

Menopause, Hormones & ADHD: What We Know, What Research is Needed

Menopause and ADHD – both associated with impaired cognitive functioning and emotional dysregulation – share a unique and complicated relationship. Anecdotal evidence tells us this in spades, but scientific research is paltry at best. Here, learn what we do know about estrogen, hormonal fluctuations, and menopause in neurotypical women — and how that may help inform clinical approaches for women with ADHD.

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During perimenopause and menopause, many women experience cognitive changes that mimic and may be confused with attention deficit hyperactivity disorder (ADHD or ADD). But how do the hormonal changes of menopause uniquely affect women who have ADHD? The science, unfortunately, is simply not there. Despite increased and hugely warranted interest, there are no studies that specifically examine menopause in females with ADHD. And that is a serious medical problem.

But what we do know – about [menopause](#) in general, the role of estrogen, and the effects of hormonal fluctuations on ‘ADHD-like’ symptoms – may help us understand the menopausal transition for women with ADHD, and how clinicians can approach treatment and care for this group.

MENOPAUSE & ADHD SURVEY

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Menopause and ADHD: A Review of Hormonal Fluctuations Across the Lifespan

Estrogen

To understand menopause and its symptoms, you must first understand [estrogen](#) and how its fluctuations impact women in general.

Estrogen is the hormone responsible for the sexual and reproductive development of girls and women. Estrogen also modulates functioning of many psychologically important neurotransmitters, including

- dopamine, which plays a central role in ADHD and [executive functioning](#)
- acetylcholine, which is implicated in memory
- serotonin, which regulates mood

Higher levels of estrogen are linked to enhanced executive function and attention.¹ Low or fluctuating estrogen levels are associated with various cognitive deficits and with neuropsychiatric disorders like Alzheimer’s disease and depression.²

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Levels of estrogen and other hormones fluctuate considerably across the lifespan and impact the mind and body in numerous ways. The complexity of hormonal fluctuations complicates the research into how hormones affect cognition — particularly in [women with ADHD](#).

Pre-menopause: Menstruation and the Reproductive Years

Estrogen concentration is high and steady in the reproductive years. In the monthly menstrual cycle, estrogen levels steadily rise during the follicular phase (usually from day six to 14) and drop precipitously in ovulation (around day 14). In the latter half of the luteal phase (the last two weeks of the cycle) estrogen levels continue to drop as progesterone increases. If pregnancy does not occur, both estrogen and progesterone levels drop, and the thickened uterine wall sheds during menses. Women report emotional changes and cognitive problems at various points in the cycle, especially when estrogen levels are at their lowest.³

These hormonal fluctuations in the menstrual cycle impact [ADHD symptoms](#).⁴ In the follicular phase, as estrogen levels are increasing, ADHD symptoms are at their lowest.⁴ We can logically infer, though it hasn’t been studied, that [ADHD medications](#) may also be more effective at this point in the cycle. Indeed, in some studies, neurotypical females report greater stimulant effects during the follicular phase than during the luteal phase.⁵

The luteal phase is when we see premenstrual syndrome (PMS) – a collection of physical, emotional, and behavioral symptoms brought on by decreasing estrogen levels and increasing progesterone. Interestingly, premenstrual dysphoric disorder (PMDD), a severe version of PMS, is more prevalent in women with ADHD than it is in women without ADHD.⁶

[[Take This Self-Test: ADHD Symptoms in Women](#)]

The Climacteric Period

The climacteric years, the transition from the reproductive years through menopause, is characterized by enormous hormonal fluctuations as overall estrogen levels gradually decrease. These fluctuations contribute to physical and cognitive changes.

What Is Perimenopause?

Before menopause is the perimenopause stage, when periods become irregular – in duration (short vs. long intervals) and flow (heavy vs. light) – but have not yet stopped. The median age for the onset of perimenopause is 47, and it can last four to 10 years.⁷

During this stage, total estrogen and progesterone levels begin to drop irregularly. Levels of follicle-stimulating hormone (FSH), which stimulate the ovaries to produce estrogen, and luteinizing hormone (LH), which triggers ovulation, also vary considerably. FSH and LH levels initially increase as estrogen levels drop (fewer follicles remain to be stimulated), eventually decreasing substantially and remaining at low levels in postmenopause. OB/GYNs often measure FSH and LH levels to determine if a patient is in menopause.

These fluctuating estrogen levels help explain the sometimes extreme mood and cognitive problems that many women, ADHD or not, experience in the lead up to menopause.⁸

What Is Menopause?

During menopause, menstrual cycles stop due to declining levels of estrogen and progesterone. The onset of menopause is 12 months after the last period, and it signals the end of a woman's reproductive years. The stage following menopause is referred to as postmenopause. The median age for menopause is 51.⁹

Research has failed to establish scientific differences between perimenopause, menopause, and postmenopause, so we are forced to consider all three of these phases under the umbrella of menopause.

Menopause Symptoms

Declining estrogen levels are associated with various changes across all menopause stages. These symptoms can worsen and improve over time, though most physical symptoms stop after a few years.

Physical Symptoms¹⁰

- hot flashes
- [sleep problems](#)
- weight gain
- mood lability
- [anxiety](#)
- loss of libido

Cognitive Symptoms¹⁰

- impaired attention and concentration
- impaired [working memory](#)
- impaired verbal fluency
- overall impaired executive functioning

Not all women will experience all these symptoms, and the impact of estrogen loss during menopause ranges widely. The factors fueling these individual differences are not well understood.

Menopause and ADHD

There is no available research on menopause and ADHD specifically, but plenty of anecdotal evidence supports a link between the two. Many of my patients with ADHD report that pre-existing symptoms worsen in menopause. Some patients also report what appears to be a new onset of symptoms, though I find that many of these patients were “borderline” or “mildly” ADD throughout most of their life.

Furthermore, research has not yet established how often ADHD is diagnosed for the first time during menopause – an important facet to consider, given that menopause and ADHD in later adulthood share many symptoms and impairments, including but not limited to:

- mood lability
- poor attention/concentration
- sleep disturbances
- depression

These similarities imply an overlap in clinical presentation, and possibly in underlying brain mechanisms.

However, the closest we've come to examining this relationship has been a series of studies on women without ADHD who were treated with ADHD medication for onset cognitive problems and ADHD-like symptoms related to menopause. The studies found that [atomoxetine](#) and [Vyvance](#) improve executive functioning in healthy menopausal women,^{11 12} and that the latter, as shown by neuroimaging, activates executive brain networks.¹³ These findings suggest that some women may benefit from ADHD medication to treat cognitive impairments

during menopause.

Menopause and ADHD: Potential Treatments and Interventions

Pharmacological Interventions

The following treatments and interventions target neurotransmitters that are affected by the loss of estrogen, and thus may help women with ADHD during menopause. Gynecologists (with expertise in hormonal management of menopause) in conjunction with psychiatrists may form such patients' care team.

- Estrogen replacement, a form of hormone therapy (HT), is a common treatment to help alleviate or lessen symptoms of menopause.
- Stimulants, which increase the availability of dopamine, are known to improve ADHD symptoms and executive functioning.
- The addition of a low dose of estrogen may help to augment stimulant effects. Transdermal forms of estrogen may be best to minimize systemic side effects. (Stimulant dosages may be adjusted with the addition of estrogen.)
- Selective serotonin reuptake inhibitors (SSRIs) may help regulate mood/depression and reduce anxiety symptoms.
- S-adenosylmethionine (SAME) has been shown to have antidepressant properties and may be a promising alternative to SSRI for those that find them difficult to tolerate.¹⁴
- Acetylcholinesterase inhibitors, like Aricept, are approved to treat cognitive deficits associated with Alzheimer's. Off-label, they have been used to treat ADHD with varying results.¹⁵ This class of drugs may be used in conjunction with stimulants and/or estrogen to help menopausal women with ADHD.

Non-Pharmacological Interventions

- Psychotherapy: Cognitive behavioral therapy (CBT) may help build and support executive function and other cognitive skills (time management, planning, etc.) affected by menopause. Dialectical behavior therapy (DBT) may help with [emotional regulation](#) and mood lability.
- Psychoeducation: Understanding the menopausal transition and its symptoms may improve patient response.
- [Mindfulness](#)-based practices may ease menopause symptoms.¹⁶
- Lifestyle changes and healthy habits (exercise, sleep, stress reduction, etc.) may likewise counteract symptoms of menopause.

While there is interest in the efficacy of phytoestrogens, herbs, and other supplements, research has not clearly established whether these natural approaches effectively treat menopause symptoms.¹⁷ Patients who prefer this route should consult with naturopathic doctors.

Menopause and ADHD: Conclusions

Estrogen loss during all three stages of menopause affects several important neurotransmitters that regulate cognitive function and emotion, in turn causing some women to experience physical and cognitive changes that range from mild to severe. We do not know how to predict who will experience these impairments or why. What's more, menopause symptoms unequivocally mimic ADHD symptoms, and may even be one mechanism for "adult onset ADHD".

Research has not yet determined whether women with ADHD are more affected, or differently affected, by menopause. But given what we know about challenges associated with ADHD, and the impact of estrogen loss on executive functioning in non-ADHD women, we can safely assume that women with ADHD are more vulnerable to challenges during menopause. Treatments for menopausal women with ADHD should take into account the various considerations we have discussed here.

Menopause and ADHD: Next Steps

- **Free Download:** [Is It ADHD? A Guide for Women](#)
- **Read:** [Is it ADHD or Menopause?](#)
- **Research:** [ADHD Medications Improve Memory, Focus & Organization in Menopausal Women](#)