Understanding Pervasive Developmental Disorders
This information is intended to help you learn about pervasive developmental disorders including the causes, symptoms and treatments. If you have questions about this information, discuss them with your health-care provider.
Pervasive developmental disorders (PDD) are a group of neurobiological conditions with symptoms of delayed development of language and social skills. Children with PDDs typically have many of the following symptoms:

- Problems speaking and understanding language
- Difficulty relating to people or events
- Repetitive, unusual play with toys
- Inability to change routines or adapt to new surroundings
- Repetitive behavior or body movements
- Unusual responses to loud noises and lights

Children with PDD vary in ability, intelligence and behavior. For example, some children’s speech is limited to short phrases, while others do not speak at all. And others may have normal speech but cannot form relationships with people.

Early detection of this disorder is very important. PDDs are often identified by a parent and can be diagnosed by a child psychiatrist or pediatrician by the time the child is three. While there is currently no cure for PDDs, treatment is available. It is aimed at managing the symptoms and behaviors of the different types of PDDs. Treatment is provided by a variety of professionals and may include a psychiatrist, developmental pediatrician, pediatric neurologist, psychologist, speech pathologist and daily paraprofessional assistance.

The Individuals with Disabilities Education Act (IDEA) ensures that every child by age three is entitled to free, specialized preschool services. In fact, every state in the country is required by law to provide the staff and programs necessary to assist children with PDD through all of their school years. Visit the special needs department of your local school district to talk about an education plan for your child.

The five types of PDD are:

- Autism
- Asperger’s syndrome
- Childhood disintegrative disorder
- Rett syndrome
- PDD-not otherwise specified (PDD-NOS)
Autism

Autism is a developmental disorder of brain function. It is the most common PDD. Children with autism appear normal but are withdrawn and unable to relate normally with others. Autism affects boys much more frequently than girls.

The causes of autism are mostly genetic and also include developmental abnormalities in the brain. Parenting practices do not cause autism.

Children with autism may have many, but usually not all, of the following symptoms:
- Avoid looking at people
- Do not respond to their name
- Unable to begin or maintain a conversation with others
- Abnormal, intensely focused and restricted patterns of interests
- Unusual and repetitive play with toys
- Not able to make friends with peers
- Rigid adherence to routines
- Do not like to be cuddled
- Harm themselves with biting or head banging
- Repetitive movements such as rocking and hair twirling

These symptoms often improve with treatment and rehabilitation. Seizures develop in approximately one-third of autistic children — the risk is greatest when the symptoms are severe. Behavior problems may get worse during adolescence and some children may develop depression. Parents need to be adaptable and adjust treatment, as their child’s needs change.

Treatment for autism

Treatment is planned to manage specific symptoms. The following therapies do not cure autism, but often help to improve symptoms:

Educational/behavioral support. Highly structured, skill-oriented training by therapists and other professionals can help children with autism develop social and language skills. Children learn best when they are young, and intervention is most useful when it is started at an early age.

Medications. Your physician may prescribe certain medications to treat some of the symptoms and complications of autism, such as harming themselves, attention problems, seizures, mood disorders or depression. Medications should be used cautiously, with careful supervision and monitoring by your child’s physician or psychiatrist.
Asperger's syndrome

Children with Asperger’s syndrome (AS) have seemingly normal language development and often may be first diagnosed with autism. AS is usually diagnosed after age three.

The symptoms of AS include:
- Limited interests
- Repetitive routines/rituals
- Excellent memorization
- Unusual preoccupations
- Uncoordinated, clumsy motor movements

Treatment for AS

Treatment is directed at controlling symptoms and providing rehabilitation. Medications can help improve mood, while physical therapy may be helpful for motor problems. Other treatments involve parent education, behavior modification, educational interventions and social skills training.

Children with AS can grow up to be adults who are able to care for themselves and hold down a job. However, they may continue to be awkward in their relationships with people. Also, they may be more likely to develop depression, anxiety or mood disorders as adults.

Childhood disintegrative disorder

Children with childhood disintegrative disorder (CDD) begin with normal development and then show signs of regression at about age 18 months to three years. For example, these children may begin to use words in sentences and then slowly stop doing so. They are initially interactive with parents and peers, but become more socially withdrawn with time.

Treatment for CDD

Treatment depends on the degree of regressions, and its goal is to manage the symptoms and behaviors associated with CDD. Behavioral therapy, medications and educational interventions are used, along with counseling and support for the family.
Rett syndrome is a genetic disorder that primarily affects girls. Boys with the disorder die shortly before or after birth. Before symptoms emerge, the child seems to develop and grow normally. Eventually, this progressive neurological disorder causes the following symptoms:

- Loss of muscle tone (hypotonia) — first symptom to appear
- Autisticlike behavior
- Waving and wringing hand movements
- Unable to use hands in a purposeful manner
- Avoid eye contact
- Slowed brain and head growth
- Sleep problems
- Difficulty chewing
- Teeth grinding
- Toe walking and difficulty walking from gait abnormalities
- Scoliosis (a curve of the spine)
- Breathing difficulties such as hyperventilation (deep, rapid breathing)
- Air swallowing
- Seizures

**Treatment for Rett syndrome**

There are many treatment options for Rett syndrome, but there is no cure. The focus of treatment is managing the symptoms. Families need many support services to manage the learning disabilities and seizures associated with Rett syndrome. Some children may need orthopedic therapy to control hand movements, improve gait disturbances and scoliosis.

Pervasive developmental disorders not otherwise specified (PDD-NOS) applies to children who show some of the symptoms of the various PDDs, but not enough symptoms to fit in a particular diagnostic category. Treatment and services for PDD-NOS are the same as for other PDDs and are aimed at managing symptoms.
At times, almost everyone displays some of the behaviors linked with the five forms of PDD. For instance, preschoolers can be inattentive and not respond to their names when they are focused on playing by themselves. Shy children have difficulty talking with others, and their shyness may get in the way of forming friendships with their peers. It is normal for children to be stubborn and self-centered, and they depend on a daily routine.

Children with PDDs, however, display these behaviors more consistently and with more intensity. They seem to be in their own worlds and do not respond to the affection and/or facial expressions of family and friends. Parents may begin to sense something is wrong early on in infancy, and by the time the child is three years old, a diagnosis of PDD may be made.

Accepting that your child has a PDD is difficult. Parents need to mourn the loss of the dreams and aspirations they have for their child. Coming to grips with the fact that your child has a PDD is important in moving on to the work ahead in dealing with the symptoms and behaviors your child displays. You do not have to do this alone. Help is available from your health-care team, your school district and local support groups.

Children with PDDs can live long and productive lives. Seek and accept help so that you can take the best care of your child and your family.

If you have any questions about PDDs or about the information in this booklet, discuss them with your health-care provider.
Notes
BARBARA WOODWARD LIPS PATIENT EDUCATION CENTER

Mrs. Lips, a resident of San Antonio, Texas, was a loyal patient of Mayo Clinic for more than 40 years. She was a self-made business leader who significantly expanded her family’s activities in oil, gas and ranching, even as she assembled a museum-quality collection of antiques and fine art. She was best known by Mayo staff for her patient advocacy and support.

Upon her death in 1995, Mrs. Lips paid the ultimate compliment by leaving her entire estate to Mayo Clinic. Mrs. Lips had a profound appreciation for the care she received at Mayo Clinic. By naming the Barbara Woodward Lips Patient Education Center, Mayo honors her generosity, her love of learning, her belief in patient empowerment and her dedication to high-quality care.