66 BLOOD LACTATE RECOVERY AT DIFFERENT TIMES OF THE DAY AND MENSTRUAL CYCLE PHASES

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Lactate removal of body at the end of practices session is essential for subsequent performance. The aim of this study was to establish the time of day and the effect of menstrual cycle on lactate recovery after a maximal exercise. Twelve physical education female students (mean±SD, aged 20.75±1.60 years, height 164.75±3.62 cm, weight 55.08±5.45 kg) participated in this study. All subjects performed the Bruce test to exhaustion and then walked for 20 min, with 1.7 speed (mph) and 0% grade of slope at recovery period. Blood lactate samples were obtained from the tip of the subjects' index finger immediately after the test and at 5th, 10th and 20th min of recovery period at two times of day (06:00 and 18:00 h) and two phases of the menstrual cycle (mid-luteal and mid-follicular phases). A lactometer was used for analysis. A significant variation in blood lactate concentrations was found at the 5th, 10th and 20th min of recovery between 06:00 and 18:00 ($F=2.99$, $p<0.05$). No significant effect of menstrual cycle ($F=1.10$, $p>0.05$) and no significant interaction effects (menstrual cycle × time of day) were observed for lactate recovery ($F=0.67$, $p>0.05$). It can be concluded that lactate recovery in the afternoon occurred faster compared to that in the morning. But follicular and luteal phases of the menstrual cycle had no effects on the lactate recovery.