

Training Adaptations Regulating Muscle and Adipose Tissue Metabolism

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The effects of exercise training to increase muscle insulin sensitivity are likely due to both chronic adaptations to the skeletal muscles and the transient effects of the preceding exercise bout. The molecular mechanism for these effects in skeletal muscle involves AMPK and other signaling proteins. Exercise training also results in adaptations to other tissues, including the heart, liver, pancreas, and adipose tissue. In adipose tissue, exercise training decreases adiposity, induces morphological changes, and increases expression of key metabolic proteins. In this presentation, data will be discussed focusing on testing the hypothesis that adaptations to both skeletal muscle and white adipose tissue contribute to training-induced improvements in glucose homeostasis.