

ANTIOXIDANTS, DIET AND LIFESTYLE: RESOURCES OF CHOICE AGAINST OXIDATIVE STRESS

Migliorati A et Al; 'Piante medicinali', Special issue May 2010 - ISSN 1825-5086

Introduction

In the last three decades, over 6,000 papers in the literature state that oxidative stress is a decisive reason for a large number of degenerative and/or neoplastic diseases and also responsible for the decline associated with ageing. This work brings to the fore the fact that it is possible to reduce and maintain at physiological levels the blood concentration of free radicals which produce oxidative stress by the ingestion of food supplements (phytoextracts), by following a balanced diet and by doing moderate physical activity.

Materials and Methods

The study involved the recruitment of a total of 630 subjects, with an approximate median age of 45. Despite the increasing use of low carbohydrates/ketogenic diets (KD) on weight control and management, 206 of these completed the experiment. The control groups (with 36 subjects only on a diet, 38 subjects only on food supplements while 59 subjects had no diet and no supplements) were selected amongst the 424 subjects who started the study but who did not turn up at control for dosage of free radicals after 8 months. Observation of these subjects involved the assessment of their BMI (Body Mass Index) and of the blood concentration of free radicals (FR).

Results

Blood levels of free radicals (FR), measured by means of the colorimetric assay, make it possible to assess the degree of oxidative stress. The BMI measurements shows any variations in body weight after following the diet and a regimen of moderate physical activity (see table).

Conclusions

The data show that both treatments have a synergic action in reducing BMI and the level of free radicals, an effect which is certainly enhanced by moderate physical exercise. It follows that it is advisable to follow a few simple and effective suggestions in order to maintain oxidative stress within the physiological range.

Parameters	T0 Median (DS)	T1 Median (DS)	p	Groups
BMI	30.2 (5.61)	27.3 (4.89)	< 0.01	Cases - diet and supplements
FR	443.1 (89.38)	391.2 (70.5)	< 0.01	
BMI	28.9 (3.8)	25.7 (3.6)	< 0.05	Control - only diet
FR	485.1 (67.5)	468.8 (67.1)	0.31	
BMI	33.3 (5.4)	32.0 (5.1)	0.28	Control - only supplements
FR	469.7 (71.2)	425.8 (65.5)	< 0.05	
BMI	31.5 (5.2)	31.6 (5.2)	0.92	Control - no diet, no supplements
FR	460.8 (71.1)	463.6 (69.9)	0.83	