

OLFACTORY THRESHOLD ADAPTATION AT ALTITUDE-HYPOXIA

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Environmental factor impair olfactory perception such as temperature, humidity and hypoxia. The aim of this study was to investigate the effect of extreme environment the altitude-hypoxia on the olfactory threshold. Seventeen volunteers underwent specific olfactory tests, before, during and after the scientific expedition of the Mera Peak Mountain (5800m). The olfactory threshold physiological adaptation to extreme environment was recorded by using 1-butanol test. The solutions were presented in progressive molar concentrations, until the volunteers perceived the odor for consecutive three times. The volunteers expressed their olfactory threshold on a scale from 1 to 9. The results obtained suggest that mean olfactory threshold highly increase at 5800m ($6.94 \pm 0.24SD$) than before the expedition, pre-test at sea level ($5.71 \pm 1.1SD$). Therefore, altitude-hypoxia dramatically affect olfactory threshold and might be considered an important experimental model to investigate the physiology of the olfactory perception.