Estrogen Lifts Mood in Perimenopause

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Women who suffer depression as they enter the early stages of menopause (perimenopause) may find estrogen to be an alternative to traditional antidepressants, suggest National Institute of Mental Health (NIMH) researchers. The efficacy of the female hormone was comparable to that usually reported with antidepressants in the first controlled study of its direct effects on mood in perimenopausal women meeting standardized criteria for depression. Drs. Peter Schmidt, David Rubinow of the NIMH Behavioral Endocrinology Branch, and colleagues, report on the findings of this preliminary study in the August 2000 American Journal of Obstetrics and Gynecology.

Estrogen levels, body thermostats and mood often fluctuate in the perimenopause. But only a minority of women become clinically depressed. Although researchers had long suspected that estrogen might lift mood in such women, controlled studies were lacking. Additionally, they hadn't ruled out the possibility that any antidepressant effect could be secondary to the hormone's known ability to reduce hot flushes. The night sweats, experienced by most perimenopausal women, often disturb sleep and may worsen mood, thus confounding assessment of the hormone's antidepressant properties. Might estrogen simply afford a good night's sleep?

To find out, Schmidt and Rubinow studied 34 women, ages 44-55, who experienced onset of depression coinciding with perimenopause, as confirmed by hormone measures and standardized diagnostic interviews. In controlled, randomized fashion, the women received either estrogen or placebo for 3-6 weeks. Using standardized symptom rating scales and structured interviews, the researchers confirmed that estrogen significantly boosted mood in 80 percent of the depressed women, independent of hot flushes. This level of relief, and the time required to achieve a therapeutic effect, about 3 weeks, are comparable to that seen with antidepressant drugs. Only 20% of the women responded to placebo. Among depression symptoms that improved with the hormone were early morning awakening, loss of enjoyment, sadness and irritability. Among symptoms that failed to improve were sexual interest and disturbed sleep.

Blood concentrations of estrogen (estradiol) prior to the study or after hormone treatment did not predict therapeutic response. This suggests that the beneficial effects of estrogen aren't mediated by correcting abnormally low levels of the hormone. Rather, Schmidt and Rubinow suggest that some women may be especially sensitive to changing hormone levels. As with disorders like PMS and post-partum depression, such hormonal changes appear to be necessary, but not sufficient, to trigger perimenopausal depression, say the researchers, who are attempting to identify the still unknown underlying predisposing factors. Doctors often prescribe estrogen to protect perimenopausal women from osteoporosis and heart disease, but long-term use of estrogen replacement may increase a woman's risk of breast and uterine cancer. In the future, more specific-acting medications that work through estrogen receptors may be engineered to selectively enhance bone, blood lipids and brain tissue without adversely affecting breast and uterine tissue, the researchers suggest.
Also participating in the study were: Dr. Lynnette Nieman, National Institute of Child Health and Human Development; Merry Danaceau, NIH Clinical Center Nursing Department; Jean Murphy, and Drs. Marie Tobin and Catherine Roca, NIMH Behavioral Endocrinology Branch.

For information about participating in NIMH studies on menopause-related mood problems, call 301-496-5645.


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