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Effects of different exercises on cyocardial cell cycles

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Objective With the advent of the era of great health, people's health awareness is increasing. As an economical and environment-friendly way, exercise should be viewed as a "first line" strategy for prevention and treatment of arterial aging and a vital component of a contemporary public health approach for reducing the projected increase in population Cardiovascular diseases burden. The objective of this work was to study the effect of 8-week spin training and swim training on normal cyocardial cell cycle.

Methods A total of 30 C57BL/6 mice were randomly allocated to 8-week spin training and swim training program (intervention group) or no supervised exercise (control group). Normal cyocardial cell cycle proteins were measured by Western Blotting. All the outcomes were measured after 8 weeks. Repeated measures were analyzed using mean \pm SD and T tests were used to analyze the data.

Results Compared with the control group, Western Blotting shows that CDK4 of spin training significantly increase (0.7698 ± 0.01130 to 1.111 ± 0.02027 , $p < 0.001$) and CDK4 of swim training significantly increase (0.7698 ± 0.01130 to 1.258 ± 0.01427 , $p < 0.001$), following 8 weeks of exercise, CyclinD1 of spin training increase (0.8558 ± 0.007912 to 1.499 ± 0.06303 , $p < 0.001$) and CyclinD1 of swim training significantly increase (0.8558 ± 0.007912 to 2.097 ± 0.3622 , $p < 0.05$).

Conclusions The 8-week spin training and swim training was found to be effective in increasing cyocardial cell cycles proteins in normal mice. There was significant improvement in CDK4 and CyclinD1 in intervention group compared to control group.