

## Infant Nutrition

### Breastmilk Retinol Levels in Bangladeshi Mothers: Reflection on the Serum Retinol Level of Infants

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**Objective:** Examine the retinol levels in breastmilk and serum of 32 mothers and same from cord blood and serum of infants of urban middle class families.

**Methodology:** Colostrum and morning collection of full expression of breastmilk at 4, 12, and 20 weeks were obtained. Cord blood and infant's serum at 6, 14, and 22 weeks were taken. All samples were collected and stored at -20 °C following standard procedures. These were analyzed by the high pressure liquid chromatography (HPLC) method. The fat content of breastmilk was estimated by creamatocrit method on the day of specimen collection.

**Results:** The retinol content of breastmilk (9%) and serum samples (17%) was below 10 µg/dl; the retinol content of all breastmilk (22%) and serum samples (59%) was below 20 µg/dl. Both median and mean retinol levels in mothers' milk were directly correlated with the amount of fat in the breastmilk samples. The median fat content of mothers' milk was 7% (range 3-20) with a lower median in the colostrum (6%). The colostrum retinol level was low (14.1 µg/dl±14.22); the breastmilk retinol level increased up to 12 weeks (61.9 µg/dl±43.72) and had a slight decrease at 20 weeks. The median fat and retinol contents were the lowest in the colostrum (7.2±2.4% and 14 µg/dl±14.2 respectively). The breastmilk retinol levels had a mean value of 72.67 µg/dl, 72.30 µg/dl, and 67.96 µg/dl at 4, 12, and 20 weeks' samples respectively. The median serum retinol level for cord blood samples was 16 µg/dl±2.7, and the values for the serum samples collected at 6, 14, and 22 weeks were: 12.97 µg/dl, 21.5 µg/dl, and 19.79 µg/dl respectively.

**Conclusion:** Infant's serum appears to reflect only 20-40% of the consumed breastmilk in the previous two weeks. The results of the study indicate that maternal reserves of retinol must be improved to produce adequate vitamin A status in their infants.

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### Initial Breast-feeding Practices of Urban Mothers Can be Influenced by Peer Counselling

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**Objective:** Assess the effect of peer counselling on early postpartum breast-feeding practices of urban mothers.

**Methodology:** Forty localities of similar size in Dhaka were randomized as intervention or control areas. From each of the 20 intervention areas, local women who had breastfed their babies and were motivated to help other mothers, were trained as peer counsellors. Three counselling sessions were provided (two visits before delivery in presence of influential family members, and one within 48 hours of delivery) to initiate early breast-