

# The effects of simple eight-week regular exercise on cardiovascular disease risk factors in middle-aged women at risk in Taiwan

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摘要

## Abstract

Background: The effects of exercise on cardiovascular disease risk factors among middle-aged women at risk of the disease in Taiwan remained unclear.

Methods: Thirty-six women (35-64 years) with more than 1 traditional cardiovascular risk factor were equally assigned into the exercise group (with a treadmill training program for 30 minutes each time, 3 times a week for 8 weeks, n = 18) and a control group (maintained their previous lifestyles, n = 18). Blood biochemistries, resting blood pressure, body composition, and mood state were evaluated before and after the 8-week period.

Results: Compared with the baseline, the exercise group had significantly lower body mass index ( $p = 0.01$ ), waist-to-hip ratio ( $p = 0.04$ ), and systolic ( $p = 0.01$ ) and diastolic ( $p < 0.001$ ) blood pressure, as well as a better mood state ( $p < 0.01$ ) after 8 weeks of exercise. However, the control group did not have significant changes in the parameters. Comparison between the groups showed that the exercise group had significant changes in waist-to-hip ratio ( $p = 0.03$ ) and mood state ( $p = 0.04$ ). Using multivariable linear regression model, we demonstrated that exercise was significantly related to waist to hip ratio ( $\beta = -0.43$ ,  $p = 0.02$ ) and total mood scores ( $\beta = -0.37$ ,  $p = 0.04$ ) after adjustment for age, menopause, and previous hormone replacement therapy.

Conclusion: A simple 8-week exercise program is able to effectively modify cardiovascular risk factors, such as the waist-to-hip ratio, blood pressure, and the mood state in Taiwanese women at risk of the disease.