

OPTIMAL HEALTH UNIVERSITY™

Presented by Dr. Joseph Baker

Autism Rates on the Rise

Autism is a complex brain disorder that causes developmental issues ranging from language and communication deficits to behavior problems.

The prevalence of autism has skyrocketed during the last few decades. Currently, The Centers for Disease Control and Prevention estimate that from one in every 500 to one in every 166 children has autism spectrum disorders. Autism affects significantly more boys than girls. It's the third most common developmental disability, following mental retardation and cerebral palsy.

Why is autism growing at such a breakneck rate? Nobody knows for sure, but researchers are investigating a number of theories about its cause — everything from environmental toxins to genetic factors. Dr. Baker wants you to be aware of recent research about this perplexing problem.

What Are the Symptoms?

Autism typically involves impairments in several core domains: social interaction, communication, language development and behavior. Autism characteristics can vary from mild to severe, and sufferers can exhibit *any combination* of symptoms. The first signs typically appear by age 3 and continue throughout life.

“Red flags” indicating autism may include no speech until after 16 months of age, no two-word phrases by 24 months or loss of any language or social skill at any age. In a study of 987 children, 40 percent weren't diagnosed by a parent or doctor, but by an “educational source.” (*JAMA* 2003;289:49-55.)

What Are the Suspected Causes?

Autism's root cause stems from abnormalities in specific regions of the brain. In these regions, nerve cells appear smaller than normal. These neurons have stunted connections to other brain regions.

But why are more children diagnosed now than ever before? Dr. Baker explains to parents that some researchers attribute the jump to heightened awareness and changing diagnostic criteria. Others claim new toxic agents play a fundamental role. Still other scientists suggest that the brain abnormalities stem from genetic factors.

Environmental Toxins

Growing evidence supports the theory that chronic exposure to toxic agents on a child's developing central nervous system plays a role in the development of autism. That's one reason why Dr. Baker advocates a lifestyle that limits exposure to toxins.

Specifically, scientists argue that environmental toxins, such as lead, polychlorinated biphenyls, mercury and certain pesticides, are strongly linked to neurodevelopment disabilities like autism (*Environ Health Perspect* 1999;107:510).

Research suggests that the link from autism to toxic chemicals may be stronger than once thought. Enrolled in one study were 20 autistic children (15 boys and five girls), who ranged in age from 3 to 12, with an average age of 6. Researchers used several scientific tests, such as a blood analysis and tests for abnormal liver function, to measure the amount of toxic agents in



the youngsters' bodies.

Why did the scientists study the children's livers? Everything the body comes into contact with — through eating, drinking, breathing or absorbing through the skin — eventually reaches the liver. The liver breaks down toxins into byproducts to be eliminated. By studying the children's livers, researchers were able to measure the amount of toxins the body had absorbed.

The result? “It is most noteworthy that of the 20 cases examined for this study, 100% of the cases showed liver detoxication profiles outside of normal,” summarize the authors.

Of the 18 children whose blood was analyzed, 16 showed “evidence of levels of toxic chemicals exceeding adult maximum tolerance.” In the two cases where toxic chemical levels were not found, scientists did find abnormal acid levels, which suggests abnormal toxic influences on the liver detoxication processes (*Toxicol Ind Health* 1998;14:553-63).

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More studies are needed to pinpoint exactly which chemicals or combination of toxins are potential instigators. Researchers stress that “paradigms for environmental risk assessment have only begun to address the hazards confronting infants and children.” (*Environ Health Perspect* 1999;107:510.)

Vaccines

In recent years, studies have linked autism to both childhood vaccines as well as vaccinations during pregnancy. Measles-mumps-rubella vaccines (MMR), as well as vaccines containing thimerosal, a preservative containing mercury, have been especially under fire. However, research is conflicting.

For more on the possible link between vaccines and autism, visit The National Vaccine Information Center at <http://www.909shot.com/> and The Centers for Disease Control at <http://www.cdc.gov/nip/vacsafe/concerns/autism/>.

Antibiotics

One recent report argues that the increase in autism coincides with the introduction of the antibiotic amoxicillin/clavulanate in the 1980s.

In the study, 206 autistic children under 3 years of age were screened through detailed case histories. One consistent commonality among the toddlers was an excessive history of chronic ear infections. On average, each of the 206 youngsters had endured approximately 10 bouts of ear infections and received 12 courses of antibiotics before reaching age 3.

As a group, the children had taken a total of 2,480 courses of antibiotics, of which 893 were Augmentin[®], which contains the antibiotic amoxicillin and an inhibitor called clavulanic acid. Out of the Augmentin[®] courses, 362 were administered before the babies reached their first birthday.

The study’s researchers insist that further examinations are needed “to determine if a subset of children are at risk for neurotoxicity from the use of clavulanic acid in pharmaceutical

preparations.” (*Med Hypotheses* 2005;64:312-5.)

Prenatal Factors

A hot-off-the-press study — performed in Denmark — has identified prenatal factors that may be linked to autism.

A total of 698 children with autism were matched by gender, birth year and age to 25 controls subjects without autism.

The scientists found that autistic babies were apt to be born in a breech position, delivered before 35 weeks of pregnancy and have a low “Apgar score” five minutes after birth.

The researchers also noted that the autistic children were more likely to have parents with schizophrenia than infants without the disorder (*Am J Epidemiol* 2005;161:916-25).

Thalidomide

Doctors of chiropractic believe that both prescription and over-the-counter drugs should only be used sparingly and when absolutely necessary. This is especially true during pregnancy, when an undeveloped fetus is completely vulnerable to toxic elements. Drugs that are labeled safe for adults can permanently affect a developing system.

For example, thalidomide was once touted as a harmless wonder drug as it provided a “safe, sound sleep” and reduced morning sickness during pregnancy. It was first marketed in the late 1950s, but was discontinued worldwide in the early 1960s because it caused birth defects, such as malformed limbs and ears.

Now, research links thalidomide to the development of autism. In a recent study in Japan, scientists administered thalidomide to laboratory rats during the ninth day of pregnancy. Fifty days after the infant rats were born, the researchers witnessed a “dramatic shift” in the baby rats’ brains. The rats showed neuron abnormalities similar to those often observed in human autism (*Int J Dev Neurosci* 2005;23:287-97).

Researchers warn that other drugs taken during pregnancy, even some which have been approved safe for expectant mothers, may later prove to cause autism.

Phenylketonuria

You’d probably argue that protein-rich foods are important for a healthy diet, right? However, for some people with a rare genetic disorder called phenylketonuria (PKU), protein-rich foods are very harmful.

All protein, including breast milk, baby formulas, eggs, meat, fish and beans, contains an amino acid called phenylalanine. People with PKU can’t process phenylalanine because they lack an essential enzyme. As a result, amino acid levels can continue to build and eventually cause mental retardation and other serious health problems. In rare cases, it may cause autism (*J Autism Dev Disord* 2003;33:201-4).

Fortunately, these health issues are preventable — if these babies are diagnosed with PKU just after birth and begin a regulated diet. Screening for PKU is routine procedure in most developed countries.

We’re Here to Help

If you suspect that your child has autism, contact your child’s pediatrician right away. Also, be sure to tell your doctor of chiropractic, who will be able to keep you up to date about natural solutions. For example, new research shows that not getting enough sleep intensifies autism symptoms. Poor sleep increased social skills deficits and communication problems in all 55 autistic children in one recent study (*Res Dev Disabil* 2004;25:57).

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