



ADHD in Women: Implications for Treatment in the Perinatal Period

KEY FACTS

- ADHD is one of the most common neurodevelopmental disorders, and symptoms typically extend across the lifespan.¹
- Though historically underdiagnosed in girls and women,² women are now as likely to be diagnosed with ADHD in adulthood as men.³ The current ADHD prevalence for all adults is 4.4%.⁴
- Untreated or unmanaged ADHD symptoms are associated with a range of impairments in adulthood and during the perinatal period, including higher rates of unplanned pregnancies,⁵ poorer prenatal health,⁶ and increased birth complications.⁷
- As more adult women are receiving ADHD diagnoses, many are seeking support for managing their symptoms during preconception and the perinatal period (i.e., pregnancy and postpartum).

In this document, the term “woman” is intended to include all people who identify as female or were assigned female at birth.

BACKGROUND

What is ADHD?⁸

- A brain-based disorder that is characterized by levels of inattention and/or hyperactivity/impulsivity that are greater than what would be expected for a person’s age or developmental level.
- For individuals aged 17 years and older to meet criteria for ADHD, a person must exhibit at least 5 symptoms of inattention or hyperactivity/impulsivity. See table below for symptoms.
- Several symptoms must have been present in childhood (i.e., younger than age 12).
- Symptoms must be persistent for at least 6 months and occur across multiple settings.
- Symptoms cannot be better explained by other factors, such as another mental health condition (e.g., depression, anxiety, psychosis, etc.).
- To meet criteria for an ADHD diagnosis, symptoms must be associated with functional impairment. ADHD can contribute to a range of significant challenges including social and emotional difficulties, academic underachievement, financial hardships,⁹ employment challenges,¹⁰ and premature death.¹¹

INATTENTION	HYPERACTIVITY AND IMPULSIVITY
Trouble paying attention to details/makes careless mistakes	Fidgeting
Trouble sustaining attention	Trouble staying seated when expected
Seems to not be listening	Often feeling or seeming restless
Trouble following instructions/finishing tasks	Trouble engaging in tasks quietly
Difficulty organizing	“On the go” or “driven by a motor”
Avoiding tasks that require concentration	Talking excessively
Losing materials	Blurts out answers to questions before they are completed
Easily distracted	Trouble waiting turn
Forgetful	Interrupting/intruding on others



What does ADHD look like in women?

ADHD CRITERIA	CONSIDERATIONS FOR WOMEN
<p>Atypical levels of inattention, hyperactivity, and/or impulsivity that have been present for at least 6 months</p>	<ul style="list-style-type: none"> • Women are more likely to present with symptoms of inattention rather than hyperactive and impulsive behaviors.¹² • Women may show more hyperv verbal behavior than hyperactive behavior.² • There is some emerging evidence that hormones may impact symptom expression; for example, in response to fluctuating steroids across the menstrual cycle.¹³
<p>Several symptoms of ADHD present in childhood (i.e., younger than age 12)</p>	<ul style="list-style-type: none"> • Symptoms might not become apparent in women until around puberty.¹⁴
<p>Symptoms present in at least two settings</p>	<ul style="list-style-type: none"> • Women often “mask” or hide their ADHD symptoms from others.¹⁵ • Women frequently develop extensive coping strategies to cover up symptoms around others.¹⁶
<p>Symptoms significantly impact functioning</p>	<p>Compared to women without ADHD:</p> <ul style="list-style-type: none"> • Women with ADHD are more likely to experience pregnancy as teenagers and have significantly greater rates of unplanned pregnancies.¹⁷ • Women with ADHD are 5 times more likely to experience intimate partner victimization.¹⁸ • Women with a childhood history of ADHD are twice as likely to have engaged in self-harm and are at significantly higher risk for attempting suicide.¹⁹
<p>Symptoms are not better explained by another condition</p>	<ul style="list-style-type: none"> • Women with ADHD are more likely to experience mood and anxiety concerns,²⁰ which can make it especially hard to parse the potential contribution of ADHD from these symptoms. • At least some difficulty with attention or behavior should have been present prior to a significant life change, such as pregnancy.

ADHD IN THE PERINATAL PERIOD

What do ADHD symptoms look like for perinatal patients?

- Hormonal, physical, and emotional changes during the perinatal period may impact the presentation of ADHD symptoms. ADHD symptoms can be hard to distinguish from other mental health or neurodevelopmental conditions that often co-occur with ADHD, or from life experiences such as pregnancy. Additionally, female ADHD patients may be more likely to experience premenstrual dysphoric disorder (PMDD) and postpartum depression after first childbirth.²¹
- Perinatal patients may also describe symptoms that sound like ADHD but are better attributed to other disorders. Having the symptoms and experiences associated with ADHD does not necessarily mean someone meets criteria but may indicate that further evaluation is warranted.

Note: The descriptions provided in the table below are general and may not apply to a person's individual experience or the presentation of the condition at all times. The table does not include all conditions and experiences that might overlap with ADHD.

SYMPTOMS/EXPERIENCES	ADHD ²²	AUTISM SPECTRUM DISORDER ²³	DEPRESSION ²⁴	ANXIETY ²⁵	BIPOLAR DISORDER ²⁶	"NORMAL" PSYCHOLOGICAL CHANGES IN PERIPARTUM ²⁷
Difficulty completing daily tasks	Often	Sometimes	Often	Sometimes	Sometimes	Sometimes
Trouble concentrating during different activities	Often	Sometimes	Often	Often	Often	Sometimes
Easily distracted and trouble getting back on track	Often	Sometimes	Sometimes	Sometimes	Sometimes	Sometimes
Frequently fidgeting or moving their body	Often	Sometimes	Sometimes	Sometimes	Sometimes	Rarely
Often forgetting steps in daily routines or information that they have been told	Often	Rarely	Sometimes	Rarely	Sometimes	Sometimes
Often engaging in risk-taking behavior	Often	Rarely	Sometimes	Rarely	Very often	Rarely
Often irritable or easily frustrated	Sometimes	Sometimes	Often	Often	Often	Sometimes
Changes in appetite or weight	Sometimes	Rarely	Very often	Sometimes	Very often	Very often
Frequently feeling guilty, worthless, or helpless	Sometimes	Rarely	Very often	Sometimes	Very often	Rarely
Thinking a lot about death or dying	Rarely	Rarely	Often	Sometimes	Often	Rarely
Experiencing worry about upcoming events	Rarely	Rarely	Rarely	Very Often	Rarely	Often
Feeling prolonged periods of sadness, emptiness, or hopeless	Rarely	Rarely	Very often	Sometimes	Often	Rarely
Significant change in energy from person's typical level	Rarely	Rarely	Very often	Rarely	Very often	Very often
Changes in sleep quality, patterns, or habits	Rarely	Rarely	Very often	Often	Very often	Very often

How can I determine whether further evaluation for ADHD is warranted?

- Disparities in the diagnosis and treatment of people with ADHD have been well-documented, attributed in part to teacher and clinician biases, racism, social determinants of health and equitable access to resources, and stigma.²⁸
- Providers can help address this by talking with their patients about their attention and/or behavioral concerns and may consider using some of the questions below to better understand the timeline and frequency of symptoms, particularly in the context of the perinatal period.
- The screening tools and questions listed below can help guide conversations and gather additional information. You may determine that further assessment for ADHD is needed.

QUESTIONS YOU MIGHT ASK	TOOLS AND TIPS FOR SCREENING
<ul style="list-style-type: none"> • Do you experience these symptoms more often than your friends or co-workers? • Have other people commented on these behaviors? 	<ul style="list-style-type: none"> • Self-report screening of ADHD symptoms during adulthood: Adult ADHD Self-Report Scale (ASRS-v1.1) Symptom Checklist • Screening of ADHD symptoms observed by someone who knows the patient well (e.g., partner, family member, friend, colleague, etc.): Adult Observer ADHD Questionnaire
<ul style="list-style-type: none"> • When did these symptoms start? • Do you recall having these kinds of challenges as a child? • How did people describe you as a child? • Do you recall academic challenges or having to put significantly more effort in than other students? • What were your social relationships like as a kid? • What did things look like before you conceived? Was the change marked by pregnancy? • Did the symptoms begin shortly after a recent traumatic event? • Do attention and behavior improve when you are not feeling anxious or depressed? 	<ul style="list-style-type: none"> • Self-report measure of childhood ADHD symptoms: Wender Utah Rating Scale for the Attention Deficit Hyperactivity Disorder • Measure of childhood ADHD symptoms by someone who knew the patient well at that time: Wender Utah Rating Scale – Observer Rating (scroll to page 6) • Have patient recall specific milestones in the past few years (e.g., holidays, performance review at work, completion of a degree, beginning of a relationship, etc.) and ask whether attention or behavior concerns were present at those times. • Have patient reflect on whether their concerns are present at times of year that may be less stressful for them (e.g., during vacations).
<ul style="list-style-type: none"> • Have these symptoms impacted you at work? At home? Socially? How so? • What feedback have you gotten about your performance from employers? • Are there certain behaviors that family members or friends have commented on that you would like to change but find it hard to do so (e.g., often running late, frequently losing personal items, interrupting others' conversations, etc.)? • How much do your symptoms impact activities in your daily life, such as driving (e.g., frequent accidents or speeding tickets, etc.)? 	<ul style="list-style-type: none"> • Rating scale of how ADHD symptoms may impact aspects of life: Weiss Functional Impairment Rating Scale

Who can conduct an ADHD evaluation for my patient?

- A primary care provider may be able to complete an evaluation for adult ADHD, and many patients will likely want to start by talking with their PCP. However, an evaluation for a new diagnosis of ADHD in adulthood may need to be completed by a mental health provider, such as a psychologist or psychiatrist.
- This [guide](#) from the [Duke Center for Girls & Women with ADHD](#) describes which providers can typically assess and/or treat ADHD.
- Patients can search the Children and Adults with ADHD (CHADD) [resource directory](#) for providers in their area who may be able to conduct evaluations.
- [NC MATTERS](#) can also provide additional resources for evaluation through the psychiatry access line.

TREATING ADHD IN PERINATAL PATIENTS

Can I initiate or continue my patient's ADHD medication during pregnancy?

- There is little evidence that the use of ADHD medications as prescribed increases risk to a fetus in a clinically meaningful way.²⁹ That said, all psychotropic medications will cross the placenta, be present in amniotic fluid, and enter breast milk.³⁰
- Choosing to initiate, discontinue, or forgo medication should result from shared decision-making with the patient, who is informed of the risks of both treating and choosing not to treat their symptoms. Our priority is to help our patients maintain mental health stability and functioning.³¹
- Preliminary research suggests that discontinuing psychostimulants during pregnancy increases risk for depressive symptoms and impaired family functioning.³² Discontinuing a medication that is beneficial prior to or early in their pregnancy may put the person, their family unit, and pregnancy at greater risk for a negative outcome than continuing to treat the person for their ADHD symptoms.
- The lowest, most effective dose should always be used.³³

MEDICATION	PREGNANCY	BREASTFEEDING	RELATIVE INFANT DOSE*
Amphetamine/ dexamphetamine	No associations with cardiac malformations have been found with intrauterine exposure in first trimester. ³⁴ Limited data and considered probably compatible.	Monitor infants for agitation. Larger doses may decrease milk supply. ³⁵	2.46%-7.25%
Methylphenidate³⁶	There is conflicting data about increased risk of spontaneous abortions, prematurity, SGA, and perinatal complications. ³⁷ Small increased risk of cardiac malformations associated with intrauterine exposure in first trimester. ³¹	Monitor infants for agitation and poor weight gain. Larger doses may decrease milk supply. ³⁵	0.19%-0.4%
Modafinil/ Armodafinil³⁸	Very limited data. Possible association with risk of malformations with first trimester exposure. ³⁹ Similar classes of drugs are associated with intrauterine growth retardation and spontaneous abortion. ³¹	Limited information is available, and no adverse effects have been found in the research. May decrease milk supply. ³⁵	5.15%-5.29%
Atomoxetine	No increase in major congenital malformations overall and no statistically increased risk estimates for cardiac or limb malformations. ⁴⁰	May increase sedation in infants. There are no studies on use during breastfeeding. ⁴¹	No information available because this is a lipophilic, neuroactive drug.
Bupropion	Increased risk of congenital malformations has not been observed; however, there may be a small risk of cardiovascular defects (2.1-2.8 per 1,000 births). ⁴²	Monitor for possible increased seizure risk. May decrease milk supply. ³⁵	0.11%- 1.99%
Clonidine	Available data comes from use as an anti-hypertensive agent, which is given at a higher dose compared to use for ADHD treatment. ³⁴ Risk to fetus cannot be ruled out.	May decrease milk supply. Observe infant for hypotension. ³⁵	0.9%-7.1%
Guanfacine	Very limited data. Risk to fetus cannot be ruled out. ³⁴	Animal studies show drug is secreted into milk. No other data available. ³⁵	Not available

* Relative Infant Dose (RID) is the weight adjusted percentage of the breastfeeding person's dose an infant receives through milk. Commonly accepted practice is an RID of <10% is probably safe for the infant. Clinically, safety depends both on maternal dose and toxicity of the medication.

RESOURCES FOR PATIENTS WITH ADHD

Psychotherapy

- **Cognitive Behavioral Therapy (CBT) for Adults with ADHD:** an evidence-based therapy⁴³ that helps people change unhelpful ways of thinking that might be affecting their thoughts, actions, or overall wellbeing. It also teaches skills that help manage some of the problems that can come with ADHD, like trouble with time management, staying organized, and planning ahead.
- **Mindfulness for Adults with ADHD:** a method that does not have as much research behind it as CBT, but has been shown to help manage ADHD symptoms, stress, depression, and anxiety by helping people develop skills to help their mind stay focused on the present.⁴⁴

Support Groups

- **Postpartum Support International (PSI)** offers a virtual support group for pregnant and postpartum moms and birthing people with a diagnosis of ADHD.
- **Attention Deficit Disorder Association (ADDA)** offers virtual peer support groups and work groups.
- **Children and Adults with ADHD (CHADD)** has local support groups for individuals with ADHD.



Organizational Support

- **ADHD Coaching:** these professionals offer practical advice and help people with ADHD learn skills to stay organized, manage their time, and set goals.
- **Professional organizer / house manager:** these professionals can help with getting your home tidy/organized, creating easy-to-follow routines, and helping you to remember important tasks.
- **“Body-doubling” / accountability buddy:** having another person around while you work can make it easier to stay focused and get things done.



Digital Interventions

- **ADHD Apps:** there are several mobile apps available that can help with time management, reducing distractions, improving sleep, and organizing information. Find a comprehensive list at [additudemag.com](https://www.additudemag.com).

Self-Care

- Engaging in self-care and doing things to reduce stress can help with ADHD symptoms and make it easier to get things done. You might try exercising, healthy eating, connecting with friends, spending time outside, getting good sleep, and resting.

Research and Additional Guidance

- **CHADD:** Children and Adults with Attention-Deficit/Hyperactivity Disorder (CHADD) is the nation's leading nonprofit organization serving people affected by ADHD.
- **ADDitude Magazine:** Expert guidance and support for living better with ADHD and its related mental health conditions.
 - **“ADHD, Pregnancy, and Motherhood: A Practical Guide for Hopeful Parents”** ADDitude webinar from 5/11/2023.
- **Duke Center for Girls & Women with ADHD:** A specialized center within the Duke ADHD Program dedicated to advancing knowledge about Attention-Deficit/Hyperactivity Disorder (ADHD) in girls and women.
- **Massachusetts General Hospital (MGH) Center for Women’s Mental Health:** Evidence-based resources to help patients and their providers learn about new research in women’s mental health so they can make good decisions together about care.

ADDITIONAL PROVIDER RESOURCES

Free Provider Consultation with NC MATTERS

NC MATTERS is a free consultation service for North Carolina healthcare professionals working with pregnant and postpartum women with mental health concerns. A perinatal psychiatry provider can answer your questions about patient care and help connect you to local resources.



Call
919-681-2909 x 2



Learn more at
ncmatters.org



Information on medication use during pregnancy and infant feeding

Mother to Baby mothertobaby.org

- Fact sheets on perinatal exposures to share with patients
- Chat with an exposure expert, enroll your patient in observational studies, or schedule a patient consult

Lactmed ncbi.nlm.nih.gov/books/NBK501922

- Database on exposure of drug and chemicals to which a breast/chest-feeding parent may be exposed

Infant Risk Center at Texas Tech University Health Sciences infantrisk.com

- InfantRisk App where healthcare providers can access information on medication safety during pregnancy and breastfeeding
- Free call center for patients to discuss their questions with experienced nurses

Massachusetts General Hospital (MGH) Center for Women's Mental Health womensmentalhealth.org

- Weekly blog summarizing recent publications in women's mental health
- Free virtual grand rounds and live online courses for providers

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