



iCarePsychiatry
L A S V E G A S
A Behavioral Wellness Center

Autism

Definition

Autism is a developmental disorder that appears in the first 3 years of life, and affects the brain's normal development of social and communication skills.

Alternative Names

Pervasive developmental disorder - autism; Autistic spectrum disorder

Causes, incidence, and risk factors

Autism is a physical condition linked to abnormal biology and chemistry in the brain. The exact causes of these abnormalities remain unknown, but this is a very active area of research. There are probably a combination of factors that lead to autism.

Genetic factors seem to be important. For example, identical twins are much more likely than fraternal twins or siblings to both have autism. Similarly, language abnormalities are more common in relatives of autistic children. Chromosomal abnormalities and other nervous system (neurological) problems are also more common in families with autism.

A number of other possible causes have been suspected, but not proven. They involve:

- Diet
- Digestive tract changes
- Mercury poisoning
- The body's inability to properly use vitamins and minerals
- Vaccine sensitivity

AUTISM AND VACCINES

Many parents are worried that some vaccines are not safe and may harm their baby or young child. They may ask their doctor or nurse to wait, or even refuse to have the vaccine. However, it is important to also think about the risks of not having the vaccination.

Some people believe that the small amount of mercury (called thimerosal) that is a common preservative in multidose vaccines causes autism or ADHD. However, studies have NOT shown this risk to be true.

The American Academy of Pediatrics, and The Institute of Medicine (IOM) agree that no vaccine or component of any vaccine is responsible for the number of children who are currently being diagnosed with autism. They conclude that the benefits of vaccines outweigh the risks.

All of the routine childhood vaccines are available in single-dose forms that do not contain added mercury.

The Centers for Disease Control and Prevention website provides further information.

HOW MANY CHILDREN HAVE AUTISM?

The exact number of children with autism is not known. A report released by the U.S. Centers for Disease Control and Prevention (CDC) suggests that autism and related disorders are more common than previously thought. It is unclear whether this is due to an increasing rate of the illness or an increased ability to diagnose the illness.

Autism affects boys more often than girls. Family income, education, and lifestyle do not seem to affect the risk of autism.

Some doctors believe the increased incidence in autism is due to newer definitions of autism. The term "autism" now includes a wider spectrum of children. For example, a child who is diagnosed with high-functioning autism today may have been thought to simply be odd or strange 30 years ago.

Other pervasive developmental disorders include:

- [Asperger syndrome](#) (like autism, but with normal language development)
- [Rett syndrome](#) (very different from autism, and almost always occurs in females)
- [Childhood disintegrative disorder](#) (rare condition where a child learns skills, then loses them by age 10)
- Pervasive developmental disorder - not otherwise specified (PDD-NOS), also called atypical autism

Symptoms

Most parents of autistic children suspect that something is wrong by the time the child is 18 months old and seek help by the time the child is age 2. Children with autism typically have difficulties in:

- Pretend play
- Social interactions
- Verbal and nonverbal communication

Some children with autism appear normal before age 1 or 2 and then suddenly "regress" and lose language or social skills they had previously gained. This is called the regressive type of autism.

People with autism may:

- Be overly sensitive in sight, hearing, touch, smell, or taste (for example, they may refuse to wear "itchy" clothes and become distressed if they are forced to wear the clothes)
- Have unusual distress when routines are changed
- Perform repeated body movements
- Show unusual attachments to objects

The symptoms may vary from moderate to severe.

Communication problems may include:

- Cannot start or maintain a social conversation
- Communicates with gestures instead of words
- Develops language slowly or not at all
- Does not adjust gaze to look at objects that others are looking at
- Does not refer to self correctly (for example, says "you want water" when the child means "I want water")
- Does not point to direct others' attention to objects (occurs in the first 14 months of life)
- Repeats words or memorized passages, such as commercials

Social interaction:

- Does not make friends
- Does not play interactive games
- Is withdrawn
- May not respond to eye contact or smiles, or may avoid eye contact
- May treat others as if they are objects
- Prefers to spend time alone, rather than with others
- Shows a lack of empathy

Response to sensory information:

- Does not startle at loud noises
- Has heightened or low senses of sight, hearing, touch, smell, or taste
- May find normal noises painful and hold hands over ears
- May withdraw from physical contact because it is overstimulating or overwhelming
- Rubs surfaces, mouths or licks objects
- Seems to have a heightened or low response to pain

Play:

- Doesn't imitate the actions of others
- Prefers solitary or ritualistic play
- Shows little pretend or imaginative play

Behaviors:

- "Acts up" with intense tantrums
- Gets stuck on a single topic or task (perseveration)
- Has a short attention span
- Has very narrow interests
- Is overactive or very passive
- Shows aggression to others or self
- Shows a strong need for sameness
- Uses repetitive body movements

Signs and tests

All children should have routine developmental exams done by their pediatrician. Further testing may be needed if the doctor or parents are concerned. This is particularly true if a child fails to meet any of the following language milestones:

- Babbling by 12 months
- Gesturing (pointing, waving bye-bye) by 12 months
- Saying single words by 16 months
- Saying two-word spontaneous phrases by 24 months (not just echoing)
- Losing any language or social skills at any age

These children might receive a hearing evaluation, blood lead test, and screening test for autism (such as the Checklist for Autism in Toddlers [CHAT] or the Autism Screening Questionnaire).

A health care provider experienced in diagnosing and treating autism is usually needed to make the actual diagnosis. Because there is no biological test for autism, the diagnosis will often be based on very specific criteria from a book called the Diagnostic and Statistical Manual IV.

An evaluation of autism will often include a complete physical and nervous system (neurologic) examination. It may also include a specific screening tool, such as:

- Autism Diagnostic Interview - Revised (ADI-R)
- Autism Diagnostic Observation Schedule (ADOS)
- Childhood Autism rating Scale (CARS)
- Gilliam Autism Rating Scale
- Pervasive Developmental Disorders Screening Test - Stage 3

Children with known or suspected autism will often have genetic testing (looking for chromosome abnormalities) and may have metabolic testing.

Autism includes a broad spectrum of symptoms. Therefore, a single, brief evaluation cannot predict a child's true abilities. Ideally, a team of different specialists will evaluate the child. They might evaluate:

- Communication
- Language
- Motor skills
- Speech
- Success at school
- Thinking abilities

Sometimes people are reluctant to have a child diagnosed because of concerns about labeling the child. However, without a diagnosis the child may not get the necessary treatment and services.

Treatment

An early, intensive, appropriate treatment program will greatly improve the outlook for most young children with autism. Most programs will build on the interests of the child in a highly structured schedule of constructive activities. Visual aids are often helpful.

Treatment is most successful when it is geared toward the child's particular needs. An experienced specialist or team should design the program for the individual child. A variety of therapies are available, including:

- Applied behavior analysis (ABA)
- Medications
- Occupational therapy
- Physical therapy
- Speech-language therapy

Sensory integration and vision therapy are also common, but there is little research supporting their effectiveness. The best treatment plan may use a combination of techniques.

APPLIED BEHAVIORAL ANALYSIS (ABA)

This program is for younger children with an autism spectrum disorder. It can be effective in some cases. ABA uses a one-on-one teaching approach that reinforces the practice of various skills. The goal is to get the child close to normal developmental functioning.

ABA programs are usually done in a child's home under the supervision of a behavioral psychologist. These programs can be very expensive and have not been widely adopted by school systems. Parents often must seek funding and staffing from other sources, which can be hard to find in many communities.

TEACCH

Another program is called the Treatment and Education of Autistic and Related Communication Handicapped Children (TEACCH). TEACCH was developed as a statewide program in North Carolina. It uses picture schedules and other visual cues that help the child work independently and organize and structure their environments.

Though TEACCH tries to improve a child's adaptation and skills, it also accepts the problems associated with autism spectrum disorders. Unlike ABA programs, TEACCH programs do not expect children to achieve typical development with treatment.

MEDICINE

Medicines are often used to treat behavior or emotional problems that people with autism may have, including:

- Aggression
- Anxiety
- Attention problems
- Extreme compulsions that the child cannot stop
- Hyperactivity
- Impulsiveness
- Irritability
- Mood swings
- Outbursts
- Sleep difficulty
- Tantrums

Currently, only risperidone is approved to treat children ages 5 - 16 for the irritability and aggression that can occur with autism. Other medicines that may also be used include SSRIs, divalproex sodium and other mood stabilizers, and possibly stimulants such as methylphenidate. There is no medicine that treats the underlying problem of autism.

DIET

Some children with autism appear to respond to a [gluten-free](#) or casein-free diet. Gluten is found in foods containing wheat, rye, and barley. Casein is found in milk, cheese, and other dairy products. Not all experts agree that dietary changes will make a difference, and not all studies of this method have shown positive results.

If you are considering these or other dietary changes, talk to both a doctor who specializes in the digestive system (gastroenterologist) and a registered dietitian. You want to be sure that the child is still receiving enough calories, nutrients, and a balanced diet.

OTHER APPROACHES

Beware that there are widely publicized treatments for autism that do not have scientific support, and reports of "miracle cures" that do not live up to expectations. If your child has

autism, it may be helpful to talk with other parents of children with autism and autism specialists. Follow the progress of research in this area, which is rapidly developing.

At one time, there was enormous excitement about using secretin infusions. Now, after many studies have been conducted in many laboratories, it's possible that secretin is not effective after all. However, research continues.

Support Groups

For organizations that can provide additional information and help on autism, see [autism resources](#).

Expectations (prognosis)

Autism remains a challenging condition for children and their families, but the outlook today is much better than it was a generation ago. At that time, most people with autism were placed in institutions.

Today, with the right therapy, many of the symptoms of autism can be improved, though most people will have some symptoms throughout their lives. Most people with autism are able to live with their families or in the community.

The outlook depends on the severity of the autism and the level of therapy the person receives.

Complications

Autism can be associated with other disorders that affect the brain, such as:

- [Fragile X syndrome](#)
- [Intellectual disability](#)
- [Tuberous sclerosis](#)

Some people with autism will develop seizures.

The stresses of dealing with autism can lead to social and emotional complications for family and caregivers, as well as the person with autism.

Calling your health care provider

Parents usually suspect that there is a developmental problem long before a diagnosis is made. Call your health care provider with any concerns about autism or if you think that your child is not developing normally.

References

Adapted from: University of Florida College of Medicine Department of Psychiatry

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