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# LINEAR DIMENSIONS AND VOLUMES OF HUMAN LUNGS

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## LINEAR DIMENSIONS AND VOLUMES OF HUMAN LUNGS

Dear Editors,

Similar to warnings on cigarette packages it is prudent and correct to warn Health Physics Journal readers with the following: **WARNING....DO NOT USE THE TOTAL LUNG CAPACITY EQUATION GENERATED BY KRAMMER, ET. AL. IN THE APRIL 2012 EDITION OF HEALTH PHYSICS (VOL 102 PP378 - 383)**. Total Lung Capacity is defined as; “ the inspiratory capacity plus the functional residual capacity; the volume of air contained in the lungs at the end of a maximal inspiration; also equals vital capacity plus residual volume” (from MediLexicon.com). Buried within the Results and Discussion section, Krammer et.al. briefly admit that the lungs of their experimental subjects were “not fully inflated”. By definition and their own admission, Krammer et. al. did not measure Total Lung Capacity (TLC), and the equation generated from this work fails to improve or update the TLC data provided by ICRP. Likewise, the five linear measurements performed by Krammer et. al. are only representative of the conditions of the measurement (i.e., not at-rest volume, but not fully inflated either). While there was significant work performed and the data are interesting, the data does not represent a maximal situation, a minimal situation, or an at-rest situation. Therefore while interesting, the linear data generated by this study is limited by the conditions of the experiment and may not be fully comparative with other lung or inspiratory parameters, measures, or physical [dimensions](#).

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