

## Vitamin D Status in Relation to Body Mass Index: Population of Carpathian Region

**Authors :** Vladyslav Povoroznyuk, Ivan Pankiv

**Abstract :** The present research has attempted to link a higher body weight with a lower vitamin D status. Objective: Vitamin D status of Carpathian region population in Ukraine was studied to examine whether serum levels of 25-hydroxyvitamin D [25(OH)D] are associated with body mass index (BMI). Methods: Data collected from 302 adults (18-84 years) were analyzed. Variables measured included serum 25(OH)D, weight and height used to determine BMI status. Results: Mean 25(OH)D level was  $23.2 \pm 8.1$  ng/mL for the group;  $26.3 \pm 8.4$  ng/mL and  $22.8 \pm 9.1$  ng/mL for males and females, respectively. Based on BMI, 3.6% were underweight, 21.2% had a normal weight, 46.4% were overweight and 28.8% obese. Only in 28 cases (9.3%), content of 25(OH)D in the serum of blood was within the normal limits, and there were vitamin D deficiency and insufficiency observed in other cases (90.7%). Thus, severe vitamin D deficiency was revealed in 1.7% of the inspected. A significant interrelation between levels of 25(OH)D in blood and BMI was found among persons with BMI 25-29.9 kg/m<sup>2</sup>. Mean value of 25(OH)D levels among persons with obesity did not differ to a significant extent from indexes in persons with normal body weight. Conclusion: Status of vitamin D among the population of Carpathian region remains far from optimal and requires urgent measures in correction and prevention. Results confirmed a poor inverse relationship between vitamin D status and BMI. Intercommunication between maintenance of vitamin D and BMI requires further investigations.

**Keywords :** body mass index, Carpathian region, obesity, vitamin D

**Conference Title :** ICO 2017 : International Conference on Obesity

**Conference Location :** London, United Kingdom

**Conference Dates :** May 25-26, 2017