

Effect of Rock Climbing Training on Strength, Speed and Endurance

Kasundra¹ P. M., Jethwa, Y. L.²

¹Associate Professor. Mahadev Desai Sharirik Shikshan Mahavidyalaya – Sadra Gujarat Vidyapith, Gujarat.

²Mahadev Desai Sharirik Shikshan Mahavidyalaya – Sadra, (Honorary Instructor) SVIM Mount Abu, Rajasthan.

Abstract

The aim of this study was to determine the effect of 28 Days Rock Climbing Training Program on physical fitness components such as strength endurance of shoulder and abdominal muscles, speed and endurance. Trainees of 72-Coaching Course (N=22, Male, Age Range = 16-27 yrs) were selected as the subjects for the study. Pull Ups, Sit Ups, 50 Yard Dash and 1 ½ Mile Run/Walk tests were respectively used to measure selected variables. By comparing pre and post test data, at 0.05 level; significant differences were found in strength endurance of shoulder muscles ('t'= 2.19), strength endurance of abdominal muscles ('t'= 10.25), speed ('t'= 9.82), and endurance ('t'= 6.83). Here strength endurance of abdominal muscles and shoulder muscles, and endurance improved significantly while speed decreased. It is recommended that improvement in climbing performance is best explained by trainable variables such as shoulder and forearm strength and endurance; furthermore strength and conditioning programs should not be viewed as a replacement of climbing but rather as supplementary during courses.

Key Words: Rock Climbing Training, Strength Endurance, Shoulder & Abdominal Muscles,

Introduction

Mountaineering as a sport consists of ascending and descending mountains under the climber's own power. At one end are the relatively gentle climbs for which climbers need little of equipment; at the other are ascents of the world's highest and most daunting peaks, involving months and years of preparation. Mountaineering and its companion sport, rock climbing is simultaneously recreational and competitive. They are recreational in the sense that most climbers climb for love of the sport, but competitive when climbers seek to climb first, highest, or by a new route. In recent years, both men and women have adapted mountaineering and rock-climbing techniques to indoor-sport climbing on vertical surface.

The sport of rock climbing evolved from this ancient tradition of climbing mountains. Climbing skills and techniques were developed by

mountaineers attempting to climb the lower, steeper mountains and cliffs. Safety equipment was finally introduced in the early 1900's, and the development of light weight shoes, improvements in equipment design, and artificial climbing aids during the 1960's enabled climbers to focus more on style and technique. To meet the demands of this growing sport, climber needs some sort of physical and mental toughness like other sports.

A sport performance depends on at least 5 components: energetic capacity, consisting of an anaerobic and aerobic part, tactics, technique, and motivation of the sportsmen for maximum use of their potentials on the sporting field (*Balabinis et al, 2003; Rodio et al, 2008; Gacesa et al, 2009*). All these components represent complex functional systems, which are created and modified during physical activities. The quality of these interactions determines sport result. Because of the different influences that each component