



Effects Of Irises On Exercise To Improve Obesity

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Objective Irisin is a protein encoded by the target gene FNDC5 of peroxisome proliferator-activated receptor gamma coactivator in skeletal muscle. The secretory protein produced by shearing modification can promote the transformation of subcutaneous white fat into brown fat. As a kind of exercise-mediated muscle factor and potential fat factor, Irisin is closely related to obesity, insulin resistance, glucose and lipid metabolism, metabolic syndrome and so on. As an important preventive and therapeutic means of obesity, exercise plays a role in affecting irisin? Through the analysis of the effect of irisin on exercise intervention in obesity, this paper aims to lay a theoretical foundation for irisin to become a new way of thinking and a new target of treatment of obesity.

Methods A computer-based search of the literature on "Research Progress in the Effects of Irisin on Exercise-induced Obesity" was conducted in the Sportdiscussussussand CNKI databases from 2012 to 2017. The key words were "obesity; exercise; Irisin; brown fat". Inclusion criteria were original research, Meta analysis and systematic review. Exclusion criteria: repetitive studies. A total of 86 articles were included in the review.

Results (1) exercise can significantly improve obesity, insulin resistance, metabolic syndrome and other diseases;(2) Irisin can induce white fat Browning, increase body heat production, reduce body weight, and promote the expression of UCP1 by p38MAPK/ERK signaling pathway. Exogenous Irisin can significantly reduce obesity in mice induced by high-fat diet and improve insulin resistance.(3) whether it is one-time exercise or long-term exercise, endurance exercise or resistance exercise, moderate and low-intensity exercise or high-intensity exercise will increase the expression of irisin in skeletal muscle, blood or fat.However, the influence of different exercise intensity and different exercise modes on the expression of irisin is not regular, and the influence and mechanism of different exercise modes and exercise intensity on the expression of irisin between different species and different tissues have not been reported.

Conclusions Exercise can significantly improve the occurrence and development of obesity, and the effect may be achieved by promoting the secretion and expression of irisin in skeletal muscle.