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TYPES OF ORTHOSTATIC REACTIONS OF SYSTOLIC BLOOD PRESSURE IN HEALTHY VOLUNTEERS

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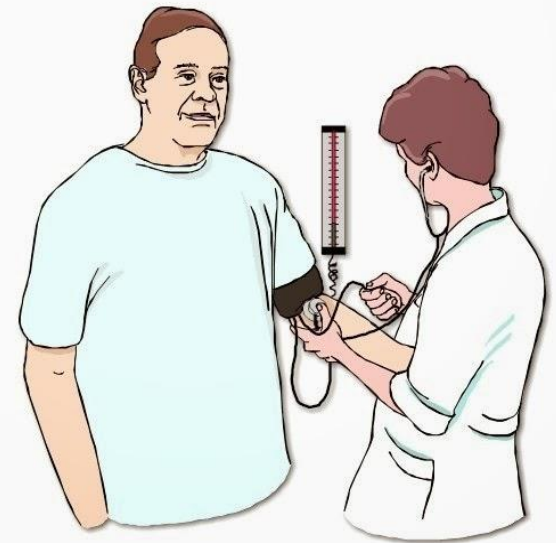


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Research Objective

To study the incidence of different types of orthostatic reactions (OR) depending from changes of systolic blood pressure (SBP) during the active standing test (AST) in healthy volunteers to develop proposals to improve diagnostic efficiency.

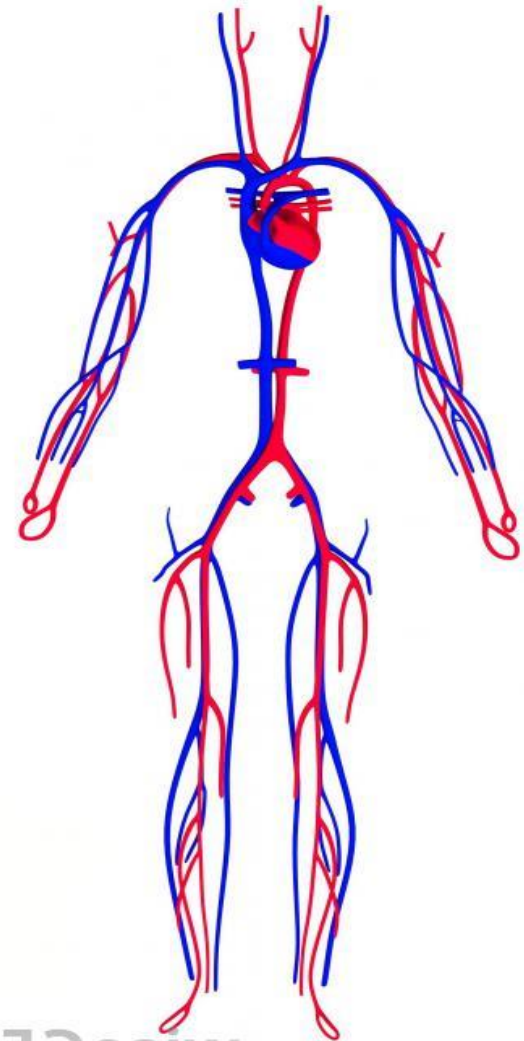




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AST, as a way to influence on the venous return of blood to the heart, allows us to study the compensatory hemodynamic and autonomic changes, and thus judge the function of the circulatory system



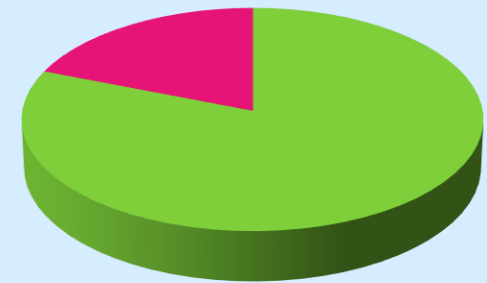


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Materials and Methods

On the polyclinic № 24 examined 63 healthy volunteers (51 men and 12 women), aged $(23, 7 \pm 3, 9)$ years. We take into account the raw data of blood pressure. The study was conducted in the morning, 24 hours before it was limited to the use of coffee, alcohol, medication, and after 30 minutes physical activity. Blood pressure was measured by the method of Korotkov by tonometer Microlife BP AG120 in a lying position after 5 minutes of rest, and after 3 minutes after the transition to a standing position



■ men
■ women

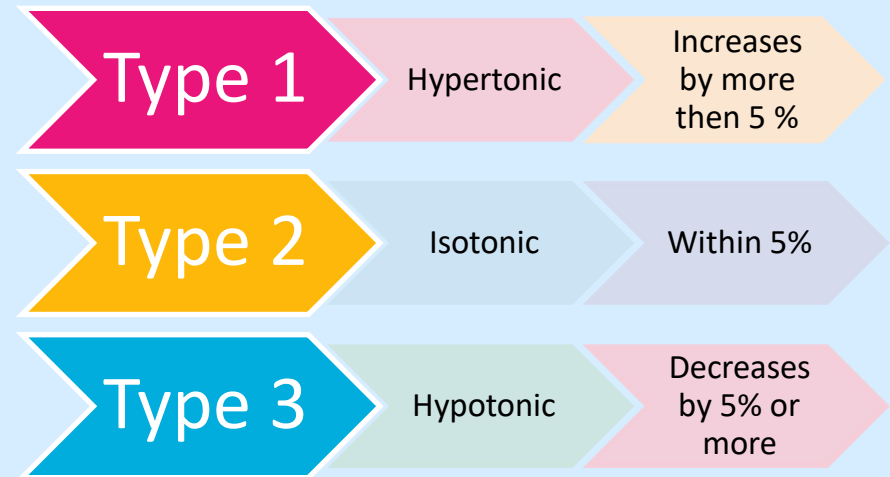




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As a result of measurement of SBP in the AST in the supine position and in the third minute after a transition from a lying position to a standing position healthy volunteers are assigned to one of three types of orthostatic reactions SBP: Type 1 - hypertonic (increase SBP by more than 5%); Type 2 - isotonic (SBP changes within $\pm 5\%$); Type 3 - hypotonic (SBP decrease by 5% or more). For statistical evaluation used parametric criteria (mean - M and the standard deviation – sd).



Types of orthostatic reaction

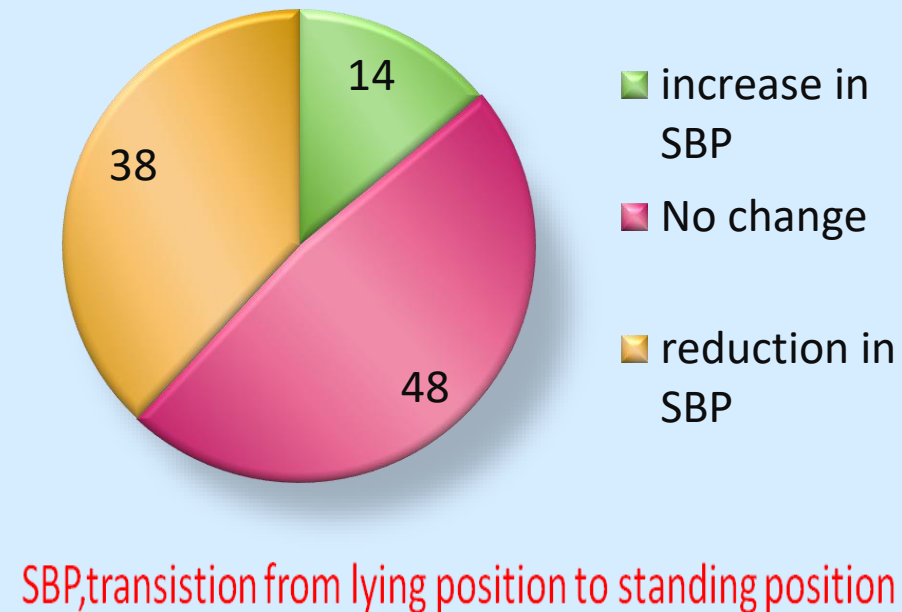


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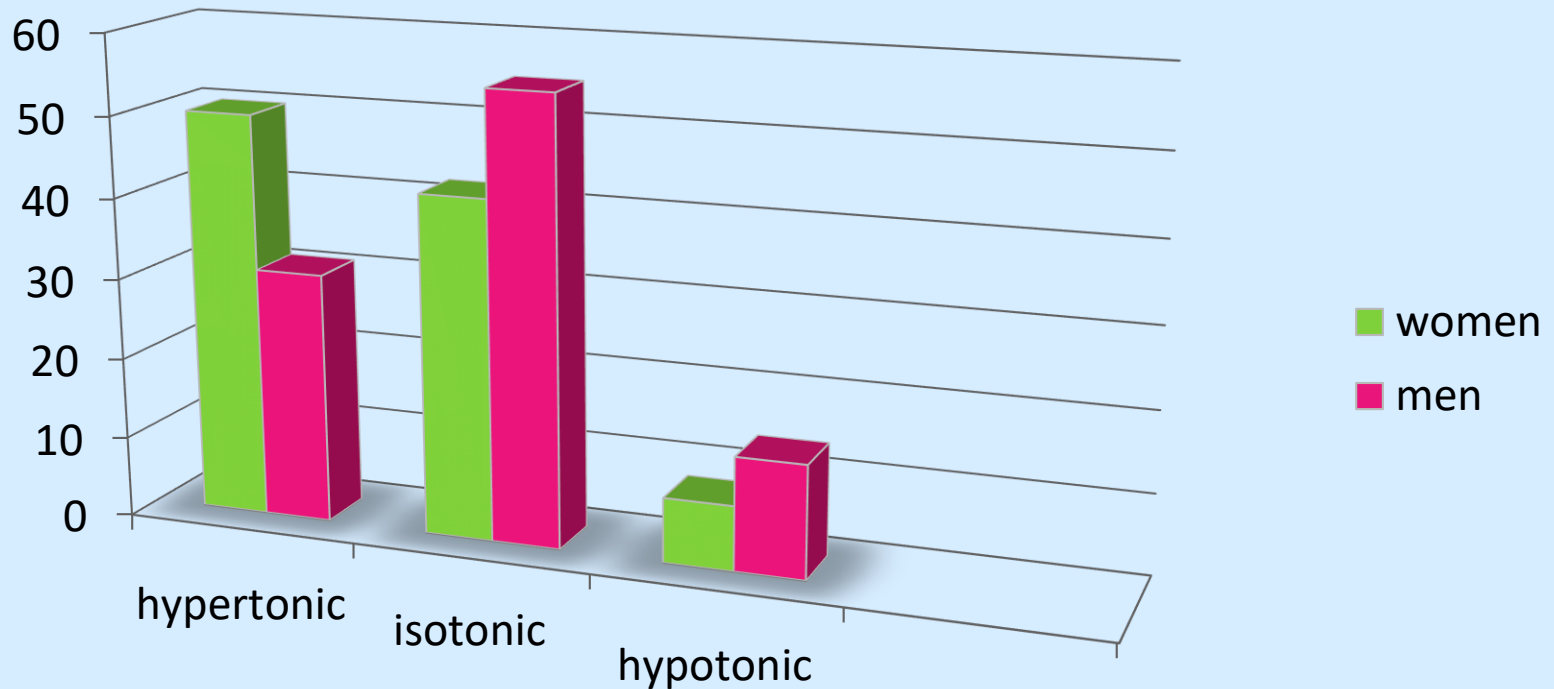
Results

In the transition from a lying position to a standing position in 14% of healthy volunteers had an increase SBP, in 48% of healthy volunteers did not change systolic and 38% of healthy volunteers had reductions in SBP. Hypertonic type reaction SBP in women (50%) is more common than in men (31%). Hypotonic type is less common in men (14%), there is less likely than women (8%). Isotonic common type in men (55%) is more likely than women (42%).





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Conclusions

These data indicate the prospects of AST in the diagnosis of cardiovascular diseases, based on a study of the average values of parameters in healthy volunteers. There are three types of OR in healthy volunteers: hypertonic - (14%), isotonic - (48%), hypotonic - (38%). Changes in body position can have marked effects on the circulatory system. These reactions are designed to maintain a certain level of systolic blood pressure in the changed circumstances. This indicates the possibility of widespread use AST for the diagnosis of the regulation of the cardiovascular system



THANK YOU