

ADHD in Girls and Women: What Does
it Look Like? How is it Affected by
Hormones?

Melanie Hamm, CNP, PMHS

Session objectives

- Explain symptoms of ADHD in females that differ from those in males.
- Why ADHD is often misdiagnosed or overlooked.
- How ADHD is affected by hormonal changes throughout a female's life.



What is ADHD?

- Chronic neurobiological disorder
- Brain based disorder of self regulation and executive functioning
- Performance disorder
- Neurological inefficiency in the area of the brain that controls impulses
- Dimensional disorder of human behaviors that are maladaptive and developmentally inappropriate compare to others at that age.
- Medical condition caused by genetic factors that result in neurological differences.

Spontaneous,
Creative,
Persistent,

Adventurous,
Inquisitive,
Resourceful

What it IS

Empathetic,
Charming,
Enthusiastic

Charismatic,
Funny,
Playful,
Passionate

Willing to try
new things,
accepting and
forgiving

Optimistic,
Intelligent,
Outgoing

Male Versus Female

- Women experience more inward/mood symptoms associated with ADHD, whereas males experience more outward
- More shame and self doubt
- Experience more central nervous system hypersensitivities (tactile defensiveness and sensory overload)
- Hormonal involvement
- Significance of gender role expectations
- Motivation to compensate
- Women have more social impairment and early trauma
- Females are less likely than males to be treated for ADHD.
- Females have more co-morbid issues like anxiety, depression, dysregulated eating, personality disorders.
- Long term positive outcomes are less in females.

Female ADHD Symptoms Throughout Life

- It is important to remember that one size does not fit all.
- Focus on what it looks like in real life, not what it SHOULD look like.
- Symptoms must be present prior to age 12, but that does not mean all diagnoses are prior to age 12.
- ADHD requires treatment.
- People do not “outgrow” ADHD.

Impulsivity in Females

- Impulsivity turns inward.
- Verbal impulsivity
- Cognitive impulsivity
- Motivational impulsivity
- Emotional impulsivity

Executive Functioning

- Part of your brain that helps you get things done
- Time management/time blindness
- Move from one task to another
- Sustained attention to finish a task
- Starting a task
- Goal persistence
- EF lags behind by 30% in people with ADHD

ADDITUDE | Women's Health Month 2023

“The most misunderstood symptom of ADHD is emotional dysregulation. Particularly for women, this piece gets either downplayed or used to justify mood disorder diagnoses that aren't accurate.”

—Em, New York

additu.de/misunderstood



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Emotional Dysregulation

- ADHD impairs the ability to regulate feelings.
- The result is overblown, extremely emotional reactions to often small problems.
- The brain handles emotional reactions and decision making. Anger/worry tells the brain to send a message to the cerebral cortex. The cerebral cortex then sends a message to the body to take a deep breath and think.
- For people with ADHD, this connection is very weak.
- Very difficult to manage and often ignored in treatment.



Trauma Associated with ADHD for Females

- Females with ADHD are at a higher risk for trauma.
- Lower level traumas like being bullied or having school anxiety
- Home life abuse (verbal or physical)
- Parental disorders like alcoholism
- Girls are often unwilling to discuss trauma in order to protect others out of fear
- Girls often not willing to open up to male doctors/counselors for fear of judgement or that their feelings will be dismissed
- Hard to focus on anything else if one is constantly worried or reliving trauma.

Social Deficits

- Affect women more than men
- Often feel overwhelmed with the demands of friendships
- Rejection sensitivity
- More likely to engage in risky sexual behaviors compared to women without ADHD.
- Social acceptance (manage oneself, family, home, work, body, parties, events, etc).

Does ADHD Affect Eating Habits?

- Impulsive eating
- ADHD brains crave carbs
- Higher risk for Binge Eating Disorder and Bulimia



Why are females undiagnosed?

- Hide their symptoms well or learn how to appear less symptomatic.
- Expectations are different from males.
- Females are often people pleasers.
- Girls feel shame in having ADHD symptoms, internalizing criticism.
- They are hesitant to give up information to male doctors for fear of judgement.
- ADHD symptoms often look like symptoms of a Mood Disorder based on observable behaviors.
- Unfamiliar with hormonal impact

- Gender bias- non disruptive symptoms do not often raise concerns in the classroom or workplace.
- Rating scales are skewed towards male oriented behavior symptoms over impairment.
- Most rating scales are not normed for women.
- Recent gains in diagnosing women, but research is still far behind.
- Females have more comorbid diagnoses than males, making it harder to decipher between the diagnoses.
- Symptoms of hormonal changes like menopause can mimic cognitive disorders like dementia or early onset Alzheimers.
- Females receive less referrals for testing and treatment.

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“There’s still a tendency to think that, if a girl doesn’t meet the mold of the fidgety, squirmy kid who can’t sit still in the waiting room, they can’t have ADHD.”

—Stephen Hinshaw, Ph.D.

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Young/School Age

- Inattentive/daydreamy
- May be overly talkative
- May be quiet and shy
- Avoidance
- Often well liked by peers and teachers
- C/O stomach aches and/or headaches before school
- Most rapid development in prefrontal cortex during these years.



Teen/Adolescent

- Difficulty maintaining friendships
- Grades drop
- Emergence of other mood symptoms
- Mask symptoms well by this age
- Poor time management skills
- Procrastination
- Difficulty balancing multiple activities
- Fatigue, sleeping more
- Continued somatic complaints
- Risky behaviors



College/Young Woman

- Overwhelming anxiety
- Dietary changes
- Time blindness
- Difficulty re-engaging after distraction
- Difficulty balancing responsibilities
- Late for class, missed assignments
- Fatigue and/or sleep difficulties
- Risky behaviors
- Increase in self harm, picking, cutting



Adult

- Controlling/demanding
- Easily irritated
- Difficulty organizing tasks at work
- Late for work
- High risk behaviors- speeding, extreme sports
- Addictive traits- gambling, substance abuse



Pregnancy

- Still have ADHD symptoms, but they are not as prone to worsening due to hormonal changes.
- Symptoms can be worse due to the fact that most women defer ADHD treatment while pregnant.
- For planned pregnancies, positive feelings about pregnancy can help a female cope with ADHD symptoms better.
- For unplanned pregnancies the opposite is true, and ADHD symptoms are often worsened due to negative thoughts about pregnancy.



Motherhood

- Psychological stressors increase with new responsibilities of motherhood.
- Inconsistent eating patterns
- Sleep deprivation
- Postpartum Anxiety/Depression
- Mothers tend to hide symptoms from spouses/friends



- Moms feel the need to meet unrealistic expectations.
- Decrease in executive functioning skills for moms with ADHD.
- Emotional dysregulation gets worse.
- Often have a more harsh parenting style due to lower parental control.



Perimenopause/ Menopause

- Most severe symptom is brain fog and poor memory
- Time management, procrastination, distractibility
- Affects job performance
- Worsening emotional dysregulation
- Sometimes very severe symptoms mimic dementia
- Mood lability, sleep disturbance, temper outbursts, depression, financial impulsivity



“

ADHD makes us feel like we're terrible at being women.

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Kathleen Nadeau, PhD

Kathleen Nadeau is the founder and clinical director of Chesapeake ADHD Center of Maryland, the largest private ADHD specialty clinic in the US. She has written many books, most with a focus on ADHD in females.

Hormonal changes and their effects on ADHD

The 4 P's

- Puberty
- Pregnancy
- Postpartum
- Perimenopause/Menopause

Most females have no idea how much the role of estrogen plays in cognition, behavior, and ADHD. Understanding changes in hormones, primarily estrogen, is key to understanding and helping girls and women with ADHD, no matter their age.

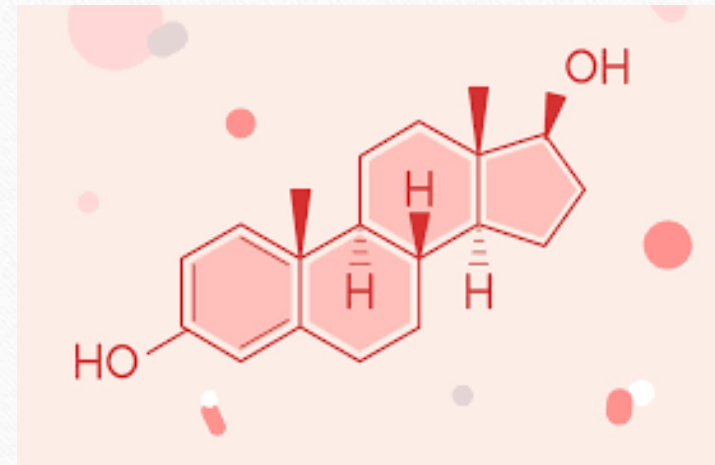
Changes in Puberty

- Ages 8-13
- Physical changes
- Mood changes
- Hormonal changes. Estrogen surges, around the same time ADHD symptoms often become more apparent in females.
- Start of menstrual cycle

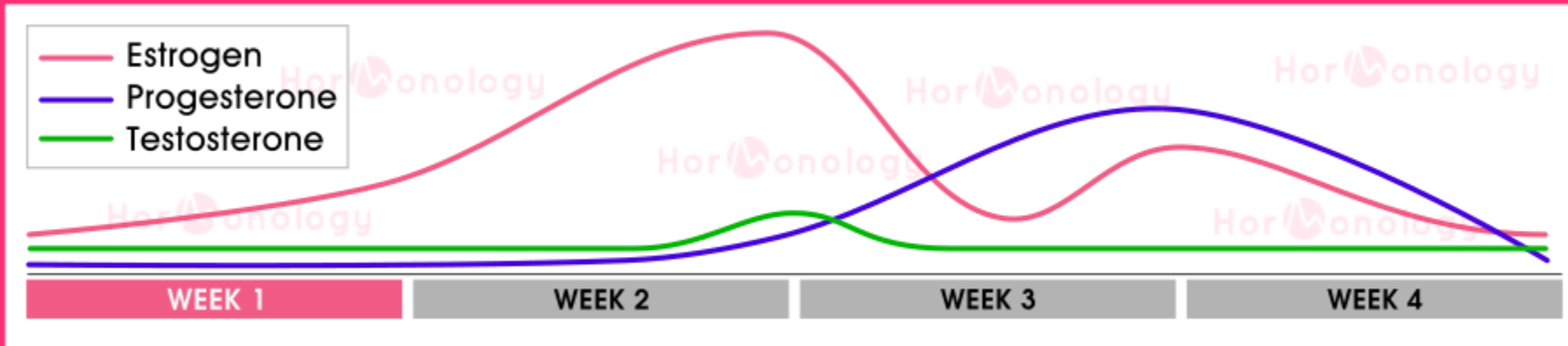
Estrogen

- Hormones are basically messages sent around the body to tell the body what to do.
- Estrogens primary role in women is reproductive health and breast health.
- Estrogen levels change throughout the menstrual cycle which affects cognition, mood, and ADHD.
- Females have 3-10 x more estrogen than males.
- Increased levels of estrogen lead to increased amounts of dopamine available.
- Dopamine is the feel good hormone.

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- As Estrogen decreases, ADHD symptoms increase.
 - The combination of low estrogen and high progesterone the week before a females cycle creates the most severe symptoms.
 - Dopamine decreased as Estrogen decreased further worsening symptoms.



HorMonology



Myhormonology.com

Menstruation

Week 1

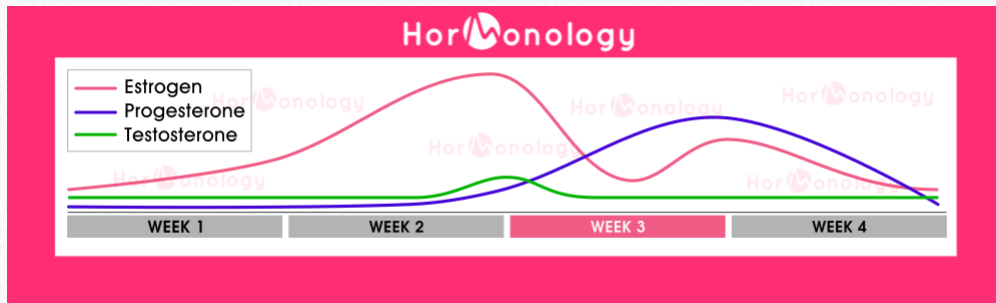
- Estrogen is starting out at its lowest point.
- Symptoms start to improve, mood improves.
- Low iron due to bleeding.
- Slowly feeling more motivated and optimistic.

Week 2

- Symptoms continue to improve
- Estrogen peaks at ovulation, day 14-17 for most.
- Happiest mood/Most controlled symptoms
- Increase in confidence, self esteem, patience.

Week 3

- Estrogen and dopamine CRASH
- Initially more irritable and tired
- Small bump in estrogen at the end of the week



Week 4

- Both Estrogen and Progesterone plunge.
- Symptoms are the worst/most uncontrolled.
- Increased anxiety, sleep problems, more distracted, forgetful, increased emotional dysregulation, impulsive, binge eating, scatterbrained, low energy, insecure, tearful, irritable, confused, hopeless

“

“My working memory is most severely affected three days before my period. I can't remember what I'm doing, and I'll walk into the kitchen 100 times. I'm terrified that when my estrogen drops during perimenopause and menopause, I won't be able to hide my symptoms at work anymore, and it will impact my ability to have a career.”

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Nearly half of women with ADHD experience Premenstrual Dysphoric Disorder (PMDD).

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Co-existing PMDD

- Hormonal health condition that causes clinically significant and impairing depression, anxiety, mood swings, and uncomfortable physical symptoms in the week leading up to period.
- Symptoms may lead to severe depression and suicidal thoughts.
- Symptoms improve as soon as period starts and are minimal, sometimes absent, the following weeks.
- 46% of women with ADHD have PMDD
- 92 % of autistic women have PMDD
- Highly hereditary, although no one agreed upon cause of where it comes from.
- People with reduced dopamine levels (like in ADHD) and people with sensory sensitivity (like in Autism) are at an increased risk.
- Can be treated with SSRIS, contraceptives, and lifestyle changes.

Criteria for PMDD

Must have a total of 5 symptoms

At least 1 from each category

Consistently interfere with ADLs over the
past year

Category A

- Unstable and easily influenced mood
- Irritability
- Depressive or hopeless mood
- Anxiety or tension

Category B

- Decreased interest in usual activities
- Difficulty concentrating
- Fatigue
- Appetite changes
- Sleep difficulties, either insomnia or hypersomnia
- Feeling of overwhelm
- Physical symptoms: breast tenderness, joint or muscle pain, a sensation of bloating, or weight gain

What is the Difference?

PMS

- Occurs in up to 48% of women who menstruate
- Symptoms less severe, often do not require treatment.

PMDD

- Occurs in only 3-9 % of women
- Much more severe symptoms, often require medication.
- At risk for suicidality and suicide attempts

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“More than 30 years ago, I told my family doctor I had symptoms and huge mood problems. He leaned in and said, ‘You mean, bitchy?’ So yeah, PMDD here.”

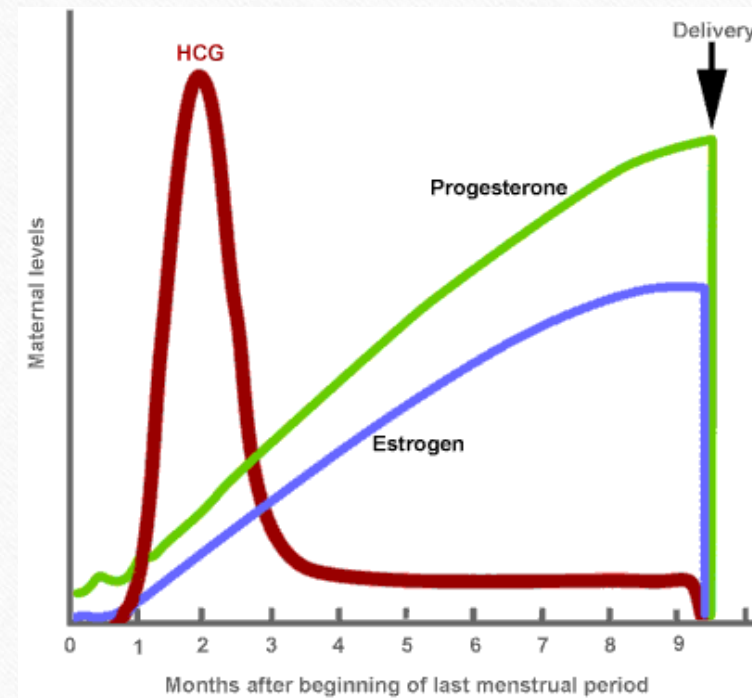
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Women feel as though they are not being heard. Symptoms are swept under the rug or attributed to PMS, toxic relationships, work/family stress, etc.

Hormone Changes During Pregnancy

- The good news is Estrogen and Progesterone take an uphill climb throughout pregnancy, improving ADHD symptoms.
- The bad news is, hormones crash at delivery.
- Women with ADHD have a huge risk of postpartum disorders due to their sensitivity to hormone changes.



ADHD and Postpartum Disorders

- Women with ADHD are 6 times more likely to have postpartum Anxiety and 5 times more likely to have postpartum Depression.
- 25% had PP Anxiety compared to 4.6% of women without ADHD.
- 17% had PP Depression compared to 3% of women without ADHD.
- Women with ADHD give birth to their first child at a younger age (15-24) than do women without (25-34).
- Women with ADHD also become pregnant more frequently than those without.

Melanie Wachsman AdditudeMag. Study: ADHD Increases Risk for Postpartum Depression, Anxiety

Postpartum Mood Disorders

- Typical onset 1-3 weeks following birth and last for days on end
- Irritability, anger, rage, resentment, self criticism, guilt
- Crying, hopeless, feeling disconnected from baby
- Combination of hormonal changes, sleep deprivation, and isolation
- Lack of concentration
- Isolation adjusting to new identity, feeling disregarded (all attention is on baby)
- Pressure to return to work

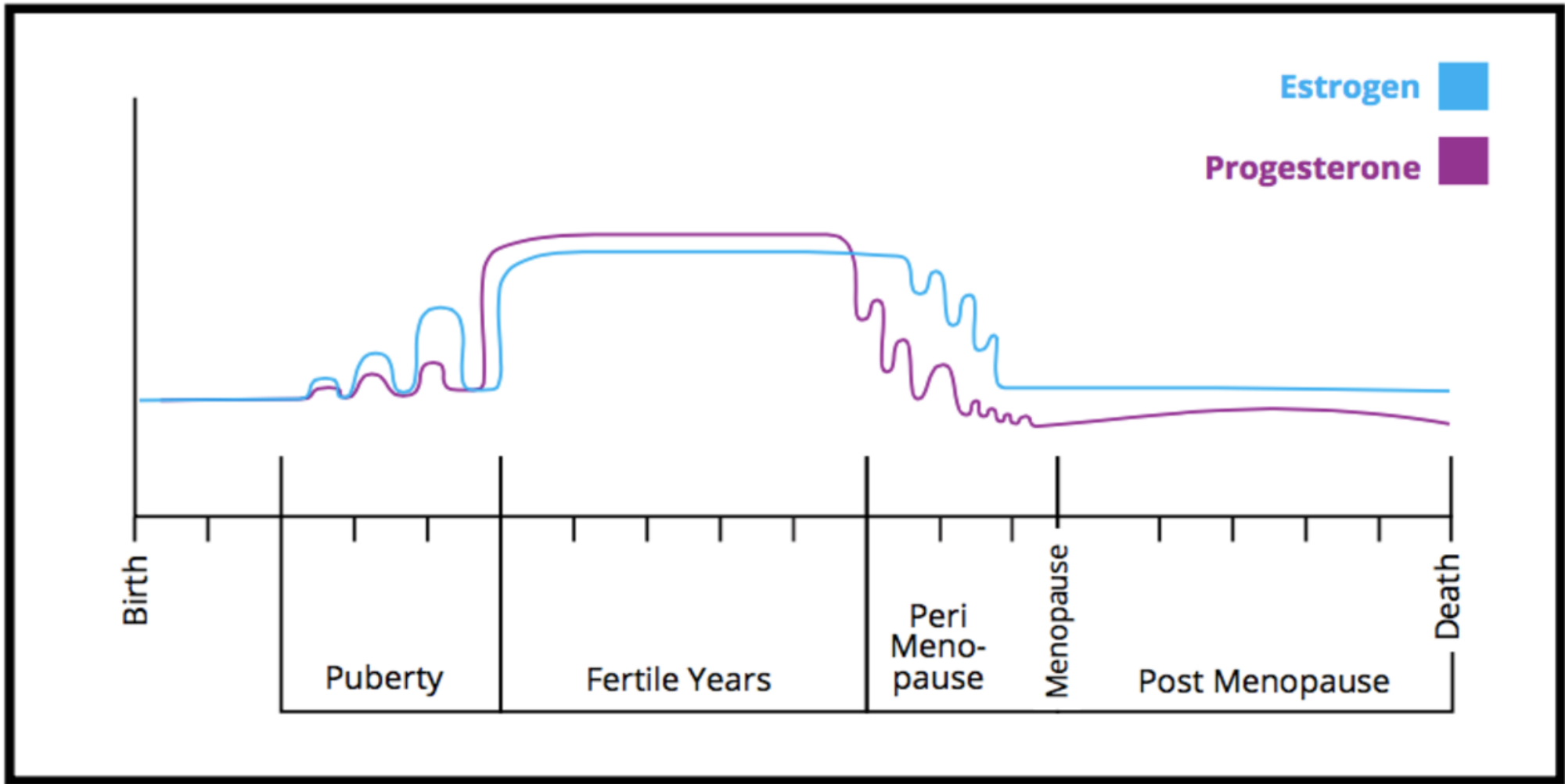
The Unspoken Truths of Postpartum Depression Jayne Singer, Ph.D.

Who is at RISK?

- ADHD
- Previous history of depression or anxiety
- Trauma
- Mood changes during menstruation
- Significant reaction to sleep deprivation
- Unwanted pregnancy, lack of social support, low socioeconomic status
- Promotion, Prevention, Intervention, and Early Treatment is key!

Menopause

- Perimenopause - periods become irregular but haven't stopped, average age 47, lasts 4-10 years
- Menopause –final cycle, marked by 12 months after last period, average age 51.
- Postmenopause – all the years afterward
- Estrogen and progesterone drop 65%



Menopause Natural Solutions

Cognitive Changes during Menopause

- Impaired attention and concentration
- Sleep problems worsen (lower Melatonin levels)
- Increase in mood problems and anxiety.
- Work inefficiency/Procrastination
- Temper outbursts
- Depression
- Financial impulsivity

Treatment of ADHD

- Women often begin treatment in a state of shame.
- “Everything is going well,” when what they really mean is “nothing seems to be working and everything is falling apart.”
- Most think treatment is medication only.
- Parents are often reserved when it comes to medication and may not treat daughters when younger. This thought process that medication is bad is communicated to daughters.

Medications

ADHD Medication Guide* (Children and Adolescents)

This chart provides a comprehensive overview of ADHD medications for children and adolescents, categorized by drug class and formulation. It includes detailed information on each medication, such as its generic name, brand name, and available forms (e.g., tablets, capsules, oral solutions, extended-release tablets, and injectables). The chart is organized into several sections: Methylphenidate Formulations (Short-Acting), Methylphenidate Formulations (Long-Acting), Amphetamine Formulations (Short-Acting), and Amphetamine Formulations (Long-Acting). Each section contains a grid of medication images and their corresponding names. A sidebar on the left lists various ADHD symptoms and signs, such as inattention, hyperactivity, and impulsivity, which are linked to the relevant medication sections. The bottom of the chart includes a disclaimer and the logo for the University of Michigan Medical Center.

ADHD Medication Guide* (Adults)

This chart provides a comprehensive overview of ADHD medications for adults, categorized by drug class and formulation. It includes detailed information on each medication, such as its generic name, brand name, and available forms (e.g., tablets, capsules, oral solutions, extended-release tablets, and injectables). The chart is organized into several sections: Methylphenidate Formulations (Short-Acting), Methylphenidate Formulations (Long-Acting), Amphetamine Formulations (Short-Acting), and Amphetamine Formulations (Long-Acting). Each section contains a grid of medication images and their corresponding names. A sidebar on the left lists various ADHD symptoms and signs, such as inattention, hyperactivity, and impulsivity, which are linked to the relevant medication sections. The bottom of the chart includes a disclaimer and the logo for the University of Michigan Medical Center.

Treatment During Different Phases

During Fertile Years

- Tailored dose treatment during week 3-4 of menstrual cycle.
- Low dose SSRI may help with mood.
- Oral contraceptives can improve ADHD symptoms by minimizing hormonal shifts.

Menopause

- Hormone replacement therapy.
- SSRI for mood regulation
- DBT and CBT
- AChEIs for improved memory (Aricept-off label).

Treatment of ADHD during Pregnancy

- Historically, it has been advised against treating ADHD during pregnancy.
- New research suggests that it may be safer than we once thought.
- For some, stopping medication poses very great risks.
- Untreated ADHD symptoms also worsen co-morbid Anxiety and Depression.
- No one size fits all mode. Each patient is a risk vs risk assessment.
- There really is no risk free decision.

Are Medications Safe During Pregnancy?

- While some studies show very mild risks, most do not.
- ADHD medications are not considered teratogenic.
- The main concern with ADHD medications (methylphenidates in particular) is the risk for cardiovascular malformations like VSD).
- Medications may increase risk of miscarriage. There is also an increase risk for miscarriage in women who have ADHD, no matter if medicated or not.
- Amphetamine based medications (Adderall, Vyvanse) may increase preeclampsia but risk is low.
- 1st trimester fetal cardiac ultrasound is recommended if women continue medication.
- Most women will need more frequent OB monitoring if continuing medication.
- Non stimulants are not well studied. Wellbutrin may be helpful and side effect profile is reassuring.

Options During/After Pregnancy

- Non pharmacological treatments like CBT
- Stop medication first 8 weeks then resume a low dose of medication if medically necessary.
- Resume medication after delivery.
- Consider risk of not medicating ADHD post delivery versus breastfeeding.
- Some women may continue to breastfeed. The dose of methylphenidate a baby gets from breastmilk is less than 1 %.

Study completed by Dr.
Allison Baker, psychiatrist

45 people, ages 18-45

14 women discontinued medication

13 adjusted dosing (lowered dose)

18 (maintained pre-pregnancy regimen)

Results for those that
discontinued medication

- Self reports of functional impairment changed significantly
- Depression ratings increased
- ADHD symptoms worsened in postpartum period
- Increase in negative self concept/image

Are ADHD Medications Effected by Hormones?

- Medications are more effective week 1-2.
- Less effective, sometimes seemingly not working at all week 3-4.
- Talk with doctor about adjusting medication dose week 3-4.
- May also consider adding SSRI for mood symptoms.
- Oral contraceptives can stabilize estrogen levels as well.

Non Pharmacologic Treatment Therapies

- CBT- improve executive functioning and cognitive skills
- DBT- emotional regulation and mood lability
- Psychoeducation- understanding hormonal transitions and symptoms
- Exercise, nutrition, sleep, stress reduction
- Mindfulness
- Resources to learn about yourself
- Technology
- Organizational coaching
- Workplace support

Technology and Resources

- Inflow app- Manage your ADHD
- <https://addiva.net/> (Coaching, Retreats, Blog, Resources)
- ADDA
- CHADD

ADD DIVA

