



# CARD Fact Sheet 3

## Diagnosing & Evaluating Autism: Part 1

Autism and related disabilities, such as PDD-NOS (pervasive developmental disorder -not otherwise specified), Asperger's syndrome, and Rett's syndrome, are difficult to diagnose, especially in young children where speech and reasoning skills are still developing. A child may be three years old before the full characteristics of these disabilities are apparent. Typically, medical professionals are not trained extensively in diagnosing and evaluating autism and related disabilities. Doctors will usually rule out other possibilities before mentioning autism.

Although autism is considered a neurological disability, no specific medical test or procedure can confirm a diagnosis of autism. To gather more information that will accurately profile an individual's strengths and needs, a variety of tests, assessments, and evaluations should be administered.

Part 1 of this fact sheet includes brief descriptions of some medical tests and evaluations that may be ordered for children suspected of having autism or a related disability.

### Medical Tests

Given the variety of theories about the causes of autism and related disabilities doctors may use various medical tests and procedures to help with diagnosis.

There is not always a clinical need to do medical tests. Your doctor(s) can recommend when, or if, a test should be done.

*The following medical tests may help with diagnosis and possibly suggest changes in an intervention or treatment strategy.*

**Hearing:** Various tests such as an audiogram, tympanogram, and the brain stem evoked response can indicate whether a person has a hearing impairment. Audiologists or hearing specialists, have methods to test the hearing of any individual by measuring responses such as turning their head, blinking, or staring when a sound is presented.

If a hearing impairment is detected, treatment could involve minor surgery, use of hearing aids, or antibiotics.

**Electroencephalogram (EEG):** An EEG measures brain waves that can show seizure disorders. In addition, an EEG may indicate tumors or other brain abnormalities. Additional tests will be needed to make an accurate diagnosis of these conditions. During an EEG, sixteen small sensors are placed at various locations on the scalp to record brain waves that a neurologist interprets. An EEG may take one to 24 hours depending on the doctor's goals when ordering the test.

If seizure activity is detected, additional testing may be required and various medications could be prescribed.

**Metabolic Screening:** Blood and urine lab tests measure how a person metabolizes food and its impact on growth and development. Some autism spectrum disorders can be treated with special diets.

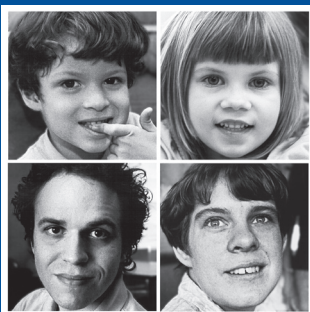
The following medical tests may help locate neurological factors that can affect typical development and could possibly identify or rule out a cause. Results will probably not change intervention or treatment.

**Magnetic Resonance Imaging (MRI):** An MRI involves using magnetic sensing equipment to create an image of the brain in extremely fine detail. The patient lies on a sliding table inside a cylinder shaped magnetic machine and must be still during the procedure. Sometimes patients are sedated in order to complete the MRI.

**Computer Assisted Axial Tomography (CAT SCAN):** An x-ray tube rotates around the patient taking thousands of exposures that are sent to a computer where the section of the body that is x-rayed is reconstructed in great detail. CAT Scans are helpful in diagnosing structural problems with the brain.

**Genetic Testing:** Blood tests look for abnormalities in the genes which could cause a developmental disability.

### RELATED DISABILITIES



## Therapy Evaluations

Many individuals with autism and related disabilities require some form of special therapy at some point during their lives. Therapeutic evaluations can help determine if therapy is required to help an individual fulfill their potential.

**Speech-Language Therapy:** People with autism usually have delays in communication. The most obvious is when they are nonverbal. Yet people who are verbal may also have serious difficulties.

Some individuals can repeat words but can't use language in a meaningful way which is called echolalia. A speech pathologist who specializes in the diagnosis and treatment of language problems and speech disorders can help a person learn how to effectively communicate.

Speech therapists look for a system of communication that will work for an individual with autism and may consider alternatives to the spoken word such as signing, typing, or a picture board with words.

**Occupational Therapy:** Commonly focuses on improving fine motor skills, such as brushing teeth, feeding, and writing, or sensory motor skills that include balance (vestibular system), awareness of body position (proprioceptive system), and touch (tactile system).

After the therapist identifies a specific problem, therapy may include sensory integration activities such as: massage, firm touch, swinging, and bouncing.

**Physical Therapy:** Specializes in developing strength, coordination and movement. Therapists work on improving gross motor skills, such as running, reaching, and lifting. This therapy is concerned with improving function of the body's larger muscles through physical activities including exercise and massage.

## Interpreting The Results

Medical tests look for a physical cause of a disability. Autism and related disabilities are not commonly caused by a physical problem. It is important to work with medical professionals that look at your whole child which includes their medical condition as well as their behavior, communication, and school environment.

### The Center for Autism and Related Disabilities

The Center for Autism and Related Disabilities (CARD) seeks to provide support and assistance with the goal of optimizing the potential of people with autism, dual sensory impairments, and related disabilities. Located at six university sites throughout Florida, CARD develops programs offering support and training for individuals, families, professionals, and peers throughout Florida. This fact sheet is made possible through the cooperative efforts of Florida's CARD Centers.

## For More Information Contact:

Center for Autism and Related Disabilities Sites:

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### University of Florida at Gainesville

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### University of Florida at Jacksonville

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