

### Introduction

Autism is a group of brain disorders that affect the development of a child. Some forms of autism are mild while others are severe. That is why autism is referred to as an autism spectrum disorder. Asperger's syndrome, also known as AS, is a type of autism spectrum disorder.

Some health care providers prefer the use of autism spectrum disorder to Asperger's syndrome. We will still use Asperger's syndrome in this module as this module deals with a specific segment of the patients affected by autism spectrum disorder.



Children with AS have trouble reading social cues and recognizing other people's feelings. They may have strange movements or mannerisms. This makes it difficult for them to develop friendships.

This reference summary explains what Asperger's syndrome is, what signs and symptoms to look for in children and what treatments are available.

### Asperger's Syndrome

Asperger's syndrome is named after Hans Asperger. Asperger was an Austrian pediatrician who discovered the condition in 1944 while observing children who had difficulty with social interaction.

Asperger's Syndrome, or AS, is a form of autism. Autism disorders can cause problems with language and communication skills. These disorders can also cause repetitive or restrictive thoughts and behaviors, such as doing the same act again and again.

Autism spectrum disorders include:

- Autistic.
- Asperger's disorder.
- Rett's disorder.
- Childhood disintegrative disorder.
- Pervasive developmental disorder not otherwise specified.

Asperger's syndrome is milder than classic autism. But it shares some of its symptoms. It is often diagnosed during childhood. Parents usually notice that their child is different from other children by his or her third birthday.

Children with AS have trouble reading social cues and recognizing other people's feelings. They may also have strange movements or mannerisms. This makes it difficult for them to develop friendships.



Problems with socialization and communication continue into adulthood. Some children with AS develop additional psychiatric symptoms and disorders during adolescence and adulthood.

Asperger's syndrome can exist alongside other mental health problems, such as depression, obsessive-compulsive disorder or attention-deficit hyperactivity disorder. It is more common in boys than girls.

## Symptoms

Symptoms of Asperger's syndrome may be different for every child.

In general, they fall into three areas:

- Social impairment.
- Communication difficulties.
- Repetitive and stereotyped behaviors.

---

This document is for informational purposes and is not intended to be a substitute for the advice of a doctor or healthcare professional or a recommendation for any particular treatment plan. Like any printed material, it may become out of date over time. It is important that you rely on the advice of a doctor or a healthcare professional for your specific condition.

Asperger's syndrome can affect the way a person understands others, talks to others, and acts around others. Usually, a person with Asperger's syndrome has trouble fitting in well with other people.

Other symptoms of AS include:

- Clumsy and uncoordinated motor movements.
- Obsession with a particular subject.
- Repetitive routines or rituals.

AS symptoms also include:

- Socially and emotionally inappropriate behavior.
- The inability to interact successfully with peers.
- Problems with non-verbal communication.
- Abnormal speech and language behaviors, such as speaking very formally or in a monotone voice.



Parents often notice the symptoms of AS by a child's third birthday. Some children may show symptoms during infancy. Crawling or walking late, clumsiness and other problems with motor skills may be the first signs of AS.

Children with AS are often awkward and poorly coordinated. The way they walk can appear either stilted or bouncy. They may have difficulty pedaling a bike, catching a ball or climbing outdoor play equipment.

Children with AS often obsess over a single object or topic. For example, a child with AS may be obsessed with dinosaurs and be able to name every dinosaur that has been discovered. The child may not want to talk about anything else but dinosaurs.



This document is for informational purposes and is not intended to be a substitute for the advice of a doctor or healthcare professional or a recommendation for any particular treatment plan. Like any printed material, it may become out of date over time. It is important that you rely on the advice of a doctor or a healthcare professional for your specific condition.

Children with AS may gather lots of facts about their favorite subject and talk constantly about it. They may display expertise, high level vocabulary and formal speech patterns. But the conversation may seem like a random collection of facts, with no point or conclusion.

Children with Asperger's syndrome may speak with a lack of rhythm, an odd tone or a monotone pitch. They may have trouble changing the volume of their voice to match their surroundings. For example, they may have to be reminded to talk softly at a library or theater.

Children with AS are not shy. But they may be avoided by other children due to their poor social skills and narrow interests. They often try to talk to other children. But their behavior may seem strange and prevent them from making friends.

Many children with AS are active and happy in early childhood, and then develop anxiety or depression in young adulthood.

Other conditions that often co-exist with AS include:

- Attention Deficit Hyperactivity Disorder, or ADHD.
- Tic disorders such as Tourette syndrome.
- Depression.
- Anxiety disorders.
- Obsessive-Compulsive Disorder or OCD.

ADHD stands for Attention Deficit Hyperactivity Disorder. People with ADHD may be inattentive, hyperactive or impulsive.

Tourette syndrome causes people to make unusual movements or sounds, called tics. They have little or no control over these actions.

OCD stands for Obsessive-Compulsive Disorder. It is a type of anxiety disorder in which a person has repeated upsetting thoughts called obsessions. The compulsions they experience are repeated actions meant to make the thoughts go away.



## Causes

Asperger's syndrome may be caused by abnormalities in the brain. Scientists have found structural and functional differences in specific regions of the brain in children with AS.

Autism disorders seem to run in families. This leads scientists to believe that Asperger's syndrome may be an inherited disorder. Genes that cause Asperger's could be passed from a parent to a child.

A specific gene for AS has not been identified. Instead, research shows that there may be a common group of genes that can make a person vulnerable to developing AS.

## Diagnosis

Diagnosing AS is difficult. This is because there is no standard test to screen for Asperger's syndrome.

Different health care providers may use different tests to diagnose AS. Until a standard test is developed, children may receive a different diagnosis depending on which health care provider they see.



Some health care providers believe that AS is not a separate and distinct disorder. Instead, they call it high-functioning autism, or HFA. They view it as being on the mild end of the autism disorders spectrum. They see AS as having the same symptoms as classic autism but with less severity.

Most health care providers look for a main group of behaviors when diagnosing AS. These include:

- Abnormal eye contact.
- Being physically or emotionally distant.
- Not turning when called by name.

---

This document is for informational purposes and is not intended to be a substitute for the advice of a doctor or healthcare professional or a recommendation for any particular treatment plan. Like any printed material, it may become out of date over time. It is important that you rely on the advice of a doctor or a healthcare professional for your specific condition.

Behaviors also include:

- Not using gestures to point or show.
- Lack of interactive play.
- Lack of interest in peers.

The diagnosis of AS usually includes two stages. The first stage begins during a well-child check-up with a health care provider. It includes a check-up of the child's development through tests known as developmental screening tests.

The second stage is a team evaluation. This team may include a psychologist, neurologist, psychiatrist, speech therapist and other professionals who have expertise in diagnosing children with AS. As a group they must decide whether or not a child has AS.

The evaluation usually includes several tests. Tests may evaluate cognitive and language level, psychomotor function, verbal and non-verbal strengths and weaknesses, style of learning and independent living skills.

The health care team will look at the test results and combine them with the child's developmental history and current symptoms in order to make a diagnosis.



## **Treatment**

Treatment for AS includes therapies that address the three main symptoms of the disorder: poor communication skills, obsessive or repetitive routines and physical clumsiness.

An effective treatment program:

- Builds on the child's interests.
- Teaches tasks as a series of simple steps.
- Includes highly structured activities.
- Provides regular reinforcement of behavior.

---

This document is for informational purposes and is not intended to be a substitute for the advice of a doctor or healthcare professional or a recommendation for any particular treatment plan. Like any printed material, it may become out of date over time. It is important that you rely on the advice of a doctor or a healthcare professional for your specific condition.

Treatment programs for AS usually include social skills training. This is a form of group therapy that teaches children with AS the skills they need to interact more successfully with other children.

Treatment programs for AS often include medication. Medication is very important if a child has other conditions such as depression and anxiety.

Treatment programs also may include:

- Cognitive behavioral therapy.
- Occupational or physical therapy.
- Specialized speech/language therapy.

Cognitive behavior therapy is a type of talk therapy that can help children to manage their emotions better and cut back on obsessive interests and repetitive routines.



Physical therapy helps children with sensory problems or poor motor coordination. Physical therapy helps condition muscles and control movement. Occupational therapy teaches people how to manage their daily activities.

Special speech therapy helps children learn how to speak to other people. It teaches children about the give and take of normal conversation.

Parent training and support is often a part of treatment for AS. Specialists help to teach parents behavioral techniques to use at home.

With effective treatment, children with AS can learn to cope with their disabilities. But, they may still find social situations and personal relationships challenging.

Many adults with AS can work successfully in mainstream jobs, although they may continue to need encouragement and moral support to maintain an independent life.

---

This document is for informational purposes and is not intended to be a substitute for the advice of a doctor or healthcare professional or a recommendation for any particular treatment plan. Like any printed material, it may become out of date over time. It is important that you rely on the advice of a doctor or a healthcare professional for your specific condition.

## Summary

Asperger's syndrome is a form of autism. It is milder than autism but shares some of its symptoms. It is more common in boys than girls.

An obsessive interest in a single subject is a major symptom of Asperger's syndrome. A child with AS often becomes an expert on a single subject. He or she may learn high level vocabulary words related to the subject.

Children with Asperger's syndrome have trouble reading social cues and recognizing other people's feelings. They may have strange movements or mannerisms. All of these make it difficult for them to make friends. Problems with motor skills are also common in children with Asperger's syndrome.

The diagnosis of AS is made difficult by the lack of a standardized diagnostic screening.

Treatment for AS focuses on managing the three main symptoms: poor communication skills, obsessive or repetitive routines and physical clumsiness.

There is no cure for Asperger's syndrome. But people with Asperger's syndrome can live full and happy lives, especially if treatment begins early.



---

This document is for informational purposes and is not intended to be a substitute for the advice of a doctor or healthcare professional or a recommendation for any particular treatment plan. Like any printed material, it may become out of date over time. It is important that you rely on the advice of a doctor or a healthcare professional for your specific condition.