

# EFFECTS OF 2-HOUR CYCLICAL HYPOBARIC EXPOSURE AT 1000M ON SEA-LEVEL PERFORMANCE. Oct 2018.

## Abstract

**Background:** High altitude training has been used to improve endurance performance. To date, there has been no study on the effects of acute exposure to a simulated cyclical altitude of 1000 m in a hypobaric chamber on trained athletes. If cyclical hypobaric exposure is able to improve endurance performance, it could provide a more convenient method to implement high altitude exposure into the training of athletes that have no access to high altitude locations.

**Methods:** The subjects were trained athletes from TP Kayaking Team (n = 7). An 8-week intervention programme where subjects underwent a 2-hr cyclical hypobaric exposure with a maximal altitude of 1000m, for five sessions a week. Erythropoietin (EPO), Red Blood Cells (RBC), VO<sub>2</sub>max, Running Economy and 5km Time Trial were measured pre, mid and post intervention to examine the changes in hematological and physical performance markers.

**Results:** There was a significant decrease in EPO concentration. There were no significant changes in RBC concentration, VO<sub>2</sub>Max, Running Economy and 5km Time Trial.

**Conclusion:** Eight weeks of daily 2-hr cyclical hypobaric hypoxia exposure was not found to cause significant improvements in hematological and physical performance markers.