

ELECTROPHORETICAL AND HISTOCHEMICAL ANALYSES OF AEROBIC EXERCISE.

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Muscle enlargement is caused by an increase in the synthesis of contractile proteins, as myosin. These alterations could be affected by different external muscular stimulus. In order to elucidate muscle adaptations in response to different overloads, an exercise program was applied to 20 Wistar rats distributed into 5 groups, (control, 2.5, 5.0, 7.5 and 10.0 % w:w related to the animal body weight). After 8 weeks (30 min for session, five days a week), all animals were sacrificed and a *vastus lateral* fragment were immediately liquid N₂ frozen and stored at -80 °C. Light microscopically analyses indicated that aerobic exercises were able to induce a moderate hypertrophy process, clearly characterized by a nuclear cell enlargement. These data could be explained by an increase on myosin heavy chain synthesis, observed by an increase in 220 kDa bands in high molecular mass unidimensional electrophoresis. This up regulation was clearly observed in 7.5 and 10% treatment in comparison to control group. Otherwise, none significant alterations were observed in 2.5 and 5.0% exercise group. Results here reported suggested the necessity of more advanced studies in order to verify the molecular mechanisms of exercise muscle adaptations caused and creates a further connection of knowledge of physical activity in of muscular disorders treatments.