Abstract

The Maximal Inspiratory Pressure (MIP) and Maximal Expiratory Pressure (MEP) are global measures of the maximal strength of the respiratory muscles. Objectives: To determine the values of MIP and MEP in healthy subjects aged 20 years old from the urban area of Manizales, Colombia and to correlate them with sociodemographic and anthropometric variables. Methods: This is an observational descriptive study. The population of the study was 203,965 healthy people from Manizales, a Colombian city located at 2150 meters above sea level. The sample size was 308 subjects, selected using simple random sampling. The maximal respiratory pressures were determined in the sample chosen and were then considered according to the variables of age, gender, size, weight, Body Mass Index (BMI), and BMI classification. Finally, a predictive model was created. Results: The average MIP value among the subjects of the study was 75±27 cmH20 and the MEP value was 96.4±36 cmH20. Both averages were higher in men than in women. Predictive equations were established for the normal values of MIP and MEP in healthy subjects; the best model for MIP was the resultant one among age, gender and BMI classification and for the MEP among gender, weight and height. Conclusion: Maximal respiratory pressure values were lower among the population of Manizales than those found in international studies. Gender and anthropometric characteristics (weight, height and BMI classification) are the explanatory variables that better support the average values of MIP and MEP in the predictive models proposed.

Keywords

Respiratory Muscles, Muscle Strength, Maximal Respiratory Pressures, Predictive Equations, Reference Values.