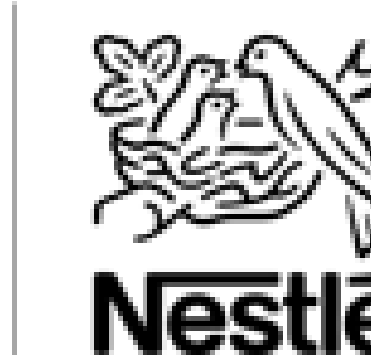


# Utilizing Absorption Factors Demonstrates a High Rate of Low Zinc Intakes Among Breastfed Infants 6 to 11.9 months in the United States

Kristen Finn<sup>1</sup>, Joel Hampton<sup>2</sup>, Susan Pac<sup>3</sup>

P14-022-23  
Poster Board 22

<sup>1</sup>DSM Nutritional Products; <sup>2</sup>RTI International; <sup>3</sup>Gerber Products Company, Nestlé Nutrition



## Background

- Zinc is essential for growth and development. Older breastfed infants are susceptible to zinc deficiency due to inadequate intake and low bioavailability from weaning foods.

## Objective

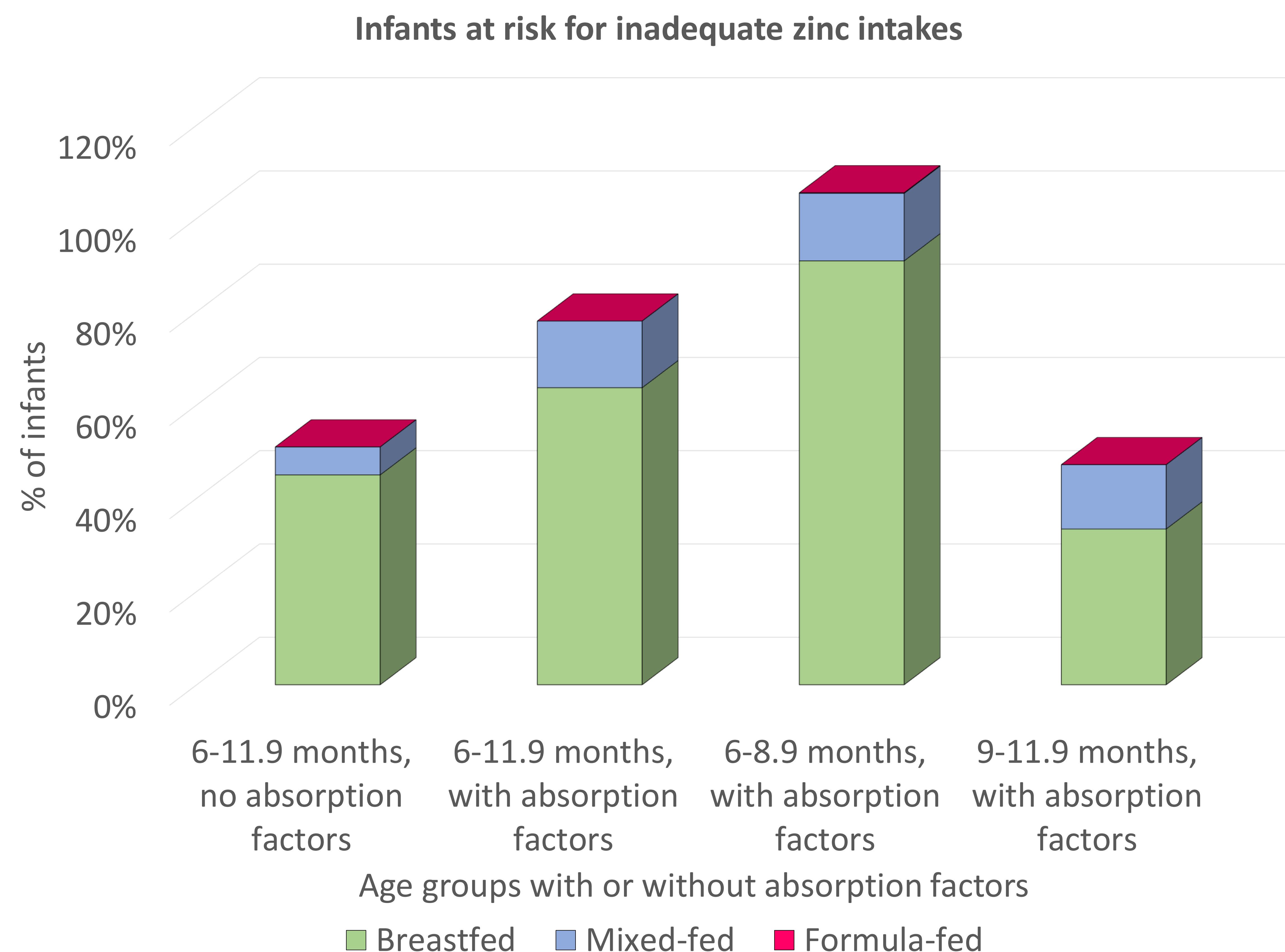
- Compare estimated total daily zinc absorption of 6-11.9-month-old infants according to feeding type (breastfed, mixed fed, or formula fed) and to requirements for growth.

## Methods

- Food intake data from the Feeding Infants and Toddlers Study was utilized to calculate zinc intakes.
- The level of zinc in human milk was adjusted from 1mg/600ml to 0.5mg/600ml to reflect the amount of zinc estimated to be in human milk at around 6 months of age.
- Estimated absorption efficiency was used to account for bioavailability of food sources and estimate the percentage of infants at risk for inadequate zinc intakes to achieve absorptive needs according to feeding type.
- Food sources of calculated absorbed zinc were ranked for each feeding type group.

## Results

- Among 6-11.9-month-olds, more breastfed infants were at risk for inadequate zinc intakes (45%) compared to mixed- (6%) or formula-fed infants (0%).
- When absorption factors were applied, more breastfed and mixed fed infants were at risk for inadequate zinc intakes (63.7% and 14.3% respectively).
- Breastfed and mixed fed infants in the 6-8.9-month-old age group were most at risk with 90.9% and 14.5% having calculated absorbed intakes below the absorbed zinc requirement, respectively.



## Conclusions

- Breastfed and mixed fed infants are at risk for inadequate zinc intakes, especially when first starting complementary foods.
- Guidance for complementary foods containing zinc for infants receiving any breastmilk may be warranted.

## Relevant Reference

Krebs NF et al. Comparison of complementary feeding strategies to meet zinc requirements of older breastfed infants. *Am J Clin Nutr.* 2012 Jul;96(1):30-5.

## Funding

The FITS 2016 was funded by Nestle Research, Lausanne, Switzerland. The analysis described here was funded by the Gerber Products Co., Nestle Nutrition, Arlington, VA.