Sleep, Mood and Cognition in the Menopause Transition

Executive Summary for practitioners

REPORT	Cognition, Mood and Sleep in Menopausal Transition: The Role of Menopause Hormone Therapy
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OVERVIEW

This review synthesizes research on how the menopausal transition and menopause hormone therapy (MHT) affect three interconnected domains: cognition, mood, and sleep. Rather than offering a single verdict, it works through why the underlying evidence has looked contradictory for decades — differences in population age, timing of therapy initiation, hormone formulation, and study design all shape the results. The throughline is that sex steroids act broadly throughout the central nervous system, which is why these three symptom domains so often present together.

KEY FINDINGS

- Self-reported sleep problems affect **40–56% of women** during and after the menopausal transition, versus roughly 31% in late premenopause.
- Women with moderate-to-severe hot flashes were **almost three times more likely** to report frequent nighttime awakenings than women without them.
- In a 172-woman RCT, transdermal estrogen plus intermittent progesterone reduced depressive symptom incidence to 17.3% versus 32.3% on placebo over one year, an effect strongest in early perimenopause.
- The Women's Health Initiative Memory Study (women over 65) found MHT did not reduce cognitive decline and was linked to a greater decline on MMSE testing versus placebo.
- Applying the “critical window” hypothesis, the Cache County Study found reduced Alzheimer's risk only when MHT was started within five years of menopause.
- MHT is **not FDA-approved for mood disturbance** and should not be proposed to non-depressed, asymptomatic women to prevent or relieve mood symptoms.
- Obstructive sleep apnea affects an estimated 47–67% of postmenopausal women and is frequently underdiagnosed as a contributor to poor sleep.

CLINICAL IMPLICATIONS

The clinically useful distinction is between using MHT for symptom relief in women who have vasomotor symptoms or disrupted sleep, versus using it specifically to prevent cognitive decline or treat mood in the

absence of other indications. The evidence supports the former for appropriately selected younger postmenopausal women; it does not support prescribing MHT with cognitive or mood prevention as the sole goal. Sleep evaluation should also consider obstructive sleep apnea and restless leg syndrome as independent contributors, not assume hormones explain every sleep complaint.

PATIENT IMPACT

Patients frequently ask whether hormone therapy will help their brain fog, mood, or sleep specifically, often having read conflicting information online. The most useful frame is that these three symptoms are connected — treating vasomotor symptoms often improves sleep as a secondary benefit — and that the timing of when therapy starts appears to matter for cognition specifically, an area still being actively researched rather than settled.

IMPLEMENTATION CONSIDERATIONS

- **Clinical:** Frame MHT and cognition as an area of ongoing research where timing appears to matter, not a settled yes-or-no.
- **Clinical:** Do not prescribe MHT with the sole stated purpose of preventing memory loss or Alzheimer's disease.
- **Clinical:** For sleep complaints, screen for obstructive sleep apnea and restless leg syndrome alongside vasomotor symptoms rather than assuming a single cause.
- **Communication:** For mood, distinguish clearly between non-depressed women (where MHT has limited evidence) and women with depressive symptoms during the transition (where evidence is more supportive, particularly transdermal estradiol).

LIMITATIONS & CONTEXT

This review synthesizes a genuinely mixed evidence base — the underlying studies vary substantially in population age, hormone formulation, dose, route, and outcome measures, which limits direct comparison. Much of the cognition and dementia-prevention data comes from older, observational or small trial populations rather than large contemporary RCTs. The authors explicitly note that future research should focus on long-term cognitive risks of MHT and on how different molecules affect outcomes differently — open questions rather than resolved ones.

RECOMMENDED NEXT STEPS

1. When discussing brain fog, distinguish transition-related cognitive changes (generally transient) from concerns warranting further evaluation.
2. For sleep complaints, screen beyond vasomotor symptoms for OSA and RLS before attributing all sleep disruption to hormones.
3. Review any patient materials implying MHT is proven to prevent Alzheimer's disease or treat general mood symptoms.
4. For women with depressive symptoms during perimenopause specifically, consider MHT as a documented, evidence-supported option alongside standard care.

RESEARCH SOURCE CITATION

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