OBJECTIVES: To evaluate respiratory muscle strength (RMS) in a sample composed exclusively of healthy sedentary individuals and to compare with predicted values, to investigate the relationship between maximal inspiratory pressure (MIP) and maximal expiratory pressure (MEP) and age, weight and height, and propose predictive equations of MIP and MEP for this population.

METHODS: Subjects were 140 healthy and sedentary individuals: 70 males (55±20 years) and 70 females (54±21 years), separated into groups according to age. The RMS was obtained with an aneroid vacuum manometer (±300 cmH2O). RESULTS: There was a significant reduction in RMS with increasing age (ANOVA one-way, p<0.05). Moreover, the RMS values decreased significantly from age 40 compared to the predicted values (Student t test, p<0.05). There were also significant correlations of RMS with age, weight and height (Pearson correlation, p<0.05). The predictive equations using linear regression for maximal respiratory pressures according to sex showed that age in males and females and weight in females influenced the prediction of the MIP and MEP values. CONCLUSIONS: Our results showed that age and anthropometric characteristics influence RMS values. In addition, the RMS values were lower compared to the predicted values from age 40 because the sample was composed exclusively of sedentary individuals. In this context, we propose equations to predict the MIP and MEP values exclusively for healthy, sedentary individuals from 20 to 89 years of age.

Abstract

Keywords

respiratory system; respiratory muscles; muscle strength.sistema respiratório; músculos respiratórios; força muscular.