Short term response of breast milk micronutrient concentrations to a lipid based nutrient supplement in Guatemalan women
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- A project by Juliana Haber from the University of California, Davis
- In conjunction with the Center for Studies of Sensory Impairment, Aging and Metabolism
Location

Guatemala
Location

- CESSIAM
- Guatemala City
- Quetzaltenango, Guatemala
Primary objective

- Evaluate the impact of supplementation with LNS (Lipid based Nutrient Supplement) consumed as a single dose or divided into 3 smaller doses per day on concentration of vitamins A, E, B12, B1, B2, and B6 in breast milk at 4-6 months post partum
Secondary objectives

- Compare effects of maternal supplementation with LNS consumed as a single dose or divided into 3 smaller doses on daily infant maternal micronutrient intake from milk

- Examine day-to-day variation in fasted milk composition within women

- Examine predictors of milk maternal micronutrient content (e.g. maternal micronutrient intake & nutritional status, demographic characteristics)
Eligibility

Inclusion
- Mother 18-40 y of age
- 4-6 months of lactation and ≥ 8 breast feeding episodes/day
- Last birth was a singleton birth
- Only breastfeeding
- Child is 4-6 m of age
- Full term child

Exclusion
- Current supplement use
- Self reported mastitis or other breast infections
- Breastfeeding problems
- BMI < 18.5 or MUAC < 12.5 cm
- Temporary – If mother or her infant present with an acute illness
- Allergy to milk or peanuts
Recruitment

- Community Health Centers
- Communities around Quetzaltenango
  - Chuicavioc
  - Tierra Colorada Baja
Community visits
Community visits
Community visits
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1st. visit

- Consent
- Anthropometrics
- Blood draw
- FFQ
- Demographics
2nd. – 4th. visit

- Milk collection
2nd. – 4th. visit

- Milk aliquoting
2nd. – 4th. visit

- Milk aliquoting
2nd. – 4th. visit

- 24h dietary recall
2nd. – 4th. visit

- 24h dietary recall
2nd. – 4th. visit

- Fat content determination
Compensation to participants

- Care packages for infant and mother, photo of them, travel costs, anemia test, iron supplementation if needed
Supplement

- LNS
  - Contains around 1-2 RDA’s for lactation of many micronutrients
  - Designed by Nutriset
  - Food-like matrix (similar to peanut butter)
Meals provided
Data entry

- EPI INFO
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