

## THE EFFECT OF IYENGAR YOGA PRACTICE ON PSYCHOSOCIAL FUNCTION AND SALIVARY CORTISOL SECRETION IN BREAST CANCER SURVIVORS

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**Purpose:** To describe the effect of regular yoga practice on self-perceived measures of psychosocial function and salivary cortisol secretion in breast cancer survivors

**Methods:** A convenience sample of 18 stage II-III female breast cancer survivors, currently disease-free, was recruited from a local cancer care clinic. The subjects were randomly assigned to attend an Iyengar yoga practice for 90 minutes twice weekly for 8 weeks or to serve as a wait-listed control group who did not participate in the yoga experience for the first 8 weeks. After obtaining written consent, all subjects completed a breast cancer specific, self-report instrument to document various aspects of psychosocial functioning. All subjects collected salivary cortisol samples at four times during the day for two consecutive days using Salivette vials to measure diurnal variation. Saliva was collected within 30 minutes of awakening and before 9am, at noon, at 5pm and at 10pm. Subjects were given preset, multi-alarm wristwatches to remind them to take saliva samples. The psychosocial tools and saliva collection procedure was repeated at the end of the 8-week study period. Saliva samples were analyzed in duplicate to measure free cortisol concentration using an enzyme-linked assay kit (R& D systems).

**Findings:** There were no differences in psychosocial profile or salivary cortisol secretion between the control and yoga groups prior to the study period. After 8-weeks of yoga participation, the yoga group had a significant decrease in the salivary cortisol concentration at the 10 pm collection compared with the control group. Significant correlations were detected between several self-reported subscales of psychosocial function (emotional, physical, social, functional) and the concentration of salivary cortisol at 10 pm in subjects who had completed the yoga intervention.

**Conclusions:** Survivors of breast cancer may have altered diurnal secretion of cortisol, resulting in an elevated late evening and night time free cortisol. Regular yoga practice may improve psychosocial functioning of breast cancer survivors and improve regulation of cortisol secretion. Further investigation with a larger sample size is needed to validate these findings.

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