Hot flashes, night sweats solutions: Estrogen therapy vs. Venlafaxine

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A new research study from Brigham and Women's Hospital (BWH) that compares low-dose oral estrogen and low-dose non-hormonal venlafaxine hydrochloride extended release (XR) to placebo were both found effective in reducing the number of hot flashes and night sweats reported by menopausal women. The study is the first clinical trial to simultaneously evaluate estrogen therapy (ET), known as the "gold standard" treatment for hot flashes and night sweats, and a non-hormonal treatment, venlafaxine, a first-line treatment in women who are unwilling or unable to use ET.

The study titled, "Randomized Controlled Trial of Low-Dose Estradiol and the Serotonin-Norepinephrine" is published in the May 27 issue of *JAMA Internal Medicine*.

"Since the publication of the Women's Health Initiative findings, which demonstrated risks associated with ET and led to our current recommendations - that ET be used only at the lowest possible dosage for the shortest possible duration - there has been increased interest in non-hormonal treatments. Our new findings provide critical data for physicians and women making treatment decisions for hot flashes/night sweats. Our data show that first-line hormonal and non-hormonal pharmacological treatments are well-tolerated and effective options for alleviating symptoms," said Hadine Joffe, MD, MSc, director of the Women's Hormone and Aging Research Program at BWH, and lead author of the paper. "Hot flashes and night sweats known as vasomotor symptoms (VMS) affect up to 80 percent of women in midlife and are

the primary menopause-related symptoms leading menopausal women to seek medical attention."

In total, 339 perimenopausal and postmenopausal women with bothersome VMS were recruited from the community to Menopause Strategies: Finding Lasting Answers for Symptoms and Health (MsFLASH), National Institutes of Health (NIH)-sponsored clinical trial network sites between December 5, 2011 and October 15, 2012.

The objective of the study was to determine the therapeutic benefit and tolerability of low-dose estradiol and low-dose venlafaxine in alleviating hot flashes and night sweats. Participants were randomized to double-blind treatment with low-dose treatments for eight weeks. The primary outcome was the daily number of hot flashes and night sweats after treatment. After eight weeks, the frequency of hot flashes/night sweats decreased by 52.9 percent with estradiol, 47.6 percent with venlafaxine, and by 28.6 percent with placebo. On average, estradiol reduced the frequency of symptoms by 2.3 more per day than placebo, and venlafaxine reduced the frequency of symptoms by 1.8 more per day than placebo. The ameliorative effect on hot flashes/night sweats was statistically significant for each of the medications compared to placebo. Low-dose estradiol reduced the frequency of symptoms by 0.6 more per day compared to venlafaxine on average, although this difference was not statistically significant. While the benefit of low-dose estradiol was found to be slightly superior to venlafaxine in this study, the difference was found to be small and likely of limited clinical relevance.

Secondary outcomes were hot flash/night sweat severity and the interference of symptoms with daily life. The results for these outcomes were consistent with those for hot flash and night sweat frequency. Treatment satisfaction was highest for estradiol, intermediate for venlafaxine, and lowest for placebo. Both interventions were well-tolerated.

Provided by Brigham and Women's Hospital