

2-3 Effects of Education on Reducing Local Residents' Weight in the Healthy Promotion Program

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The objective of this study was to investigate the effect of a weight loss course consisting of nutritional education and exercise. The study was performed in 30 females with a BMI of 24.2 or higher in Obama-cho, Nagasaki. After reinforcement intervention twice a week for 12 weeks, the subjects were followed until the 26th week.

The nutritional education was performed on an individual basis, and the exercise supervision was performed as a group (combination of aerobic exercise and weight training). As a result, the mean body weight significantly decreased from 63.6 kg to 59.1 kg ($p < 0.05$). The mean BMI also significantly decreased from 26.8 to 24.9. The chest, abdominal, and hip circumferences and the visceral fat area also significantly decreased. The mean percent body fat significantly decreased from 34.3% to 31.9%. As for blood pressure, only diastolic blood pressure significantly decreased. Concerning serum biochemistry, total cholesterol, LDL cholesterol, neutral fat, and HbA1c significantly improved. This study indicates that a weight loss course consisting of a combination of dietary instruction and an exercise program is useful.

2-4 Standardization of Questionnaire for Sleep Health Consultation Based on Internet Web Site and Characteristics of Sleep in Japanese Internet Users

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Sleep habits and sleep health in Japanese Internet users were investigated based on an Internet survey of 27,718 respondents who completed the questionnaire for sleep health consultation (JQSHC) posted on a sleep information web site. JQSHC consist of 29 items was statistically standardized and six

factors, sleepiness during wake-time, sleep habits, sleep quality, sleep length, sleep normality and sleep intrusion, were extracted. Each item was weighted based on the distribution of subject responses to determine discrimination. The reliability coefficient alpha for JQSHC was high, exceeding of 0.83.

Characteristics of sleep in 26,719 Japanese Internet users aged 16–79 years old were analyzed. Sleepiness during wake-time, sleep habits, sleep length and sleep intrusion were deteriorated in the young generation, and sleep normality was deteriorated in the middle-aged men. Sleep quality was deteriorated in the young and postmenopausal women.

The prevalence of possible sleep apnea syndrome in the survey was 2.7%. It was similar to the prevalence of general population survey. These results suggest that the Internet survey is efficient and future method to acquire knowledge of time-varying sleep habits and health of Japanese people.

2-5 Gender Differences of Psychosocial Stress and Stress Tolerance among Japanese College Students

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In the process of evaluating the validity and reliability of the newly developed inventories for measuring psychosocial stress (IMPS) and stress tolerance (IMST) among 827 Japanese college students (male 547, female 280), it was found that the score of IMPS among female students was higher than that among male students, suggesting a gender difference in psychosocial stress. This study was carried out in an attempt to find gender differences in psychosocial stress and stress tolerance. It was found that the incidence of "yes" among female students was higher than that among male students for 20 items of IMPS. The factor analysis of IMPS and IMST revealed that the factors of psychosocial stress and stress tolerance among female students were different than those among male students. The results suggest that there are gender differences in the structures of psychosocial stress and stress tolerance.

2-6 Effects of Artificial Carbon Dioxide Foot Bathing with Bab-KAO: Comparison between Artificial High Concentration CO₂ Bathing and Bab-KAO Bathing

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This study aims to clarify the effects of artificial carbon dioxide foot bathing with Bab-KAO. This is a preliminary study to develop foot care to prevent diabetic foot ulcers. We measured up the subcutaneous blood flow in legs at the dorsum of the feet of 10 healthy male students using a Laser Doppler flowmeter before and after foot bathing. We also measured up their skin temperature using skin thermometer before and