

THE INFLUENCE OF ORAL CONTRACEPTIVES AND DIET
ON ASCORBIC ACID AND VITAMIN A IN LACTATION

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Many lactating women use oral contraceptives (OC). However, little is known of the effect of OC on lactation, and in particular their influence on the nutrient content of human milk with respect to vitamins. The ascorbic acid status and vitamin A status of women using OC are consistently altered to some extent (Briggs and Briggs 1980). It was therefore decided to study the effect of OC use on these two vitamins in breast milk, as marked changes could affect the nutritional status of the nursing infant.

A longitudinal study has been done on five lactating women, all using the progestagen-only OC or 'mini pill'. One to 2 weeks prior to commencement of OC use, which usually started 6 or 7 weeks post-partum, anthropometric and dietary data were collected from the women. At this and each of the 19 ensuing weekly visits, a 10 ml fasting venous blood sample was collected, together with a 10 ml fasting sample of milk obtained 30 sec. after milk let-down at the feed nearest to the time of blood collection. A written record of the food consumed by the women in the previous 24 h was also obtained at each visit. Plasma and milk samples were analysed for ascorbic acid and vitamin A concentrations and dietary analyses were done.

Milk vitamin concentrations during the 20-week study in
five women using progestagen-only OC (Mean \pm SE)

	Initial Concentration ($\mu\text{mol/l}$)	Final Concentration ($\mu\text{mol/l}$)
Ascorbic acid	367 \pm 25	320 \pm 24
Vitamin A	2.68 \pm 0.26	1.83 \pm 0.47

(Values presented are the means of four weekly determinations).

There was a decline in the milk concentrations of both ascorbic acid and vitamin A over the 20-week study period. However these small changes were similar to those observed in a comparable group of lactating women who did not use OC, indicating a physiological rather than pharmacological effect.

Dietary intake was found to affect the milk ascorbic acid concentration. Further influences on milk ascorbic acid and vitamin A concentrations will be discussed.

BRIGGS, M.H. and BRIGGS, M. (1980). 'Oral Contraceptives', vol. 4, p. 129. (Eden Press, Annual Research Reviews : Edinburgh & London. Churchill Livingstone).

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