Traumatic Experiences May be Associated With Lower Levels of Sex Hormones

New study suggests that a history of trauma is associated with lower concentrations of estrone and estradiol, especially in women who get less sleep

CLEVELAND, Ohio (October 12, 2022)—Traumatic experiences are associated with a number of adverse mental and physical health outcomes. A new study suggests that they may also be associated with lower concentrations of sex hormones in midlife women—especially women with shorter sleep. Study results will be presented during The North American Menopause Society (NAMS) Annual Meeting in Atlanta, October 12-15, 2022.

Previous research has shown that psychological trauma has the potential to suppress ovarian function and reduce ovarian estrogen secretion. However, the relationship between trauma and sex hormones in midlife women remains largely unknown. A new study from the University of Pittsburgh involving 260 postmenopausal women evaluated whether traumatic experiences are associated with levels of estrogens (estradiol, estrone) and follicle stimulating hormone (FSH) and whether this association is affected by sleep duration.

The researchers found that women with a history of trauma had lower levels of estrogens, including estradiol and estrone, compared with women without such history. There was no relationship between trauma and FSH levels. Findings were not accounted for by depressive or posttraumatic stress symptoms, vasomotor symptoms, or how long a woman had been postmenopausal. The relationship between trauma and hormones depended on how much women were sleeping: women with a history of trauma who were sleeping fewer than 6 hours per night had particularly low levels of estrogens.

“This work highlights the importance of trauma in relation to health at midlife, particularly given the sensitivity of women’s health to hormones.” says Dr. Mary Carson, lead author of the study, from the University of Pittsburgh.

“This study demonstrates the need for healthcare professionals to have a good understanding of a patient’s history, including any traumatic experiences. This history could help identify women at increased risk for certain health issues and allow for adoption of preventive strategies,” says Dr. Stephanie Faubion, NAMS medical director.
Dr. Faubion and Dr. Carson are available for interviews before the presentation at the Annual Meeting.

Founded in 1989, The North American Menopause Society (NAMS) is North America’s leading nonprofit organization dedicated to promoting the health and quality of life of all women during midlife and beyond through an understanding of menopause and healthy aging. Its multidisciplinary membership of 2,000 leaders in the field—including clinical and basic science experts from medicine, nursing, sociology, psychology, nutrition, anthropology, epidemiology, pharmacy, and education—makes NAMS uniquely qualified to serve as the definitive resource for health professionals and the public for accurate, unbiased information about menopause and healthy aging. To learn more about NAMS, visit www.menopause.org.