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EFFECTS OF NUTRACEUTICAL SUPPLEMENTATION ON RESPIRATORY FUNCTION IN HEALTHY HEAVY SMOKERS

Fabrizia Bamonti¹, Marco Pellegatta², Cristina Novembrino¹, Rachele De Giuseppe¹, Federica de Liso¹, Dario Gregori³ and Luisella Vigna²

¹ Dip. Scienze Mediche, University of Milan; Fondazione IRCCS O.M.P.Ma.R.E., Milan, Italy

² Dip Medicina Preventiva Clinica e del Lavoro, U.O.Medicina del Lavoro I, Fondazione IRCCS O.M.P.Ma.R.E., Milan, Italy

³ Dip. Medicina Ambientale e Sanità Pubblica, University of Padua, Padua, Italy

ABSTRACT

It's well established that cigarette smoking is associated with reduced pulmonary function. The effects of two different encapsulated formulas, consisting primarily of mixed juice powder concentrate (Juice Plus+®) were evaluated in a randomized, placebo controlled, double-blind study; spirometry indexes (in particular, Forced Expiratory Volume in 1 s, FEV1; Forced Expiratory Flow at 25% of forced vital capacity, FEF 25; CO Diffusion Lung per unit Alveolar Volume, DLCO/VA) were measured, at baseline and after 3 months' supplementation, in 101 healthy heavy smokers (>20 cigarettes/d, duration ≥10y, median age 47; 41–57 y, 63 M, mean capsule compliance 85.2%) randomized into three groups: A-placebo; B-fruit/vegetable; and, C-fruit/vegetable/berry.

Statistical analysis was performed by t-test for paired data.

Our results showed a significant improvement in FEF 25 ($p < 0.05$, adjusted by smoking duration) in group C compared to group A. Group A showed a worsening respiratory function, probably due to seasonal factors (bronchitis, allergies); however, selecting subjects on the basis of compliance >95% and 79% < FEV1 < 105% (range of normal value), our study highlighted a slight improvement in DLCO/VA in group C (mean delta values ± standard deviation = 5.1 ± 4.96) and in FEV1 in group B (0.41 ± 4.66). These data show improvements with both experimental formulas compared to placebo.

Support: NSA, Collierville, TN

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