

Anti-obesity Effects of Exercise

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< Summary >

Calorie restriction and exercise reduce the body fat. The anti-obesity effect of the exercise is divided into acute effect and chronic effect by the continuous training. The acute effect is the reaction in which the enzyme for burning fat increases. CPT1 regulating β -oxidation of fatty acids in mitochondria is believed to play an important role in the acute effect. The activation of AMP-activated protein kinase (AMPK) which detects the energy state in the muscle may be concerned in exercise induced activation of CPT1. In the chronic effect, increases in muscle mass and physiological changes of muscle functions are observed. There is increase of the mitochondrion number with metabolism enhancement of fatty acid. The increase of PGC-1 α is concerned in the change. We will review these mechanisms with our recent findings demonstrating how exercise induced AMPK activation and increase in PGC-1 α expression coordinates burning fat.