INTRODUCTION: Patients with chronic obstructive pulmonary disease (COPD) report dyspnea when performing activities of daily living (ADLs) with elevated upper limbs. To elucidate the determinants of dyspnea, it is important to study the changes in the respiratory pattern of these patients and the electromyographic activity of their accessory muscles of respiration during ADLs. In the literature, there are no reports of a normative parameter, therefore it is necessary to study how these variables behave in healthy subjects. OBJECTIVES: To verify, in healthy subjects, the existence of changes in the respiratory pattern and activation of the sternocleidomastoid (SCM) muscle during an ADL with unsupported arm elevation. METHODS: Thirteen male subjects, 60.57 (±6.42) years old, with normal spirometry values for age and sex, were evaluated using surface electromyography (EMG) and respiratory inductive plethysmography (RIP) collected at rest and during the activity of combing their hair with elevated and unsupported upper limbs. The data distribution was assessed using Shapiro-Wilk’s test. ANOVA was used to compare the phases, and when the difference was significant (p<0.05), Tukey’s test was applied. RESULTS: The RIP during the ADL showed a significant increase in tidal volume, minute ventilation, respiratory frequency and mean inspiratory flow. Thoracoabdominal asynchrony was identified in percentage of asynchrony in inspiration, expiration, and Phase Angle (p<0.05). The EMG showed an increase in SMC muscle recruitment (p<0.05). CONCLUSIONS: Healthy subjects increased their SCM muscle activation and changed their breathing pattern when performing the ADL with unsupported arm elevation, resulting in thoracoabdominal asynchrony.

Keywords
Physical therapy, upper limbs, activities of daily living.