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KEY WORD : COLOSTRUM/ MATURE MILK/ FATTY ACIDS

NAPUSAKORN TONGSAKUL : THE COMPARISON OF FATTY ACIDS
COMPOSITION IN HUMAN COLOSTRUM AND MATURE MILK. THESIS ADVISOR
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At present women have increased their social roles but have decreased their breast - feeding, although human milk contains essential fatty acids for neonatal brain and retina development. The objective of this study is to analyse 19 fatty acids both in colostrum and mature milk and to find their correlation with those acids in the diets of 10 full - term normal primigravidas in 2 hospitals . The instruments consisted of general questionnaire, 3 day - food record form and gas - chromatograph for fatty acids analysis. Paired t - test and Pearson' s correlation were the statistical methods used. The sample group included 32 women.

The study used interviews with a questionnaire concerning social and economic status, health status and 3 day dietary record. Milk samples were analyzed by GC. The statistics used in this study were percentage, mean, standard deviation, paired sample t - test and Pearson' s correlation coefficient.

The study showed that saturated fatty acid 12:0, 14:0, 20:0, monounsaturated fatty acid 18:1 n9, 20:1 n9, polyunsaturated fatty acid 18:2 n6 were higher in mature milk than in colostrum while saturated fatty acid 16:0, 17:0, 18:0, monounsaturated fatty acid 16:1 n7, polyunsaturated fatty acid 18:3 n6, 18:3 n3, 20:2 n6, 20:3 n6, 20:4 n6, 20:5 n3, 22:6 n3 were higher in colostrum than in mature milk. Percentage of linoleic acid in diet correlated positively with that in mature milk at (p = 0.02).

It is recommended that lactating women should have a diet which includes seed oil, green - leaf vegetables and sea food during postpartum and breast-fed period in order to adequately supply essential polyunsaturated fatty acids in the breast milk to their newborn babies.