**Objective**

To assess the effect of intensified muscles oxidation on blood pressure (BP) in strength athletes with arterial hypertension.

**Materials and methods.** The study was performed at the Department of Sports Medicine of Russian State University of Physical Culture, Sport and Tourism and lasted for 180 days. The study included 65 power athletes from heavyweight categories with arterial hypertension. Athletes were randomized into three groups: HIIT (n=23), MICE (n=22) andRT (n=20). The following methods were used: blood pressure assessment, ergospirometry, measurement of the muscle tissue oxygenation, mathematical and statistical analysis.

Athletes in the HIIT and MICE groups performed velergometry 3 times a week according to high intense interval and

steady training protocols, while athletes from RT group had their regular power exercise training 3 times a week.

**Results.** Athletes who performed velergometry for 180 days showed the increase of oxygen consumption at the anaerobic burden, from the HIIT group — at 8,6 ml・kg–1・min–1, and from MICE group — at 7,7 ml・kg–1・min–1, and showed the decrease of oxygenation of the lateral head of the quadriceps femoris between the HIIT, MICE and control RT groups by 16.4 % and 11.4 %, respectively, which was accompanied by the decrease of systolic BP by 11.1 mm Hg and diastolic BP by 11.2 mm Hg on average.

**Conclusion.** The developed programs of aerobic exercise for strength athletes allows to safely and effectively influence the oxidative abilities of skeletal muscles and BP, however, athletes who followed HIIT protocol spent 38 %

less time on non-specific training activities compared with MICE protocol that makes high intensity interval training the most effective and convenient method.