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Title: Decrease of physical capacity during acute induction at high altitude is associated with more pronounced increased pulmonary arterial pressure

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Body: The aim is to assess the relation between physical performance (max VO₂) and systolic pulmonary arterial pressure (sPAP) at high altitude (HA). **Subjects and methods.** Twenty one subjects aged from 18 to 30 years were examined. After being examined at the low altitude (Bishkek, 700 m above sea level) all subject were transported at 3200 m. At the HA patients were repeatedly examined in the 7th, 14th and 21st days of the sojourning, as well as on the 3rd day after coming down to Bishkek. **Results.** The subjects were divided into two groups: the 1st group - "normoresponders" (n=14), subjects, whose sPAP was up to 35 mmHg in the first days at HA and the 2nd group - "hyperresponders" (n=7), subjects with sPAP 35 mmHg or higher. Results are shown.

Comparison of maxVO₂ between normo- and hyperresponders

Group	Bishkek	HA-7	HA-14	HA-21	Descent
Normoresponders	43,7±1,7	40,4±1,1	41,0±1,6	41,6±1,9	46,5±1,7
Hyperresponders	45,8±1,2	38,8±1,5*	42,4±2,5	44,1±2,8	48,4±3,0

max VO₂ – maximal oxygen consumption, ml/min/kg, * - p < 0,05 between max VO₂ in Bishkek and at the 7th days of high altitude staying

At Bishkek the 1st group had the higher max VO₂ value, but after the ascent at HA the max VO₂ significantly decreased at that group (from 45,8 to 38,8 ml/min/kg, p< 0,01), while the 2nd group demonstrated the nonsignificant max VO₂ reduction. Later these differences disappeared. Obtained data can denote the presence of the interrelation between sPAP response to HA hypoxia and decrease of the physical capacity at HA. This supposition should be tested on a larger sample of volunteers.