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## A Study of Speed, Power and Fatigue Index of Volleyball Players

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### Abstract

**Aim:** The aim of the study was to observe speed, power and fatigue index of male volleyball players. **Materials & Method:** Twenty-five healthy male volleyball players of participated and their age ranged 18 to 28 years. Each subject performed running based Anaerobic Sprint Test (RAST). **Result:** The mean age, height and weight of male volleyball players was  $21.12 \pm 2.20$  years,  $180.84 \pm 8.28$  cm, and  $71.36 \pm 9.68$  kg. The mean sprint time 1, sprint time 2, sprint time 3, sprint time 4, sprint time 5, sprint time 6, power 1, power 2, power 3, power 4, power 5, power 6, power maximum, power minimum, power average and Fatigue index was  $5.04 \pm 0.35$  seconds,  $5.11 \pm 0.42$  seconds,  $5.10 \pm 0.38$  seconds,  $5.27 \pm 0.43$  seconds,  $5.18 \pm 0.36$  seconds,  $5.27 \pm 0.37$  seconds,  $698.8 \pm 179.99$  watts,  $672.8 \pm 196.02$  watts,  $672.08 \pm 158.83$  watts,  $602.72 \pm 162.94$  watts,  $640.04 \pm 130.50$  watts,  $593.4 \pm 113.85$  watts,  $758.88 \pm 158.15$  watts,  $542.04 \pm 125.47$  watts,  $646.76 \pm 141.34$  watts and  $7.02 \pm 3.18$  watts/second. It was concluded from the results of this study that sprint time increased, power declined with a high fatigue index, the volleyball players may need to focus on improving lactate tolerance and this could be a focus of their training programme.

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### Introduction

Volleyball is an amazing sport that includes fast sudden movements like jumping's, landings, which need high power and strength (DeAlmeida & Soares, 2003). During a volleyball match, players perform different types of physical activities such as the sprints, jumps, and high-intensity court movement (Häkkinen 1993). Anaerobic and aerobic capacities are the ability to organize energy during activities of strong nature i.e. executing intensive work with explosive action in short duration of time, such as, bursting speed, smash of volleyball, and take off in jumps. Volleyball can