

BLOOD HAEMATOLOGY RESPONSE TO CHANGES IN ANTIOXIDANTS: THE INFLUENCE OF SIX MONTHS NUTRACEUTICALS AND FUNCTIONAL FOODS INTERVENTION ON AGE AND SEX AS RISK FACTORS FOR IMMUNE-COMPROMISED INDIVIDUALS

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ABSTRACT

To assess the long-term effects of antioxidants in individuals according to age and sex distribution, we studied the effects of antioxidant functional foods and nutraceuticals on blood haematology such as White blood cells (WBC), Red blood cells (RBC), Haemoglobin (HGB) and Platelets (PLT). This study performed as a randomized, prospective, parallel group, comparative, open dose and single centre study. The studied subjects included a total of 150 healthy adults of 96 men and 54 women aged between 30 and 74 years. The included subjects had no history of gastrointestinal surgery, or other significant pathology, were non-smokers, had no history of alcohol or drug abuse, were non-diabetic, were not on a calorie-reduced or vegetable diet nor were taking antioxidant/vitamin supplement, female were not pregnant or lactating. No concomitant medication was allowed throughout the study except contraceptive pill. At the baseline visit, eligible candidate were randomized to either 1 capsule per day of antioxidant nutraceutical (Forever living product) (containing vitamin E 10 mg, vitamin C 60 mg and β - carotene 2000 mcg of vitamin A, or antioxidant functional foods of equivalent vitamin composition oranges, carrots, and soybean or placebo, and the first dose was dispensed and followed up for six months. At the end of the six months of the dietary intervention, significant decline in HGB, RBC, and PLT with ageing, and more pronounced in male though males have higher HGB and PLT than the female. No significant difference in WBC and RBC count of male compare to female but WBC increases or decreases to the extreme range with age. In the present study, the authors have demonstrated that functional foods significantly improve blood haematology and its function.

Keywords: Antioxidant nutraceuticals, antioxidant functional foods, haematological parameters, age, sex.