

JOINT EVENT

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Hypovitaminosis D in overweight/obese children, residents of a low-income community, on the Southeast of Brazil

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Introduction: The deficiency of micronutrients, including vitamin D, is frequent in several countries, regardless of the nutritional state; however, its magnitude is higher in overweight children. There are many evidences that overweight children and teenagers represent a vulnerable group to vitamin D deficiency. Besides that, the deficiency of vitamin D appears to be the biggest contributory factor to complications associated to obesity, such as insulin resistance and type-2 diabetes. Various studies have been demonstrated associations between deficiency of vitamin D and a variety of diseases, including diabetes mellitus, metabolic syndrome, cancer, cardiovascular diseases, multiple sclerosis and neuromuscular malfunction, causing nutritional rickets and osteomalacia, which have a major impact on health, growth and development of infants, children, and adolescents (Figure1).

Aim: The main aim of this study is to evaluate the prevalence of hypovitaminosis D and intervene by providing adequate supplementation.

Methodology & Theoretical Orientation: Serum dosages of 25-OHD3 and PTH (parathyroid hormone) were performed in 111 overweight/obese children on the month of March (summer) of 2016. All of the children that were detected with insufficiency (<29 ng/ml) received supplementation on the dosage of 50.000 UI of cholecalciferol/weekly, during six weeks.

Results: The prevalence of hypovitaminosis D in this group was of 60.36% (49.24% girls and 50.7% boys).

Conclusion & Significance: Hypovitaminosis D is elevated on the presented group, meeting other studies performed in various locations in Brazil and foreign countries. Dosages were performed in a period that coincided with the end of the summer. Supplementation was performed in a critical period to elevation of taxes of hypovitaminosis D (beginning of winter).

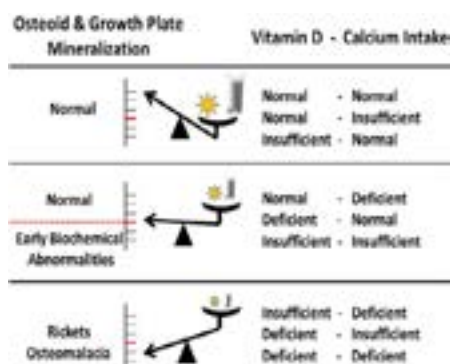


Figure 1: Biochemical disturbances in rickets pathogenesis based on a three-stage classification of vitamin D status (symbolized by the sun) and calcium intake (symbolized by a glass of milk).

Biography

Pollyanna Fernandes Patriota is a Nutritionist and Professor in the area of Public Health at Federal University. She is pursuing her PhD in Nutrition at Federal University of São Paulo. She has experience in teaching, research and extension in the areas of Nutrition and Public Health, Maternal and Child Health and Child Obesity.

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