

Abstract

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Relationships among plasma zinc, plasma prolactin, milk transfer, and milk zinc in lactating women.

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OBJECTIVE: The objective was to analyze interrelationships among plasma zinc (PZ), plasma prolactin (PRL), milk transfer, and milk zinc from a longitudinal study of lactating women with a range of zinc intakes.

METHODS: Sixteen of 26 women received a 15 mg/d zinc supplement, resulting in a significant increase in total zinc intake compared with nonsupplemented participants ($P < .001$).

RESULTS: No significant differences in key variables were observed between the zinc-supplemented and non-zinc-supplemented women; data were thus combined. An inverse trend between PRL and PZ was observed at 0.5 ($r = -.36$, $P = .08$) and 7 months ($r = -.38$, $P = .06$). Correlations between PRL at 0.5 months and at 3, 5, and 7 months were significant ($r > .50$, $P < .01$). PRL concentrations and milk transfer were positively correlated at 5 ($r = .67$, $P < .001$) and 7 months ($r = .53$, $P < .01$), consistent with PRL role in lactation maintenance.

CONCLUSION: Studies including zinc-deficient lactating women are required to clarify the interrelationships between zinc status and PRL secretion.

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