

RELIABILITY OF ORAL TEMPERATURE MEASUREMENTS DURING RECOVERY FROM MUSCULAR EXERCISE

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Measurement of oral temperature (T_{or}) is the more popular and relatively easier method of assessing body temperature compared to invasive ways.

The objectives of the present study were to examine the relationship between oral (T_{or}), axillary (T_{axil}) and tympanic (T_{tym}) temperatures during recovery from muscular exercise in warm environmental conditions and assess the reliability of T_{or} as an indicator of the core temperature of body in comparison to T_{tym} during recovery from muscular exercise.

The study was conducted on 16 healthy, male, sedentary, undergraduate students at a mean ambient temperature of 26.06 °C (SD=0.77). They were requested to pedal the ergometer for 6 minutes at a fixed workload of 120W at 50 rpm. Values for heart rate (HR), respiratory rate (RR), T_{or} , T_{axil} , T_{tym} as well as systolic (SBP) and diastolic (DBP) blood pressures were recorded at rest and at 0, 5th, 10th, 15th and 20th minutes during recovery from muscular exercise.

The results showed that there were significant differences between values at rest and at 0 minute as well as at rest and at 5th minute of recovery ($P<0.05$, One way ANOVA and Tukey test) with regard to all the parameters except the DBP and T_{axil} . During recovery, the mean T_{or} almost returned to baseline value at 20th minute. There were highly significant correlations between T_{or} and T_{tym} at rest and throughout the recovery period of exercise ($r=+0.73$, $P<0.05$, Pearson's correlation). Moreover, there were no significant differences between the mean T_{or} and mean T_{tym} at rest as well as during recovery (t-test, $P>0.05$).

In conclusion, the present findings revealed that T_{or} can be considered as a reliable and easy way of assessing body