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EXAMINATION OF THE JOINT EFFECTS OF SMOKING AND SEDENTARY LIFESTYLE ON LUNG FUNCTION IN AFRICAN AMERICANS: THE JACKSON HEART STUDY COHORT

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Though, there is no current scientific evidence to explain the ethnic differences in lung function (LF), a number of studies have noted the differences. However, some of the differences in LF may be attributed to body composition, dietary intake, physical activity, socioeconomic factors, age, and even genetics. Smoking and sedentary lifestyle (SL) have been reported to have mediating effects on health status. Objectives: The primary objective of this research is to examine the Joint effects of current smoking status (CSS) and SL on LF in African Americans (AAs), via The Jackson Heart Study (JHS) Cohort.

Methods. Smoking status was classified as yes or no to CSS and SL was defined as the low quartile of the total physical activity score. General Linear Models (GLM) was used to assess: 1) differences in the LF of smokers who do not have SL (SMK_NSL) versus non-smokers who have SL (NSMK_SL); and 2) joint effect of smoking and SL on LF in AAs in JHS.

Results. Forced Expiratory Volume in one second (FEV1) /Forced Vital Capacity (FVC) ratio is the only of the three measures of LF that showed significant joint effect of CSS and SL for the unadjusted ($P=.0279$) and the age-sex adjusted ($P=.0230$) models, but were attenuated in the multivariable-adjusted model ($P=.9921$). SMK_NSL had significantly higher FEV1 values compared to the NSMK_SL for the unadjusted ($P<.0001$) but difference was attenuated in age-sex ($P=.7509$) and multivariable adjusted ($P=.3460$) models.

Conclusion. Though smoking compromises LF, SL seems to have a more deleterious effect on LF than smoking.
