Effects of Tu-chung Extract on Serum Testosterone During Exercise Training in Normoxia and Hypobaric Hypoxia in Rats

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The purpose of this study was to investigate the effects of administering Tu-Chung extract on serum testosterone (T) during strenuous endurance training during normoxia and hypobaric hypoxia. Male rats swam with loads of 3.5% (normoxia) or 2.63% (simulated altitude of 4,000 m) body weights for 90 min, 6 days per week for 5 weeks. The concentrated Tu-Chung extract was orally administered in the training groups at a dose of 0.7 ml/100 g body weight 1 hr before exercise daily. Distilled water was given by a similar method to other sedentary and control groups. Serum T were measured at rest and following exercise after 5 weeks training. We found that serum T concentrations decreased immediately after exercises in all the training groups, and recovered to the normal level with the treatment of Tu-Chung extract 24 hr after exercise in normoxia, not in hypobaric hypoxia.

Key Words: testosterone, Tu-Chung extract, normoxia. hypobaric hypoxia, exercise training