Title: Reduction of physical activity in daily life and its determinants in smokers without airflow obstruction

Body: Background: Detailed, objective and controlled quantification of the level of physical inactivity in daily life in smokers without airflow obstruction was never performed. This study aimed to objectively assess and characterize the level of physical activity in daily life in adult smokers without airflow obstruction in comparison to a matched sample of non-smokers, as well as to investigate its determinants. Methods: Sixty smokers (50[39-54] years) and 50 non-smokers (48[40-53] years) matched for confounders of physical activity were cross-sectionally evaluated regarding functional exercise capacity (6-minute walking test, 6MWT), lung function (spirometry), quality of life (SF-36 questionnaire), anxiety (State-Trait Anxiety Inventory), depression (Beck Depression Inventory), and objective assessment of daily physical activity (pedometer Yamax Digiwalker SW-200). Results: Despite presenting lung function within the normal limits, smokers walk less in daily life than non-smokers (7923±3558 vs 9553±3637 steps/day, respectively), besides presenting also worse 6MWT, quality of life, anxiety and depression (P<0.05 for all). Multiple regression analyses identified 6MWT, Borg fatigue scale and self-reported motivation and physical activity behavior as determinants of steps/day in smokers (partial r²=0.12, 0.14 and 0.13, respectively; P<0.002 for all; overall fit of the model r²=0.34; P<0.001). Conclusions: Despite their normal lung function, adult smokers present reduced level of daily physical activity. Functional exercise capacity, fatigue sensation and aspects of motivation and physical activity behavior are significant determinants of physical activity in daily life in smokers.