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Abstract

The present investigation is a comparative study of pulmonary function variables mainly Force Vital Capacity, Forced expiratory Volume in 1 sec and Peak Expiratory Flow rate of Male Rajput population of high and low altitude areas of Himachal Pradesh. The total subjects taken for the study were healthy 400, out of which 200 were taken from high altitude (>2200 m) and 200 were taken from low altitude (<300m). The subjects were divided into four groups of 5 years interval. The variables were measured with the help of calibrated computerized spirometer named Spiro Excel manufactured by Medicaid Systems, Chandigarh. The results indicate that there exist significantly higher values of FEV1 (forced expiration volume in 1 sec) in high altitude population of the age 20-25, 26-30 & 31-35 in comparison to corresponding age peer groups of low altitude. The Force Vital Capacity is found to be highly significantly greater in the age group of 36-40 years in comparison to rest of the age groups. The peak expiratory flow rate is found to be significant higher in the age group of 20-25, 31-35, 36-40 and not in 26-30 age group of residents of high altitude. Quite surprisingly Rajputs of 36-30 age group of low altitude have more PEFR than Rajput residents of high altitude. The results of pulmonary variables are discussed at length in the paper.

Introduction

The functional alteration associated with high altitude exposure represents one of the most thoroughly investigated area of environmental physiology. Many studies