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Biological Mechanism of Exercise in Improving Dyslipidemia

Mi Tang^{1,2}, Quansheng Su²
1.Xihua University
2.Chengdu Sport University

Objective The purpose was to further improve the understanding of exercise to improve dyslipidemia and to formulate exercise prescription more scientifically. It provides a reference for the further study of exercise mimics in the treatment of dyslipidemia and helps to reduce the high incidence of dyslipidemia.

Methods Methods of documentation and comparative analysis are applied.

Results It was found that the effects of exercise on dyslipidemia were beneficial or had no obvious effect on some indexes so far, and had no adverse effect. The biological mechanism of exercise regulating dyslipidemia and the effects of different exercise forms (acute exercise, long-term exercise training, different intensity exercise) on improving dyslipidemia were summarized. It is pointed out that exercise plays an important role in regulating the enzymes and proteins associated with dyslipidemia. Research from several aspects: exercise to block cholesterol biosynthesis, exercise inhibits cholesterol absorption, exercise affects cholesterol conversion, exercise promotes cholesterol conversion to bile acid, and exercise promotes cholesterol metabolism, exercise regulating triglycerides, etc.

Conclusions The regulation of dyslipidemia is a complex process, involving multiple pathways, multiple gene regulation, and different hypolipidemic pathways. A large number of experimental studies have demonstrated the effect of exercise on the improvement of dyslipidemia, but there are few studies on the biological mechanism of exercise, which need to be further studied. In addition, when chemically synthesized anti-hyperlipidemia drugs have many safety problems, we should increase the in-depth study of sports drugs, especially some natural products, that can simulate exercise effectiveness. In order to better control the high incidence of dyslipidemia, it is necessary to improve the development of exercise mimic drugs in improving dyslipidemia.