

# **Attention Deficit/Hyperactivity Disorder**

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# Attention Deficit/Hyperactivity Disorder (ADHD)

- ADHD – is characterized by a pattern of diminished sustained attention and higher levels of impulsivity in a child or adolescent that expected for someone of that age and development level.

# ADHD

Begins in childhood,  
before age 12 years

No biological markers are  
diagnostic

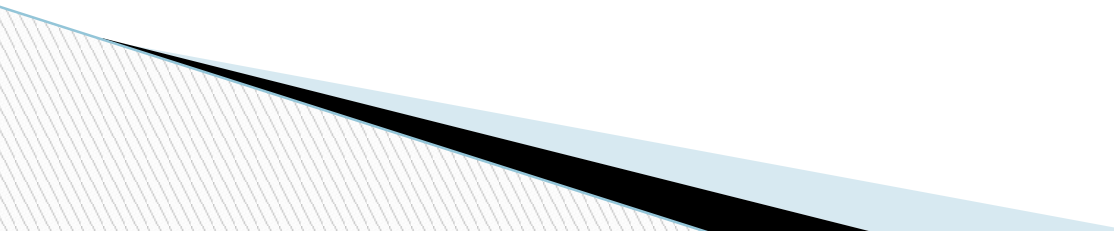
# ADHD Classification by DSM-5

A (1) - Inattention - six (or more) of the following symptoms have persistent for at least 6 month to a degree that inconsistent with developmental level and that negatively impacts directly on social and academic/occupational activities.

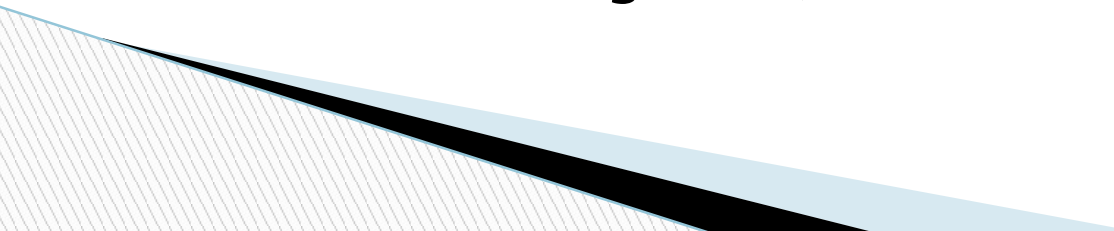
A (2) - Hyperactivity and impulsivity

A - A present of pattern of inattention and/or hyperactivity - impulsivity that interferes with functioning or development

# Inattention

- ❑ Often fails to give close attention to details or makes careless mistakes in schoolwork, at work, or with other activities.
  - ❑ Often has trouble holding attention on tasks or play activities.
  - ❑ Often does not seem to listen when spoken to directly.
  - ❑ Often does not follow through on instructions and fails to finish schoolwork, chores, or duties in the workplace (e.g., loses focus, side-tracked).
  - ❑ Often has trouble organizing tasks and activities.
  - ❑ Often avoids, dislikes, or is reluctant to do tasks that require mental effort over a long period of time (such as schoolwork or homework).
  - ❑ Often loses things necessary for tasks and activities (e.g. school materials, pencils, books, tools, wallets, keys, paperwork, eyeglasses, mobile telephones).
  - ❑ Is often easily distracted
  - ❑ Is often forgetful in daily activities.
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# Hyperactivity and impulsivity

- Often fidgets with or taps hands or feet, or squirms in seat.
  - Often leaves seat in situations when remaining seated is expected.
  - Often runs about or climbs in situations where it is not appropriate (adolescents or adults may be limited to feeling restless).
  - Often unable to play or take part in leisure activities quietly.
  - Is often "on the go" acting as if "driven by a motor".
  - Often talks excessively.
  - Often blurts out an answer before a question has been completed.
  - Often has trouble waiting his/her turn.
  - Often interrupts or intrudes on others (e.g., butts into conversations or games)
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B – Several inattentive or hyperactive – impulsive symptoms were present prior to 12 years

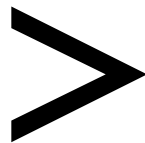
C – Several inattentive or hyperactive – impulsive symptoms are present in two or more settings

D – There is clear evidence that the symptoms interfere with, or reduce the quality of social, academic or occupational functioning.

E – The symptoms do not occur during the course of schizophrenia or another psychotic disorder and are not better explained by another mental disorder.

# Prevalence

- ADHD – occurs in most cultures in about 5% of children and about 2.5% of adults.





# Development and Course

ADHD is most often identified during elementary school years.

In preschool, the main manifestation is hyperactivity.

Inattention becomes more prominent during elementary school.

During adolescence, signs of hyperactivity are less common.

In adulthood, along with inattention and restlessness, impulsivity may remain problematic even hyperactivity has diminished.

# Risk and Prognostic factors

Temperamental- ADHD is associated with reduced behavioral inhibition, negative emotionality. Some traits may predispose some children to ADHD.

**Environmental - very low birth weight ( less than 1500 gr.) conveys a two- to three - fold risk for ADHD.**

Smoking during pregnancy

Alcohol exposure in utero

Exposure to environmental toxicants

Infections (encephalitis)

Neurotoxin exposure

# Genetic and physiological factors

ADHD is elevated in the first degree biological relatives of individuals with ADHD.

Visual and hearing impairments, metabolic abnormalities, sleep disorder, nutritional deficiency and epilepsy, should be considered as possible influences on ADHD symptoms.

# Differential diagnosis

**Oppositional - defiant disorder**

**Intermittent explosive disorder**

**Specific learning disorder**

**Intellectual disability**

**Autism spectrum disorder**

**Reactive attachment disorder**

**Anxiety disorders**

**Depressive disorders**

**Bipolar disorder**

**Disruptive mood dysregulation disorder**

**Substance use disorder**

**Personality disorder**

**Psychotic disorder**

**Medication induced symptoms of ADHD**

**Neurocognitive disorders**

# Comorbidity

Oppositional –  
defiant  
disorder

Conduet  
disorder

Specific  
learning  
disorder

Anxiety  
disorders

Major  
depression  
disorder

Tic disorder

Autism  
spectrum  
disorder



# Treatment

## Pharmacotherapy:

First line – CNS stimulation –  
Methyphenidate (Ritalin, Ritalin SR,  
Concerta). Dextroamphetamine  
and amphetamine (Adderall,  
Adderall XR).

## Second line - Atomoxetine (Strattera)

Norepinephrine uptake  
inhibitor

Antidepressants (Bupropion,  
velafexine)

$\alpha$ -adrenergic agonists - clonidin

# Monitoring pharmacological treatment

Height

Blood pressure

Weight

Physical examination

Pulse

# Psychosocial interventions

- Social skill groups

- Training for parents of children with ADHD

- Behavioral interventions at school and at home



# תודה על ההקשבה



