

Hemodynamics patterns and response to isometric sustained weight test in normorreactive, hyperreactive and hypertensive young people: gender differences.

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ABSTRACT

Introduction: a number of adjustments of the cardiovascular system are required during isometric exercise; variations in the components involved in young people blood pressure response result controversial.

Objective: to determine the difference between gender at baseline hemodynamic parameters and response to Sustained Weight Test in normorreactive, hyperreactive and hypertensive young people.

Methods: sample was constituted by 97 young people of both genders, 41 males and 56 females, with an average age of $19\pm 1,40$ years, whom was applied hemodynamic monitoring in supine decubitus position with non-invasive by impedance cardiography at rest and while the sustained weight test was performed. **Results:** significantly superior values of heart rate and cardiac index were obtained in normorreactive women in basal conditions, and at the exercise. Normorreactive male had significantly higher Resistance index than females in both conditions and hypertensive response group had differences only in the exercise. Women achieved higher heart rate increments than men during isometric exercise. Systemic vascular resistance and resistance index were increased in all groups of both genders, mainly in normorreactive men. **Conclusions:** at baseline, women had higher values of hemodynamic variables related to cardiac activity and men related to vascular tone. Differences between both genders remained during isometric exercise, and the increased blood pressure was mainly due to the increase of systemic vascular resistance.

Keywords: hypertension, sustained weight test, hemodynamics, cardiography impedance.