

Pervasive Developmental Disorders (PDD) — Symptoms and Treatment

[See online here](#)

Pervasive developmental disorders (PDD) include autistic spectrum disorders, Asperger syndrome, and PDD not otherwise specified. These disorders are characterized by chronic and severe impairment across different domains of development that occur in early childhood. Accurate diagnosis is crucial for further treatment and behavioral development.



Overview of Pervasive Developmental Disorders (PDD)

Autistic disorder

Autistic disorder is the **most common specific form** of PDD. It is characterized by severe impairment in social and communication skills. Repetitive patterns of behavior and limited interest in daily-life activities are commonly observed.

Asperger syndrome

Asperger syndrome is characterized by **impaired social interaction and repetitive patterns of behavior**; however, patients with this disorder exhibit normal language development. Children with Asperger syndrome tend to accumulate information about specific topics; social interaction and communication are usually focused on these specific topics of interest. This behavioral trait might contribute to social isolation.

Developmental disorder not otherwise specified

Patients with impaired social skills who do not meet the diagnostic criteria for autism and Asperger syndrome are diagnosed with PDD not otherwise specified.

Neurological Disorders Associated with PDD



Image: "Spike Waves" by Der Lange. License: [CC BY-SA 2.0](https://creativecommons.org/licenses/by-sa/2.0/)

Recently, a lot of research has been focusing on the pathophysiology of autism and its association with other neurological and psychiatric disorders. **Individuals with autism or Asperger syndrome are at an increased risk of developing seizures and epilepsy.**

The exact **mechanism of the development of seizures in autism is still unclear**; however, the **mTOR pathway** has been implicated to be common to both autism and specific forms of idiopathic generalized epilepsy.

Additionally, **the electroencephalogram** of up to 60% of children with autism shows **epileptiform discharges**. This correlation between autism and epilepsy has opened doors to evaluate neuroinflammation and inhibition/excitation imbalance as possible pathologies in autism spectrum disorders.

Recent research has provided evidence for **inhibition/excitation imbalance** in children with autism and is in favor of excitation in the temporal and frontal lobes. This imbalance is associated with impaired social interaction, repetitive behavior, and restricted communication, which are a hallmark of children on the autistic spectrum.

In addition to the clear association with seizures, children with autism also tend to **exhibit severe mental retardation. Aggression, tantrums, and self-injury** are common traits in such children.

Epidemiology of PDD

Developmental disorders

The combined estimated prevalence of PDD is 40–60 cases/10,000 children. The prevalence of specific forms of PDD is available from large and well-constructed epidemiological studies.

Autistic disorder

The prevalence of autistic disorders in children is around 10–20 cases/10,000, making it the most common specific type of PDD.

Asperger syndrome

Asperger syndrome is **rare compared to other types** of PDD and has an estimated prevalence of 1–5 cases/10,000 children.

Developmental disorder not otherwise specified

Unfortunately, many children with severely impaired social skills do not meet the criteria for either autism or Asperger syndrome. These children are diagnosed as PDD not otherwise specified.

PDD has been explained by the observation that **autism and Asperger syndrome are phenotypic diagnoses** rather than pathology-oriented diagnoses. This means that children with autism might have a wide array of heterogeneous genetic mutations. Due to this limitation, the **diagnostic criteria may result in the underestimation of autism spectrum disorders**.

Autism is four times more common in boys than girls. The reason behind this gender difference in the prevalence of PDD is **still unknown**.

Clinical Evaluation of PDD

Children suspected to have PDD are usually brought to the clinic based on the following observations:

- Extreme social isolation
- Repetitive behavioral patterns
- Poor communication skills

These observations cause concern to caregivers about their children either being on the autistic spectrum or having a less severe form of PDD.

Due to **the chronicity of the diagnosis**, physicians often hesitate to diagnose the condition as PDD. Additionally, this diagnosis may entail many **implications regarding the prognosis of the condition and the possibility of improvement in the future**.

For an accurate and objective diagnosis of PDD in children, the following three sets of

tools should be primarily used for evaluation:

Categorical diagnosis

Confirm the diagnosis of PDD followed by the determination of its type.

Measurement of the severity

Measure the severity of PDD and its impact on factors such as IQ development. This tool **helps determine the impact** of the disorder on the daily functioning of the child.

Evaluation of symptoms

This tool addresses the concerns of the parent. It **helps evaluate different symptoms** of a disorder and guides **parents to identify one or two symptoms** that cause the most concern. Future interventions are tailored based on the two chosen symptoms.

Assessment for Categorical Diagnosis

These assessment tools are aimed at **categorizing the diagnosis** as autism, Asperger syndrome, or PDD not otherwise specified. Several objective lists have been developed and validated for the categorical diagnosis of PDD.

Autism Behavior Checklist

The Autism Behavior Checklist is a commonly used tool that has **57 items that target several domains of behavior** relevant to autistic disorder. This checklist is **usually filled by a caregiver** and not the physician.

Psychiatric symptom inventories — DSM-IV

These inventories are based on the DSM-IV criteria for the diagnosis of PDD and other psychiatric conditions in children. They are **more specific** and provide **more clinically relevant information than obtained using the Autism Behavior Checklist**. This tool is often **used by the parents, caregivers, or teachers** of children with autism.

The structured diagnostic interview

This is the **most specific and sensitive method** to diagnose autism in children. The interview includes **92 questions that have to be answered by** parents or caregivers of children with autism.

These questions target the following eight primary aspects related to autism:

- Behavior
- Family background
- Educational performance
- Early-developmental milestones
- Language development and communication
- Social development
- Interests and repetitive behavioral patterns
- Clinically relevant behavior (self-injury and aggression)

Asking the parents or caregivers about epilepsy episodes or a history of seizures in their

children is very important. Some studies have shown that a **history of febrile status epilepticus during infancy might be associated with an increased risk of autistic disorder** during childhood.

The Vineland Adaptive Behavior Scales, Aberrant Behavior Checklist, and Developmental Behavior Checklist aim to assess the degree of behavioral impairment. They **focus on antisocial behavior, self-absorbed behavior, impaired communication, anxiety, or impaired social interaction**. IQ and language testing, and studying the degree of repetitive behavioral patterns may help assess PDD in children.

References

Scahill, Lawrence. 2005. "[Diagnosis and Evaluation of Pervasive Developmental Disorders](#)." *The Journal of Clinical Psychiatry*. 66(suppl 10):19-25. Available at: <http://www.psychiatrist.com/jcp/article/Pages/2005/v66s10/v66s1003.aspx>

Legal Note: Unless otherwise stated, all rights reserved by Lecturio GmbH. For further legal regulations see our [legal information page](#).

Notes