

Study of biochemical responses to sprint swimming and long-distance swimming and variations in these responses during different training seasons

■ SHIRISH V. TOPARE

Received : 14.05.2016; Revised : 06.09.2016; Accepted : 21.09.2016

Author for correspondence

SHIRISH V. TOPARE
Bharatiya Mahavidyalaya, Morshi,
AMRAVATI (M.S.) INDIA
Email : tvshirish@rediffmail.com

■ **ABSTRACT**

The biochemical responses to any exercise activity are extremely important indicators of the quantity and quality of training being given to the sports person. The chief purpose of present study was to analyze the biochemical responses to sprint swimming and long-distance swimming and variations in these responses during different training seasons. For this purpose, the subjects were assigned to two groups. "Group A" was of sprint swimmers and "Group B" was of long-distance swimmers. Each group consisted of thirty subjects. For each group, subjects were selected by using "Random sampling method" from the available trained level swimmers. The duration of experimental period was of sixteen weeks. This period was divided into three seasons. These seasons were: Preparatory season, Peak season and Taper season. The biochemical tests were done after collecting blood samples of subjects. The difference in biochemical responses before and after activity was tested. Such tests were carried out in the beginning *i.e.* start of the experimental programme and at the end of each training season and the variations in these responses were tested. The results of the group of sprint swimmers indicated that, there is no significant difference in pre-swimming and post-swimming total cholesterol levels at all stages of the experiment. But observation of variations in these responses during different training seasons indicates that, the total cholesterol level decreased gradually during each season. The greatest decrease in total cholesterol level was observed at the end of peak season in both groups.

■ **KEY WORDS** : Sprint swimming, Long-distance swimming, Training periods, Cholesterol

■ **HOW TO CITE THIS PAPER** : Topare, Shirish V. (2016). Study of biochemical responses to sprint swimming and long-distance swimming and variations in these responses during different training seasons. *Internat. J. Phy. Edu.*, 9 (1&2) : 10-17, DOI : 10.15740/HAS/IJPE/9.1&2/10-17.