

**Shital S. Raut: Impact of plyometric & cycle ergometer training on handball players
anaerobic performance**



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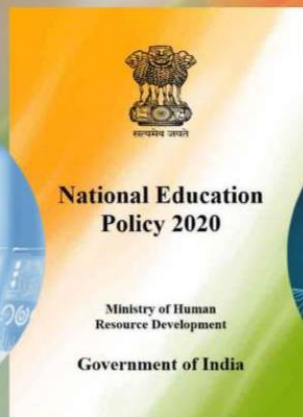
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IMPACT OF PLYOMETRIC & CYCLE ERGOMETER TRAINING ON HANDBALL PLAYERS' ANAEROBIC PERFORMANCE

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ABSTRACT

The purpose of the present study was to determine impact of plyometric & cycle ergometer training on Handball Players' anaerobic capacity. The participants were 30 men shot putters from Yawatmal Senior Secondary Schools, aged 14 to 18. (Maharashtra). Ten volunteers from each of the two experimental groups (Plyometric and Cycle Ergometer) and the control group were randomly chosen among the participants. The training was provided for six weeks. The two experimental groups got training three times each week, while the control group went about their normal daily activities. Data gathering focused on anaerobic capability. The Pre- and Post-tests were given in order to collect the data. Once the data had been gathered, the t-test was used to see whether there were any significant differences between the groups. For the anaerobic capacity, a covariance analysis was also utilised to identify significant differences. In order to find significant variations between the training regimens, the LSD Post hoc test was performed. The significance threshold was set at 0.05. The findings have shown the significant value of F-ratio's for anaerobic ability of all the experimental groups i.e. plyometric and cycle ergometer training programs as compared with the control group. The plyometric training program proved better than the cycle ergometer training.

Key words: Plyometric, Cycle ergometer, Anaerobic Ability

INTRODUCTION

The performance in most of the sports is determined by three factors namely physical fitness, technique and tactics. Strength is one such component which influences the performance and special attention has to be paid to it. There are three main forms of strength viz. Maximal strength, explosive strength and strength endurance. Strength may be developed in many ways such as weight lifting, bounding with or without resistance, various drills and of course depth jumping or plyometric. In 1996, V.M. Zaciorskij's work, which was published in Russian sports literature, introduced the term "plyometric." Plyometric exercise has also been referred to by various names as shock training, speed strength, bounce training, and elastic reactivity. Exercises like plyometric training are meant to build more powerful muscles. It is preferable for athletes, sprinters, football players, and occasionally boxers to include plyometric training into their training regimen in order to increase their level of explosive power.

Layers should gradually incorporate Handball Players into their workouts and should be sure to include plenty of rest intervals in the workout so that the body can recover sufficiently between sets and between exercises. Plyometric training can be so beneficial to Handball Players because, unlike standard weightlifting, they improve the explosion of the leg muscles rather than just building strength and muscle mass. A stationary one-wheeled bike that is used as an ergometer to evaluate a person's ability to do labor-intensive tasks under controlled conditions. Cycle ergometers are not very good at determining peak performances in those who are not accustomed to riding since the leg muscles often fatigue before the rest of the body. A fitness tool that makes it possible to measure under control the volume and speed of a person's physical activity. There are various distinct ergometer kinds, each with unique benefits and drawbacks.

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