

# Pediatric ADHD: Final Review

---

**Definition:** A neurobehavioral disorder characterized by 3 core symptom types: Hyperactivity, Impulsivity, and Inattention. Onset is usually **before 7 years of age**.

## 1. Epidemiology & Etiology

- **Prevalence:** 3-5% of school-aged children (community rates 4-12%). In Jordan, total prevalence was ~6.24%.
- **Gender Ratio:** Males to Females is 3:1 up to 4:1. (Inattentive type is most common in females).
- **Genetics:** Highly heritable. 90% concordance in identical twins. Tied to an unusual form of the **D4 dopamine receptor gene** (receptors are less sensitive, causing an imbalance between Noradrenaline and Dopamine).
- **Prenatal Factors:** Maternal smoking, drugs, and alcohol.

## 2. Diagnosis (DSM Criteria)

Diagnosis requires symptoms to be statistically abnormal for the child's age/development.

- Onset before age 7 years.
- Symptoms present for **at least 6 months**.
- Present in **two or more settings** (e.g., home AND school).
- Cannot be secondary to another disorder.

### MCQ Pearl: The Diagnostic Steps

1) Parent interview. 2) Child interview. 3) Behavior-rating scales. 4) School data (grades, teacher input). 5) Psychological testing (IQ/Learning Disabilities). 6) Physical/Neuro exam (to rule out medical causes).

## 3. Co-morbidities & Differential Diagnosis

Must rule out medical causes like Thyroid dysfunction, Absence seizures, Migraines, Sleep disorders (OSA), and Learning Disabilities. Co-morbidities are extremely high:

- **Oppositional Defiant Disorder (ODD):** 35%
- **Conduct Disorder (CD):** 35%
- **Anxiety Disorders:** 25%
- **Depression/Mood Disorders:** 18%

## 4. Medications & Management

Drug Class	Examples	Key Exam Notes & Side Effects
<b>Stimulants</b>	Methylphenidate (Ritalin, Concerta), Adderall	First-line. Normalizes NA/Dopamine imbalance. Onset in 30 mins. <b>Side effects:</b> Weight loss, sleep disturbance, tics, agitation.
<b>Non-Stimulants</b>	Atomoxetine (Strattera)	Acts on different neurotransmitters. Has some antidepressant properties.

### Mnemonic: ADHD Stimulant Side Effects

#### W A S T E

- Weight loss
- Agitation
- Sleep disturbance (insomnia)
- Tics (exacerbation)
- Emotional lability (mood swings)