ABSTRACT

EFFECT OF AEROBIC AND RESISTANCE PERFORMED EXERCISE ALONE AND IN COMBINATION ON POST EXERCISE THE BLOOD PRESURE, AND ITS HEMODYNAMIC, AUTONOMIC AND ANXIETY MECHANISMS.

Author: LUIZ TEIXEIRA
Adviser: PROF[a] .DR[a]. CLÁUDIA LÚCIA DE MORAES FORJAZ

Post-exercise hypotension has been observed after aerobic and resistance exercises, however the effect of the association of these exercises are unknown. This study verified the effect of aerobic and resistance exercise performed alone and in combination on post exercise blood pressure (BP), and its mechanisms. 23 young subjects were submitted to 4 sessions: control (C); aerobic exercise – 30 minutes on cycle ergometer at 75% of the peak VO_2 (A); c) resistance exercise; 6 exercises, 3 sets of 20 repetitions, 50% of one repetition maximum (R) and; d) association of aerobic and resistance exercises (AR). After exercise sessions, systolic, mean and diastolic BP decreased (AR=A), and cardiac output (CO) reduced similarly in the sessions. Systemic vascular resistance increased after the three exercise sessions, but this increase was greater in the AR session after all exercise sessions. Stroke volume (SV) decreased, while heart rate (HR) increased due to an increase in sympathetic and a decrease in vagal modulation to the heart. These responses were greater in the AR session. In conclusion: A, R and AR exercises promoted post-exercise hypotension, due to a fall in the CO, with reduction in SV. Aerobic exercise

was the main determinant of this response. HR remained elevated after exercise bouts because the increase in sympathetic and reduction in the vagal modulation of the heart, and these responses were exacerbated in the AR session.

keyword: aerobic exercise, resistance exercise, blood pressure, heart rate and autonomic modulation.