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Necessability of vitamin D among children and adolescents in Greece

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Background: The current study was aiming to report prevalence of 25(OH)D3 deficiency-insufficiency among children - adolescents in Greece and to see the role of sex and seasonality on vitamin D status.

Material & Methods: A sample of 285 healthy children and adolescents aged 3 to 18 years (M/168, F/117), who came from district of Attiki (urban area) was examined. They were grouped into three groups: Group I: 3-10 years of age (72), Group II: 10-14 years of age (89) and in Group III: 15-18 years of age (124). Blood samples were taken during spring (April to June) and during autumn (October to December).

Results: The prevalence of vitamin D concentration <20 ng/mL and <30 ng/mL (Vit D deficiency and insufficiency respectively was 5.5% and 53.2% respectively). Girls had a higher prevalence of 25(OH) D3<20 ng/Ml (6.8 vs. 4.1) and 30 ng/mL (38.2 vs. 47%) than boys (P<0.001). The highest prevalence rates of 25(OH)D3<20 and 30 ng/mL (8.5 vs. 70.2% respectively) were observed during spring (April to June), whereas the lowest (1.4 and 30.5% respectively) during autumn (October to December). Female sex living in an urban area and spring months are found to increase the likelihood of vitamin D deficiency and insufficiency.

Conclusions: Even in a sunny country like Greece children and adolescents living in an urban area are in high risk for vitamin D deficiency and insufficiency. The prevalence of vitamin D status among children and adolescents is comparable to or exceeds the prevalence reported among those on a European level. Girls living in urban areas during spring months are at highest risk for vitamin D deficiency and insufficiency. This indicates the need of effective initiatives to support adequate vitamin D status in these population groups.

Recent Publication

1. Hagenau T, Vest et al., (2009) Global vitamin D levels in relation to age, gender, skin pigmentation and latitude: an ecologic meta-regression analysis. Osteoporosis International 20:133-140.
2. Cashman K D and Dowling K G et al., (2016) Vitamin D deficiency in Europe :pandemic? The American Journal of Clinical Nutrition 103:1033-1044.
3. Katrinaki M, Kampa et al., (2016) Vitamin D levels in a large Mediterranean cohort: reconcidering normal cut-off values. Hormones (Athens) 15:205-223.

Biography

I Polychroni have completed her degree in Medicine, Athens Medical School and she did specialization in Pediatrics. She was appointed to IKA- Social Insurance Institute in Nea Ionia as a Pediatrician. From 1992 until today she has been a working in the Growth Surgery of the Clinic, where she works twice a week as a non-paid associate with the approval of the Hospital Paidon P. & A. Kyriakou. For the last 14 months, she has been training on diabetes and has been participating in research programs, with the approval of IKA-EOPYY (Insurance Fund), where she works. She is a member in Greek Pediatric Association, Athens Medical Association, Greek Association of Children and Teenager Endocrinology and Greek Endocrinology Association.

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