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Effect of diet rich in lycopene and exercise on blood lipids in adults with dyslipidemia

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Objective: To determine the effects of a diet rich in lycopene, the practice of physical exercise or association between them on levels of blood lipids in adults with dyslipidemia.

Material and Methods: It is an experimental study with duration of 12 weeks. The diet was designed rich in lycopene (50mg / day), the standard diet and exercise program. Before and after the intervention lipid profile of the participants was determined. Involved people between 21 and 64 years old, randomly divided into 4 groups: two standard diet (one did exercise and one not), and the other two with diet rich in lycopene, one did exercise and one not. For each indicator behavior regarding their group arithmetic mean and standard deviation were used. Later ANOVA was used to demonstrate the significance and finally the post hoc Tukey test.

Results: 48 participants completed the study of which 35.4% (17) were male and 64.6% (31) female. The mean differences were significant post-pre cholesterol ($p = 0.004$) and LDL ($p = 0.001$). The mean difference between groups was significant for cholesterol between the standard diet with exercise and diet rich in lycopene with exercise and vice versa ($p = 0.002$). For the LDL was significant difference between the standard diet and exercise group with the other groups.

Conclusions: The lycopene-rich diet (50 mg / day) for 12 weeks significantly reduce LDL cholesterol levels and blood. Exercise training (4 days a week for 60 minutes) for 12 weeks significantly decreased blood levels of LDL when combined with the standard diet and cholesterol levels and LDL to be associated with diet rich in lycopene.

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The association between dietary intake of folate (F) and vitamin B12 (VB12) with body composition (BC) of adolescents aged 10-18 years from Merida, Mexico

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Mexico has a high prevalence of stunting in children and adolescents, due to poor nutrition. Paradoxically, too many Mexican children and adolescents are currently overweight or obese (OW/OB). The dual-burden of stunting (low height for age) and OW/OB are nutritional conditions that increase the risk of developing chronic degenerative diseases in adulthood. The persistence of high levels of stunting in southern regions of Mexico, such as Yucatan, may be due to diet changes (nutrition transition) that Yucatecan population has experienced in recent years. Vitamins, such as folic acid (FA) and VB12 are micronutrients necessary for normal metabolism and growth. The relationships between the intake of these micronutrients and growth rate were identified. The impact of micronutrient consumption on body composition was also investigated. The sample population comprised 273 adolescents (152 females) aged 10-18 years, from Merida, Mexico. Dietary information was obtained using a food frequency questionnaire (FFQ) covering 106 local foods. Anthropometric and body composition measurements were taken, and socioeconomic data were gathered. Data were collected between September 2011 and July 2012. Over 50% of participants had inadequate consumption of both vitamins: 64% had inadequate intake of FA and 69% of VB12. Almost half (46.9%) were either short or stunted, and 33% were at risk of OW/OB. A higher risk of presenting OW/OB was found for participants with FA intake less than the RDI of 400 µg/day and for those with VB12 intake less than the RDI of 2.4 µg/day. No relationship was found between body fat percentage and the consumption of FA or VB12.

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