The Impact of Dietary Intake and Sun Exposure on Vitamin D Deficiency among Couples

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Background: The main sources of vitamin D are sun exposure and diet. There is a gap in our knowledge about the contribution of these factors to vitamin D level among couples in Bahrain.

Objective: To determine vitamin D dietary intake and sun exposure and their impact on vitamin D level.

Design: Cross-sectional study.

Setting: Maternity hospitals.

Method: Data were collected using an adapted pre-validated food frequency questionnaire. It was adjusted to reflect the local food items. Vitamin D intake below 600 IU was considered low. The level was assayed as 25(OH)D using chemiluminescence method. SPSS-20 was used for data analysis. P value < 0.05 was considered significant.

Result: Three hundred and twenty five couples were included in the study. The mean dietary intake of vitamin D was low, but not significantly different between men and women. Vitamin D level was <50 nmol/L in 209 (64.3%) men and 292 (89.8%) women. The mean 25(OH)D level in males (46.06 ± 12.97 nmol/L) was significantly higher than females (33.12 ± 13.48 nmol/L). There was a significant association between dietary intake and 25(OH)D levels in both men and women. Sun exposure was also found to be significantly associated with 25(OH)D level in males but not in females which is attributed to the use of veil.

Conclusion: Low vitamin D intake and inadequate sun exposure lead to hypovitaminosis D. There is a need to increase awareness and mandate the fortification of milk, dairy products and to supplement veiled women and those at risk of deficiency with vitamin D.

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