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## Influence of cortisol and DHEA-S on pain and other symptoms in post menopausal women with fibromyalgia.

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#### Abstract

**OBJECTIVE:** This study aims to assess cortisol and dehydroepiandrosterone sulfate (DHEA-S) levels in post-menopausal women with FMS and correlate it with pain threshold and tolerance, depression and quality of life.

**METHODS:** We conducted a cross sectional observational study of 17 women with FMS (FMS group), and 19 healthy volunteers (CT group). Algometry, the Beck Depression Index (BDI) and Fibromyalgia Impact Questionnaire (FIQ) were used. Blood samples were collected in the morning (8:00-9:30 am) to determine cortisol and DHEA-S plasmatic levels by chemiluminescence.

**RESULTS:** Significant differences between groups were recorded for pain threshold and tolerance ( $p < 0.0001$ ), BDI ( $p < 0.0001$ ) and all FIQ parameters ( $p < 0.0001$ ). No significant differences in cortisol levels were found between the two groups ( $p = 0.325$ ). In the FMS group, a tangential effect was observed for DHEA-S ( $p = 0.094$ ) and positive correlations were found between DHEA-S, pain threshold ( $p = 0.017$ ) and pain tolerance ( $p = 0.044$ ). No correlation was observed between cortisol and DHEA-S levels and the variables of depression and quality of life for either group.

**CONCLUSIONS:** There seems to be an influence of the decreased levels of DHEA-S and increased pain sensitivity in post-menopausal women with FMS.

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