

عنوان مقاله:

The effect of general exercise on creatine, glycolysis and mitochondrial respiration in ATP regeneration

محل انتشار:

اولین همایش بین المللی فیزیولوژی ورزشی (سال: 1402)

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خلاصه مقاله:

Purpose: The purpose of this research is to investigate the effect of general exercise on creatine, glycolysis and mitochondrial respiration in ATP regeneration. **Research method:** In this research, the effect of general exercise on creatine, glycolysis and mitochondrial respiration for ATP regeneration has been investigated by reviewing and studying various books and articles. **Findings:** Traditional studies investigating the effects of creatine (Cr) supplementation have shown that it has improved performance under different test conditions. Short-term, high-intensity exercise, although this has not been shown in all studies. It also has a significant capacity for regeneration after administration of myotoxic drugs, crushing and autoimplantation, and ischemia. Skeletal muscle differentiation and formation occurs with a significant level of cellular stress. In particular, skeletal muscle growth requires the proteolytic activation of CASP (caspase), which also has a consistent role in apoptosis. Importantly, the level of CASP activation is kept at a "sub-apoptotic" threshold in differentiated myoblasts. **Conclusion:** Muscle pain and damage caused by overtraining may negatively affect sports performance by reducing economy, disrupting glycogen replenishment, changing biomechanical performance, and reducing strength. Additionally, these changes may put an athlete at risk for injury. A nutritional supplement that may reduce the extent of exercise-induced muscle damage or enhance recovery from it would be beneficial to athletes during intense training phases and during post-injury recovery.

کلمات کلیدی:

creatine, glycolysis, mitochondrial respiration, ATP

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