in my mind. Many children with autism are good at drawing, art and computer programming. These talent areas should be encouraged. Talents can be turned into skills that can be used for future employment. Many autistic children get fixated on one subject such as trains or maps. The best way to deal with fixations is to use them to motivate school work. If the child likes trains, then use trains to teach reading and math. Read a book about a train and do math problems with trains. For example, calculate how long it takes for a train to go between New York and Washington. Use concrete visual methods to teach number concepts. My parents gave me a math toy which helped me to learn numbers. It consisted of a set of blocks which had a different length and a different color for the numbers one through ten. With this I learned how to add and subtract. To learn fractions my teacher had a wooden apple that was cut up into four pieces and a wooden pear that was cut in half. From this I learned the concept of quarters and halves. I had the worst handwriting in my class. Many autistic children have problems with motor control in their hands. Neat handwriting is sometimes very hard. This can totally frustrate the child. To reduce frustration and help the child to enjoy writing, let him type on the computer. Typing is often much easier. Some autistic children will learn reading more easily with phonics, and others will learn best by memorizing whole words. I learned with phonics. My mother taught me the phonics rules and then had me sound out my words. Children with lots of echolalia will often learn best if flash cards and picture books are used so that the whole words are associated with pictures. It is important to have the picture and the printed word on the same side of the card. When teaching nouns the child must hear you speak the word and view the picture and printed word simultaneously. An example of teaching a verb would be to hold a card that says "jump," and you would jump up and down while saying "jump. Children with autism need to be protected from sounds that hurt their ears. The sounds that will cause the most problems are school bells, PA systems, buzzers on the score board in the gym, and the sound of chairs scraping on the floor. In many cases the child will be able to tolerate the bell or buzzer if it is muffled slightly by stuffing it with tissues or duct tape. Scraping chairs can be silenced by placing slit tennis balls on the ends of the legs or installing carpet. A child may fear a certain room because he is afraid he may be suddenly subjected to squealing microphone feedback from the PA system. The fear of a dreaded sound can cause bad

behavior. If a child covers his ears, it is an indicator that a certain sound hurts his ears. Sometimes sound sensitivity to a particular sound, such as the fire alarm, can be desensitized by recording the sound on a tape recorder. This will allow the child to initiate the sound and gradually increase its volume. The child must have control of playback of the sound. Some autistic people are bothered by visual distractions and fluorescent lights. They can see the flicker of the cycle electricity. If the lights cannot be avoided, use the newest bulbs you can get. New bulbs flicker less. Some hyperactive autistic children who fidget all the time will often be calmer if they are given a padded weighted vest to wear. Pressure from the garment helps to calm the nervous system. I was greatly calmed by pressure. For best results, the vest should be worn for twenty minutes and then taken off for a few minutes. This prevents the nervous system from adapting to it. Some individuals with autism will respond better and have improved eye contact and speech if the teacher interacts with them while they are swinging on a swing or rolled up in a mat. Sensory input from swinging or pressure from the mat sometimes helps to improve speech. Swinging should always be done as a fun game. Some children and adults can sing better than they can speak. They may respond better if words and sentences are sung to them. Some children with extreme sound sensitivity will respond better if the teacher talks to them in a low whisper. Some nonverbal children and adults cannot process visual and auditory input at the same time. They cannot see and hear at the same time. They should not be asked to look and listen at the same time. They should be given either a visual task or an auditory task. Their immature nervous system is not able to process simultaneous visual and auditory input. In older nonverbal children and adults touch is often their most reliable sense. It is often easier for them to feel. Letters can be taught by letting them feel plastic letters. They can learn their daily schedule by feeling objects a few minutes before a scheduled activity. For example, fifteen minutes before lunch give the person a spoon to hold. Let them hold a toy car a few minutes before going in the car. Some children and adults with autism will learn more easily if the computer key-board is placed close to the screen. This enables the individual to simultaneously see the keyboard and screen. Some individuals have difficulty remembering if they have to look up after they have hit a key on the keyboard. Nonverbal children and adults will find it easier to associate words with pictures if they see the printed word and a picture on a flashcard. Some individuals do not understand line drawings, so it is recommended to work with real objects and photos first. The picture and the word must be on the same side of the card. Some autistic individuals do not know that speech is used for communication. Language learning can be facilitated if language exercises promote communication. If the child asks for a cup, then give him a cup. If the child asks for a plate, when he wants a cup, give him a plate.

Chapter 6 : Signs of Autism | National Autism Association

Autism is a developmental disorder characterized by troubles with social interaction and communication, and by restricted and repetitive behavior. Parents usually notice signs during the first two or three years of their child's life.

Does My Child Have Autism? Recognizing the Early Signs and Symptoms of Autism As a parent, you never want to believe that your precious bundle has a problem. But when it comes to autism, catching it early—ideally by the age of eighteen months—makes a huge difference. Autism is a spectrum of closely related disorders with a shared core of symptoms. The signs and symptoms of autism vary widely, as do its effects. Some children with autism have only mild impairments, while others have more obstacles to overcome. However, every child on the autism spectrum has problems, at least to some degree, in the following three areas: Communicating verbally and non-verbally Relating to others and the world around them Thinking and behaving flexibly There are different opinions among doctors, parents, and experts about what causes autism and how best to treat it. There is one fact, however, that everyone agrees on: For children at risk and children who show early signs, it can make all the difference. In fact, she rarely makes eye contact. Melanie needs to be checked out by a child development specialist right away. You know your child better than anyone and observe behaviors and quirks that a pediatrician, in a quick fifteen-minute visit, might not have the chance to see. Autism involves a variety of developmental delays, so keeping a close eye on when—or if—your child is hitting the key social, emotional, and cognitive milestones is an effective way to spot the problem early on. You risk losing valuable time at an age where your child has the best chance for improvement. In order to develop skills in an area of delay, your child needs extra help and targeted treatment. But sometimes, even well-meaning doctors miss red flags or underestimate problems. Schedule a follow-up appointment with the doctor, seek a second opinion, or ask for a referral to a child development specialist. Regression of any kind is a serious autism warning sign Some children with autism spectrum disorder start to develop communication skills and then regress, usually between 12 and 24 months. Although autism is hard to diagnose before 24 months, symptoms often surface between 12 and 18 months. If signs are detected by 18 months of age, intensive treatment may help to rewire the brain and reverse the symptoms. The earliest signs of autism involve the absence of normal behaviors—not the presence of abnormal ones—so they can be tough to spot. However, you can catch warning signs early if you know what to look for. No big smiles or other warm, joyful expressions By 9 months: No back-and-forth sharing of sounds, smiles, or other facial expressions By 12 months: Lack of response to name By 12 months: No back-and-forth gestures, such as pointing, showing, reaching, or waving By 16 months: No spoken words By 24 months: There are many warning signs and symptoms, but they typically revolve around impaired social skills, speech and language difficulties, non-verbal communication difficulties, and inflexible behavior. Many kids on the autism spectrum seem to prefer to live in their own world, aloof and detached from others. Signs of speech and language difficulties Speaks in an abnormal tone of voice, or with an odd rhythm or pitch e. Often, they start talking late. May be especially sensitive to loud noises. Abnormal posture, clumsiness, or eccentric ways of moving e. This makes the "give-and-take" of social interaction very difficult. Signs of inflexibility Follows a rigid routine e. Obsessively lines things up or arranges them in a certain order. Preoccupation with a narrow topic of interest, often involving numbers or symbols e. Some researchers and clinicians believe that these behaviors may soothe children with autism more than stimulate them. Children with autism spectrum disorder are often restricted, inflexible, and even obsessive in their behaviors, activities, and interests. Common restricted and repetitive behaviors Hand flapping.

Chapter 7 : Autistic Children

Need Personalized Support? Our Autism Response Team (ART) is specially trained to connect people with autism, their families, and caretakers to information, tools, and resources.

Intervention is likely to be more effective and less costly when it is provided earlier in life rather than later. From birth to 5 years, your child should reach milestones in how he or she plays, learns, speaks, acts and moves. Characteristics and concordance of autism spectrum disorders among twin pairs. Arch Pediatr Adolesc Med. Genetic heritability and shared environmental factors among twin pairs with autism. Genetic heterogeneity between the three components of the autism spectrum: Genetic influences on the broad spectrum of autism: Study of proband-ascertained twins. Recurrence risk for autism spectrum disorders: A Baby Siblings Research Consortium study. Sibling risk of pervasive developmental disorder estimated by means of an epidemiologic survey in Nagoya, Japan. Screening for autism spectrum disorders in children with Down syndrome. J Dev Behav Pediatr. Specific genetic disorders and autism: Clinical contribution towards their identification. J Autism Dev Disord. Compulsive, self-injurious, and autistic behavior in children and adolescents with fragile X syndrome. Am J Ment Retard. Zecavati N, Spence SJ. Neurometabolic disorders and dysfunction in autism spectrum disorders. Curr Neurol Neurosci Rep. The economic costs of autism:

Chapter 8 : Autism Spectrum Disorder Fact Sheet | National Institute of Neurological Disorders and Stroke

Autism Spectrum Disorders (ASDs) are a group of developmental disabilities that can cause significant social, communication and behavioral challenges. CDC is working to find out how many children have ASDs, discover the risk factors, and raise awareness of the signs.

Chapter 9 : Helping Your Child with Autism Thrive: Parenting Tips, Treatments, and Services That Can Help

What Is Autism Spectrum Disorder? Autism (say: AW-tiz-um) spectrum disorder is a difference in the way a kid's brain develops. Kids with autism may have trouble understanding the world around them. What's It Like to Have Autism? A kid with autism might have trouble: talking and learning the meaning.