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TITLE: Mindfulness-based stress reduction in relation to quality of life, mood, symptoms of stress and levels of cortisol, dehydroepiandrosterone sulfate (DHEAS) and melatonin in breast and prostate cancer outpatients. [In Process]

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ABST: **OBJECTIVES:** This study investigated the relationships between a mindfulness-based stress reduction **meditation** program for early stage breast and prostate cancer patients and quality of life, mood states, stress symptoms, and levels of cortisol, dehydroepiandrosterone-sulfate (DHEAS) and melatonin. **METHODS:** Fifty-nine patients with breast cancer and 10 with prostate cancer enrolled in an eight-week Mindfulness-Based Stress Reduction (MBSR) program that incorporated relaxation, **meditation**, gentle yoga, and daily home practice. Demographic and health behavior variables, quality of life, mood, stress, and the hormone measures of salivary cortisol (assessed three times/day), plasma DHEAS, and salivary melatonin were assessed pre- and post-intervention. **RESULTS:** Fifty-eight and 42 patients were assessed pre- and post-intervention, respectively. Significant improvements were seen in overall quality of life, symptoms of stress, and sleep quality, but these improvements were not significantly correlated with the degree of program attendance or minutes of home practice. No significant improvements were seen in mood disturbance. Improvements in quality of life were associated with decreases in afternoon cortisol levels, but not with morning or evening levels. Changes in stress symptoms or mood were not related to changes in hormone levels. Approximately 40% of the sample demonstrated abnormal cortisol secretion patterns both pre- and post-intervention, but within that group patterns shifted from "inverted-V-shaped" patterns towards more "V-shaped" patterns of secretion. No overall changes in DHEAS or melatonin were found, but nonsignificant shifts in DHEAS patterns were consistent with healthier profiles for both men and women. **CONCLUSIONS:** MBSR program enrollment was associated with enhanced quality of life and decreased stress symptoms in breast and prostate cancer patients, and resulted in possibly beneficial changes in hypothalamic-pituitary-adrenal (HPA) axis functioning. These pilot data represent a preliminary investigation of the relationships between MBSR program participation and hormone levels, highlighting the need for better-controlled studies in this area.

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