

Adequacy of Calcium Intake of Breast Feeding Mothers in selected Sri Lankan Population

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Introduction: The Institute of Medicine (IOM) of the National Academy of Sciences in the USA has recommended the intake of 1000-2500 mg of total calcium per day for lactating mothers. Objective of this study was to determine whether dietary calcium levels fulfil daily supply of recommended calcium among a selected population of lactating mothers who are attending government clinics.

Materials and Methods: Dietary information was collected using an interviewer administrated questionnaire from 111 exclusively breast feeding mothers of babies under 6/12 attending to the Colombo South Teaching hospital. Weekly intake of calcium was calculated from questionnaire and divided by seven to obtain average consumption per day. Estimation of dietary intake of calcium was performed with, Nutrisurvey 2007 modified for Sri Lankan food items and recipes. Serum corrected calcium, phosphate and alkaline phosphatase (ALP) levels were analyzed using an auto analyzer colorimetric method. Data were analyzed using the SPSS software version 15.0. Ethical clearance was obtained from Ethics committee, University of Sri Jayewardenepura.

Results: Mean $\pm$ SD age of the population was 29 $\pm$ 6 years. The main source of calcium in this population was milk and small fish. However, consumption of cheese, yoghurt, curd, butter, egg and margarine were not frequent and regular among them. Calculated average consumption of calcium from their diet and supplementation is 913 $\pm$ 433 mg/day. Recommended Daily Allowance (RDA) of calcium from the diet and supplementation has not been reached. However, mean serum

corrected calcium was 2.17 $\pm$ 0.09 mmol/L and levels are within the normal range (2.15-2.57 mmol/L) regardless of calcium intake through diet and supplementation. And also there was no any significant correlation between serum corrected calcium and calcium intake through diet/supplementation. Mean serum phosphate (normal range 0.87-1.45 mmol/L) and ALP (normal range 42-98 U/L) were 1.2 $\pm$ 0.2 mmol/L and 121.4 $\pm$ 25.4 U/L respectively.

Conclusions: Recommended daily allowance of calcium was not reached by both supplementation and diet. Thus, large-scale studies are needed for better understanding of amount of additional supplementation of calcium in breast feeding mothers.

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