AUTISM

What Is Autism?

When people refer to “Autism” today, they are usually talking about Autism Spectrum Disorders (ASD), which are five complex, brain-based disorders that affect a person’s behavior as well as social and communication skills. The Centers for Disease Control describes ASDs as: "developmental disabilities that cause substantial impairments in social interaction and communication and the presence of unusual behaviors and interests. Many people with ASDs also have unusual ways of learning, paying attention, and reacting to different sensations. The thinking and learning abilities of people with ASDs can vary—from gifted to severely challenged. An ASD begins before the age of 3 and lasts throughout a person's life."

Autism is four times more likely to affect boys than girls, and is found in all racial, ethnic, and social groups. There is no known single cause for autism, although the best available science points to important genetic components. Through twin studies, scientists have determined that autism is a genetically based condition. If one identical (monozygotic) twin has autism then there is an 80-90% chance that the other twin will also be diagnosed with an autism spectrum disorder. For non-identical (dizygotic) twins the chance is about 3-10% that both twins will develop autism spectrum disorder. The chance that siblings will both be affected by ASD is also about 3-10%.

Scientists are unsure what, if any, environmental triggers may be involved in autism. One theory, popular in the late 1990’s and early 2000’s, that vaccines cause autism, has since been disproven by numerous studies conducted around the world.

Autism Spectrum Disorders are characterized by significant impairments in social interaction and communication skills, as well as by the presence of extremely challenging behaviors. Such behaviors include repetitive motor behaviors (hand flapping, body rocking), insistence on sameness, resistance to change and, in some cases, aggression or self injury. Many individuals with an autism spectrum disorder have significant cognitive impairments, although some have typical or even above average IQs. 30-50% of people with autism also have seizures.

Autism was first described by Dr. Leo Kanner in 1943. He reported on eleven children who showed a marked lack of interest in other people, but a highly unusual interest in the inanimate environment. Initially, autism was thought to be an early form of schizophrenia, which led to the belief that its onset could be caused by negative experience or bad parenting. We now know that this is not the case.

There are five Autism Spectrum Disorders, sometimes called Pervasive Developmental Disorders (PDD):

- PDD-NOS (Pervasive Developmental Delay - Not Otherwise Specified).
- Autism (sometimes referred to as Classic Autism, Early Infantile Autism, Childhood Autism, or Autistic Disorder)
- Asperger Syndrome
- Rett Syndrome
- Childhood Disintegrative Disorder

Learn more about Autism Spectrum Disorder classifications here.

How Is Autism Diagnosed?

Early signs of autism can often be detected in infants as young as 6-18 months. For example, if a baby fixates on objects or does not respond to people, he or she may be exhibiting early signs of an autism spectrum disorder. Older

babies and toddlers may fail to respond to their names, avoid eye contact, lack joint attention (sharing an experience of observing an object or event by gazing or pointing), or engage in repetitive movements such as rocking or arm flapping. They may play with toys in unusual ways, like lining them up or focusing on parts of toys rather than the whole. Parents who notice these signs, or are concerned their children are not meeting developmental milestones, should contact their pediatricians and request a developmental screening. Learn more about the early warning signs of autism here.

Early diagnosis is critical because younger children respond better to interventions that improve functioning. Early treatment optimizes long-term prognosis. Several studies estimate that the gains associated with early treatment result in considerable cost savings to families, schools, and other service providers. The American Academy of Pediatrics recommends routine screening of all infants for autism as part of 18-month and 24-month well-baby examinations.

How Common Is Autism?

In 2007, the Centers for Disease Control and Prevention's Autism and Developmental Disabilities Monitoring Network reported that approximately 1 in 150 children in the United States have an Autism Spectrum Disorder. This represents an increase in the prevalence of autism spectrum disorders compared to earlier in the decade when prevalence was cited as 1 in 166 and 1 in 250. In the 1980's autism prevalence was reported as 1 in 10,000. In the nineties, prevalence was 1 in 2500 and later 1 in 1000.

It is problematic to compare autism rates over the last three decades, as the diagnostic criteria for autism have changed with each revision of the Diagnostic and Statistical Manual

(DSM). In 1983 the DSM did not recognize PDD-NOS or Asperger's syndrome, and the criteria for autistic disorder (AD) were more restrictive. Clinicians frequently diagnosed autism as mental retardation, and as autism rates climbed throughout the 1990s, the rate of diagnosis of mental retardation declined.

What are the Evidence-Based Treatments for Autism?

Scientists agree that the earlier in life a child receives early intervention services the better the child's prognosis. All children with autism can benefit from early intervention, and some may gain enough skills to be able to attend mainstream school. Research tells us that *early* intervention in an appropriate educational setting for at least two years prior to the start of school can result in significant improvements for many young children with Autism Spectrum Disorders. As soon as autism is diagnosed, early intervention instruction should begin. Effective programs focus on developing communication, social, and cognitive skills.

The most effective treatments available today are applied behavior analysis (ABA) and occupational, speech and physical therapy. Many "cures" for autism are touted on the Internet, but these interventions are not backed by science and in many cases can cause harmful side effects. Most individuals with autism will need support and services their entire lifetime.

Some service providers, celebrities, parent groups and medical practitioners may talk about "recovery" from autism. "Recovery" is a subjective term, and what one family calls "recovery" may be different for others. Parents should be skeptical of any health care provider holding out "recovery" as an option, as it often leads to expensive and ineffective treatments that can burden families with needless debt. Remember, autism is pervasive *developmental* delay, which

means children will continue to develop, learn, gain skills and adapt as they age. Sometimes children lose their diagnosis altogether, leading to claims of recovery. Keep in mind that symptoms of autism change as a child develops. Research has shown that children who are diagnosed by the age of two are more likely to eventually lose their autism label because early diagnosis leads to behavioral treatment, which benefits the child, and because these children are more likely to be misdiagnosed altogether. (Turner and Stone, 2007). "Recovery" can be a useful concept, but only if defined as the ability of individuals with ASD to lead fulfilling lives, given the challenges of their condition.

Beware of Non-Evidence-Based Treatments

Parents can protect themselves and their children from expensive and ineffective treatments by learning to critically evaluate various claims. Before having their child begin any treatment, parents should question whether there is a coherent scientific rationale behind the intervention and whether it makes biological sense. They should also ask their health care practitioner whether the treatment has been proven effective and safe in objective scientific studies (with comparison to controls – i.e., patients who did not receive the treatment), and whether those studies have been published in well established, highly reputable, peer-reviewed medical journals. It is important to know that anyone can publish a study on the Internet or start a new journal.

Health care fraud is a huge business in the U.S., and parents of children with autism are often targeted. Fringe treatment providers prey on desperation and fear, and deceive parents with numerous unfounded claims. You may read about the following non-evidence based treatments:

Chelation: Chelation therapy involves administering chemicals designed to bind to heavy metals and eliminate them from the body. Chelating agents have a legitimate use

in the treatment of poisoning from lead, mercury and other metals. However, there is no evidence in the medical literature that chelation is safe or effective for the treatment of ASDs. Autism is not metal poisoning. In 2005, a child with autism died from chelation therapy, when the chelating agent administered bonded with calcium in the child's body, causing his heart to stop.

No paper published in the peer-reviewed literature has reported an abnormal body burden of mercury in individuals with autism spectrum disorder. Mercury poisoning is associated with bilaterial constriction of visual fields, paresthesias (tingling or numbness of the skin), hypertension, skin rashes, and thrombocytopenia (low platelet count). These conditions are seldom seen with autism. Exposure to mercury and other neurotoxins in fetuses and infants is associated with microcephaly (small head size). In autism, increasing evidence indicates that both head and brain size tend to be *larger* than population norms.

Lupron protocol: Lupron is a testosterone-inhibiting drug used in the treatment of precocious puberty (which is rare) and prostate cancer, as well as for the "chemical castration" of sex offenders. Its use for autism is based on the hypothesis that testosterone magnifies the toxic effects of mercury (see above). There is no evidence that Lupron is safe or effective for the treatment of autism. Side effects of Lupron include hives, difficulty breathing or swallowing, numbness, tingling, weakness, painful or difficult urination, blood in the urine, bone pain, testicular pain and osteoporosis.

Hyperbaric oxygen therapy: HBOT is proven effective for gangrene, carbon monoxide poisoning, "the bends" and various other conditions related to oxygen in blood. There is no evidence that ASD is related to insufficient oxygen. There is insufficient evidence to determine if HBOT is safe or effective for the treatment of autism. Furthermore, the

benefits of hyperbaric oxygen delivered in a soft-shelled chamber are no different than with a less expensive oxygen tent, or nasal cannula.

Gluten Free-Casein Free (GFCF) Diet: Promoters of a gluten (wheat) and casein (dairy) free diet claim that children with autism have "leaky guts" that allow opioids to escape into the bloodstream, where they travel to the brain, causing autistic behaviors. There is no evidence for this claim, and at least one study has found that children with autism have no more opioids in their blood than a control group. Furthermore, children on the GFCF diet have been found to have lower bone density than controls, which could lead to osteoporosis. A large scale study of the safety and efficacy of the GFCF diet is currently underway.

Stem cell therapy: Stem cell therapy for autism is illegal in the United States, but that hasn't stopped some from offering this as a treatment for autism in Costa Rico, China, and other countries. There is no evidence that the treatment is safe or effective for autism, and no guarantee that the stem cells used in these countries are even human.

For More Information Concerning Autism please visit the website at:
http://www.autismsciencefoundation.org/aboutautism.html