

VITAMIN C SUPPLEMENTATION IN LACTATING WOMEN

BARBARA C. KLEINE, C. REILLY and FIONA J. CUMMING*

The use of vitamin C supplements by lactating women and the usefulness of such supplements was investigated.

A sample of 112 lactating women attending two of the Maternal and Infant Health Baby Clinics in Brisbane completed a questionnaire about their use of vitamin C supplements. Twenty-five % ($P < 0.05$) of these mothers were taking vitamin C supplements, and 23% ($P < 0.05$) of the infants were receiving supplementary vitamin C. The lactating women who took vitamin C themselves were more likely to give supplements to their infants than those who did not take supplements ($P < 0.05$).

Subsequently, the effect of vitamin C tablets on the milk and urinary vitamin C concentrations was studied in five lactating women. For one week, each subject recorded their daily dietary intake but no vitamin C tablets were taken. On days 1, 4 and 7 of that week, milk samples were taken at 6-hourly intervals and 24-hour urine outputs were collected. During the following week this regime was continued, but each woman took a daily vitamin C tablet. The dose for the women ranged from 0-500 mg per day. Each woman took the same dose for all seven days of the week.

The womens' milk vitamin C concentrations were not significantly affected by the vitamin C tablets, and the urinary vitamin C excretion was increased significantly only in the woman who took 500 mg of vitamin C per day during the second week of the study.

These results were comparable with those from other studies (Kon and Mawson 1950). There appears to be an upper limit beyond which the milk vitamin C concentration cannot be increased. Additional ingested vitamin C is directed into the body pool or excreted in the urine. Therefore, in well-nourished Australian lactating women, vitamin C supplements are unnecessary.

Similarly, provided the infants of the women in this study consumed at least 400 ml of breast-milk each day, their vitamin C intakes were adequate.

KON, S. and MAWSON, E. (1950). Human Milk. Wartime Studies of Vitamins and Other Constituents', Medical Research Council Special Report Series No. 269: 121.

* Department of Public Health and Nutrition, Queensland Institute of Technology
Brisbane, Queensland 4000