



Changes in stress response biofactors and bone resorption markers in young women during the menstrual cycle Predictable factors of BMD changes in young women

Health and Welfare Physical Therapy
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● Research Summary

Dr. Iida has been studying relationships of behavioral and environmental factors with development and progression of osteoporosis. He and his colleagues have been conducting a longitudinal study of bone mineral density in relation to lifestyle among middle-aged Japanese women for fifteen years. They found that lower bone mass in middle-aged and older women was related to lower physical activity in childhood, lower body weight during adolescence, and inappropriate diet during peri-menopausal period.

He has also been involved in a study as the principle investigator that examines factors related to depressive symptoms in young women with a Grant-in-Aid for Scientific Research from Japan Society for the Promotion of Science. One of the strengths of the study is its inclusion of multiple measurements of several biomarkers at different menstrual cycles since these biomarkers may vary during the menstrual cycle

● Research Topics

Approach physiological functions on stress, quality and quantity of sleep and healthy feeling

We measure sleep using objective indicators (heart rate variability, sympathetic nerve activity, etc.) and study them with the subjective stress / stress related biomarkers over time. Furthermore, we investigate what kind of transformation occurs in the

stress condition of sleep intervention. From this result, we think that there is a possibility of preventing mental health malfunction and early detection of depression.

Health creation project using lemon produced in Hiroshima prefecture

The present study investigated the effectiveness of continuous consumption of a calcium-fortified test drink containing lemon juice by postmenopausal women to clarify the effects on bone metabolism. The present test drink can be consumed regardless of the presence or absence of a diagnosed condition and should have a prophylactic effect on future osteoporosis development.

Influence of interaction among the elderly through amusement and motion on Physiological indicator

Prevent dementia by exercise and amusement intervention. Evaluate objectively using physiological index as evaluation.