Comprehensive health education combining hot spa bathing and lifestyle education in middle-aged end elderly women: one-year follow-up on randomized controlled trial of three- and six-month interventions

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BACKGROUND: This study attempted to clarify the duration of effects of 3- and 6-month comprehensive health education programs based on hot spa bathing, lifestyle education and physical exercise for women at 1-year follow-up. METHODS: We examined middle-aged and elderly women who were randomly divided into two groups and followed up them for one year. Spa programmers instructed subjects for one hour in lifestyle education and physical exercise and for one hour in a half bath (salt spring, temperature at 41.5 degrees C) once a week. The program for the 3-month group (n=19) was repeated in the 6-month group (n=14). The evaluation items were body mass index, PWC75%HRmax (by a bicycle ergometer as aerobic capacity), blood profiles (total cholesterol, HDL cholesterol, arteriosclerotic index, uric acid, and hemoglobin A1c), profile of mood states, self-rating depression scale, subjective happiness, pains in the knee and back, and active modification of lifestyle. RESULTS: There were significant interactions between groups and response over time to aerobic capacity, hemoglobin A1c, back pain, vigor, fatigue and self-rating depression (respectively, p<0.05). Duration of effects was longer for the 6-month intervention than for the 3-month intervention. CONCLUSIONS: Beneficial effects of 6-month intervention on hemoglobin A1c, aerobic capacity, pains in the back, vigor, fatigue and depression remained significant at the 1-year follow-up. Duration of effects was longer in the 6-month intervention than in the 3-month intervention.

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