

PB8 134 DEBRECEN LONGEVITY STUDY II. HEALTH AND FREE RADICALS IN OLDEST OLD RESIDENTS

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Introduction: Among the elderly population in Hungary the number and proportion of the oldest old (defined as age 90 years or older) residents would increase most significantly in the near future. We decided to make a systemic analysis of this target group under this title: Debrecen Longevity Study. It is well known that the toxic effects of oxygen free radicals contribute not only to the incidence of age-associated diseases, but also to the aging as a biological phenomenon. To study the damaging effect of oxygen free radicals and the efficiency of antioxidant defense in this special group three parameters were examined: plasma vitamin E and lipidperoxid contents as well as the carbonil contents of plasma proteins. Methods: The laboratory results of 185 persons above 90 years old have been presented. For healthy controls in the evaluation of vitamin E contents 100 persons with an average age of 37,5 +/-9.9 years have been used. For healthy controls in the evaluation of lipidperoxid and carbonil contents three age groups, 20 – 39 years of age (60 persons), 40 – 59 years of age (40 persons) and 60 – 80 years of age (40 persons) have been used. Results: Significantly higher levels of alfa – tocoferol ($p < 0.001$) and gamma - tocoferol ($p < 0.05$) were observed in the oldest old residents as compared with the values found in healthy controls. The trend of significant ($p < 0.001$) increase was observed in the contents of lipidperoxid and carbonil as a function of age in healthy controls, but the increase was not significant over 80 years of age. Conclusions: It could be concluded that the oldest old residents had a native resistance to the damaging effect of oxygen free radicals.