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**The
Menopause
Society™**

Leading the Conversation

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**What Your Hair and Saliva Say About Your Risk for Depression and Cognitive Shortfalls
During Menopause**

New study suggests hair and salivary cortisol levels may be correlated with depression symptom severity and cognitive performance

CLEVELAND, Ohio (Sept 27, 2023)—Stress affects the body and brain in many ways by causing the endocrine system to increase cortisol levels. These spiked levels can be found throughout the body. A new study suggests that elevated cortisol levels in the hair and saliva may affect cognitive and mental health in late peri/early postmenopausal women. Study results will be presented during the 2023 Annual Meeting of The Menopause Society in Philadelphia September 27-30.

It's no secret that stress can take a major toll on the body and mind, causing a number of adverse health conditions. Significant research has been done on the long-term effects of stress. A new study, although small in size (including 43 participants in late perimenopause or early postmenopause), took a different approach to evaluating the impact of stress by determining the degree to which hair and salivary cortisol levels correlated with depression symptom severity and cognitive performance on verbal memory, verbal learning, attention, and working memory tests among healthy women in late peri/early postmenopause.

The researchers found that higher levels of hair cortisol were significantly associated with worse attention and working memory performance. Hair cortisol did not significantly correlate with performance on verbal learning or verbal memory tests. Salivary cortisol did not significantly correlate with verbal memory recall trials, attention, or working memory performance; however, higher salivary cortisol was significantly associated with worse depressive symptom severity.

This work suggests that markers of hypothalamic-pituitary-axis (HPA) activation that capture total cortisol secretion over multiple months, ie, hair cortisol, strongly correlate with cognitive performance on attention and working memory tasks, whereas measures of more acute cortisol, ie, salivary cortisol, may be more strongly associated with depression symptom severity.

The results will be presented during the Annual Meeting of The Menopause Society as part of the presentation entitled, "Stress in the body, on the brain: hair and salivary cortisol levels linked with depressive symptom severity and cognitive performance among healthy late peri/early postmenopausal women."

"This work provides initial evidence linking longer-term HPA activation with worse attention and memory during perimenopause. Other research has demonstrated that interventions can decrease HPA activation; my next steps will be to study whether longer-term HPA is a modifiable marker and if by decreasing HPA activation with interventions we can improve executive functioning during the

perimenopause,” says Dr. Christina Metcalf, Assistant Professor and lead author from the Department of Psychiatry at the University of Colorado Anschutz Medical Campus in Aurora, CO.

“This study, although small in size, provides insight into considering HPA activity when evaluating a patient’s cognitive and mental health,” adds Dr. Stephanie Faubion, medical director of The Menopause Society. “This may be helpful in the future to identify patients who may be at higher risk for depression and cognitive decline.”

Drs. Metcalf and Faubion are available for interviews before and after the presentation at the Annual Meeting.

For more information about menopause and healthy aging, visit www.menopause.org.

The Menopause Society (formerly The North American Menopause Society) is dedicated to empowering healthcare professionals and providing them with the tools and resources to improve the health of women during the menopause transition and beyond. As the leading authority on menopause since 1989, the nonprofit, multidisciplinary organization serves as the independent, evidence-based resource for healthcare professionals, researchers, the media, and the public and leads the conversation about improving women’s health and healthcare experiences. To learn more, visit menopause.org.