

Depression and Anxiety in Climacteric Women: Role of Hormone Replacement Therapy

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Abstract:

Objective: To better define the effect exerted by menopause and hormone replacement therapy (HRT) on depression and anxiety in women.

Design: In a cross-sectional study, we tested anxiety by the State-Trait Anxiety Inventory and depression by the Self-Evaluation Depression Scale (Zung, *Arch Gen Psychol* 1965;12:63-70) on 1,031 women who came to our clinics, 275 of which were in perimenopause, 509 in postmenopause without treatment, and 247 in postmenopause on HRT.

Results: Depression and anxiety scores were significantly lower ($p < 0.01$) in perimenopausal than in untreated postmenopausal women. When considered together, women in postmenopause on HRT had significantly lower scores than women in postmenopause without treatment ($p < 0.01$) and perimenopause ($p < 0.02$ for depression and $p < 0.01$ for anxiety). Scores for both depression and anxiety obtained in women studied during the combined administration of estrogens plus progestins were lower ($p < 0.05$) than during estrogens alone. These results were confirmed by two placebo-controlled prospective trials. At the third month of treatment, depression and anxiety scores were not affected by placebo, whereas these scores were significantly ($p < 0.01$) reduced by transdermal estradiol plus norethisterone acetate ($n = 36$) or transdermal estradiol plus dydrogesterone acetate ($p < 0.01$ for depression and $p < 0.02$ for anxiety; $n = 18$) treatment. Neither progestin counteracted the positive response of both depression and anxiety to estrogen administration.

Conclusions: The present data indicate that depression and anxiety states are worsened by postmenopausal sex steroid withdrawal and are improved by HRT. Progestins do not counteract the effect of estrogens on depression and anxiety.

Key Words: Mood -- Psychological symptoms -- Anxiety -- Depression -- Menopause -- Estrogens -- Progestins.