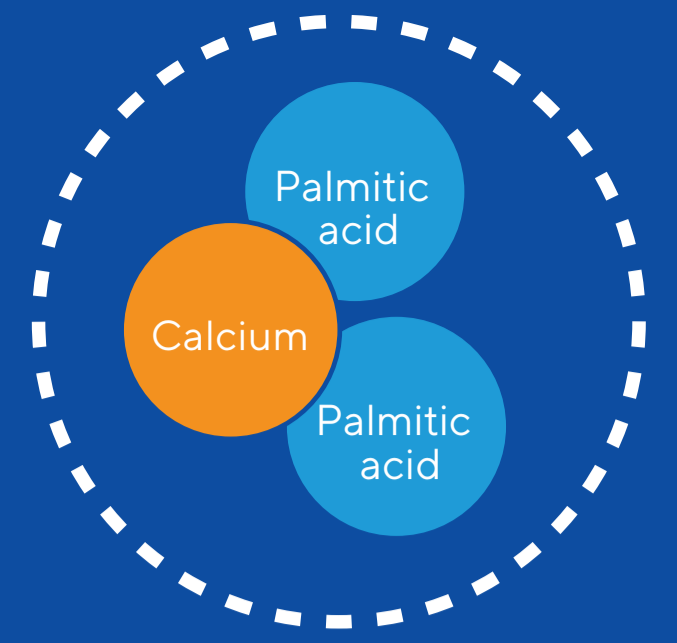


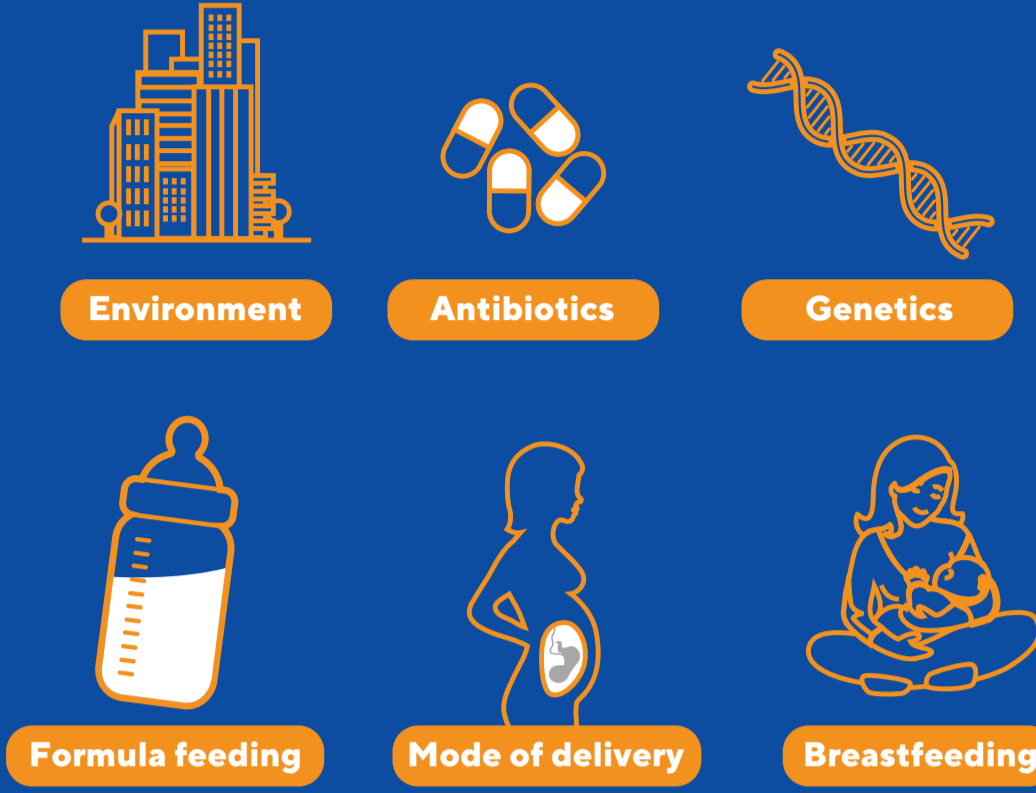
THE EFFECT OF CALCIUM PALMITATE ON BACTERIA COLONIZING THE INFANT GUT¹

A well-balanced gut microbiota is important for the maturation of an infant's digestive and immune systems. Vegetable fat, rich in triglycerides with palmitic acid at the sn-1 and sn-3 positions, leads to calcium soap formation in the gut, which lowers nutrient absorption in infants and negatively affects their health. Most infant formulas contain unmodified vegetable fat.

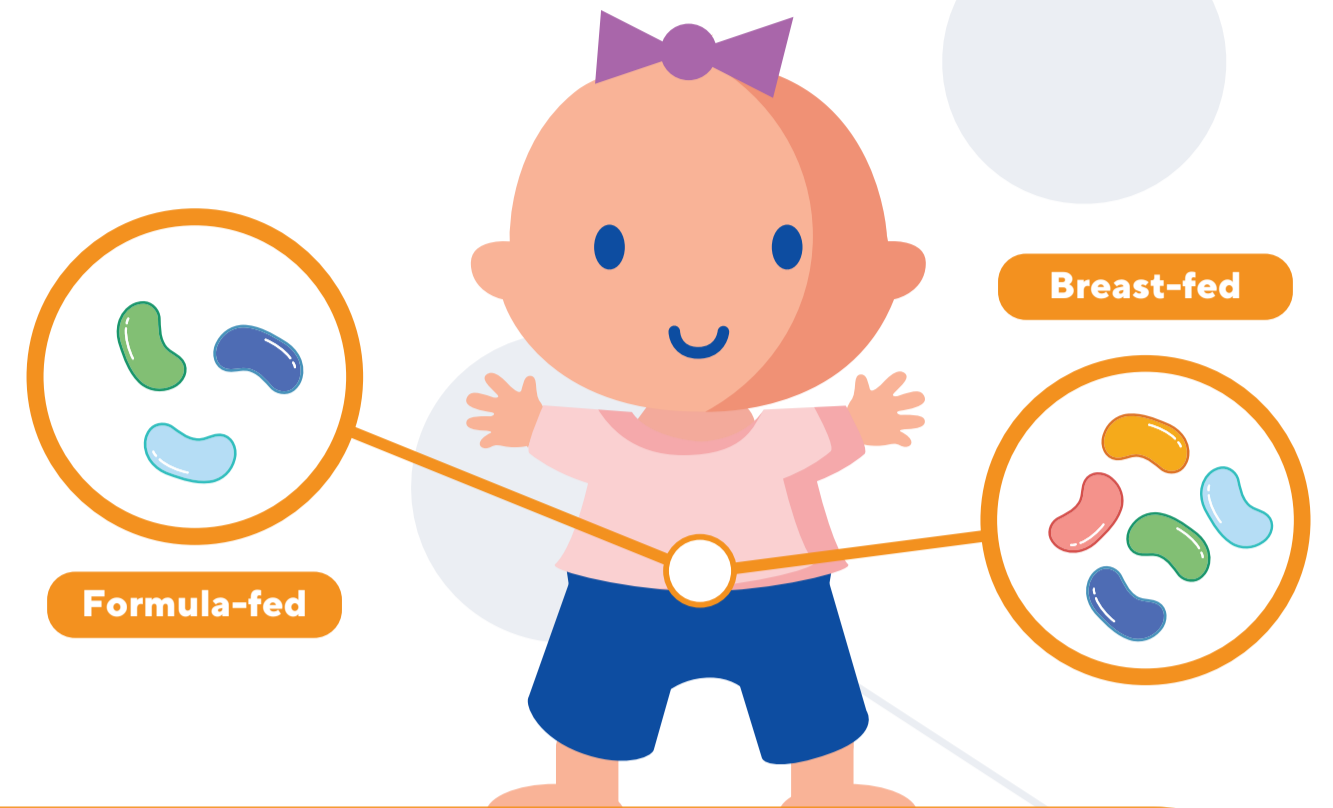


Gut microbiota

From the moment of birth, an infant's gut microbiota will develop extensively over time, a process influenced by several factors.²

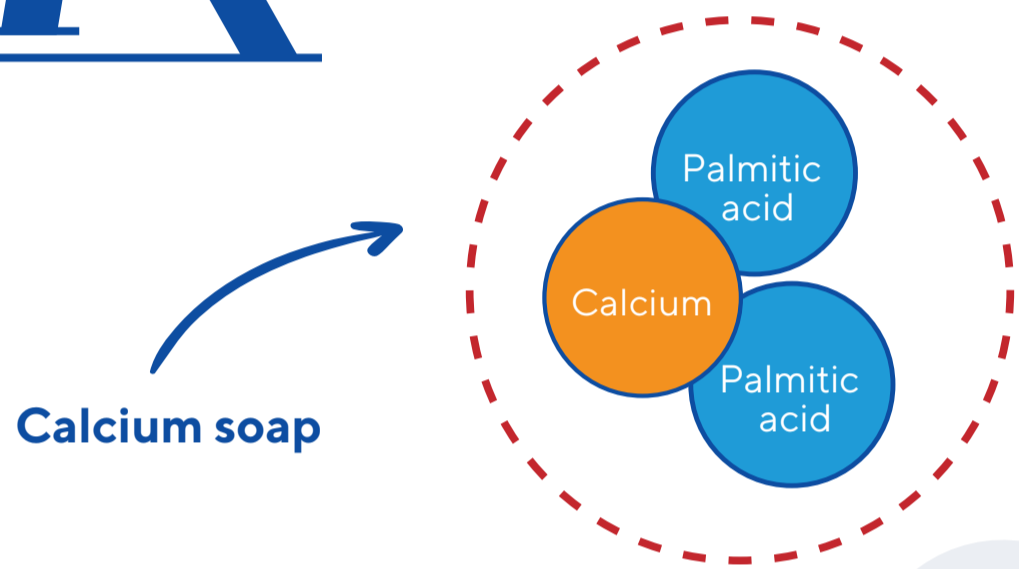


Development of the gut microbiota in formula-fed and breast-fed infants is known to differ.



Objective

This study was aimed at investigating the possible influence of calcium soap on the infant gut microbiota.¹



Method



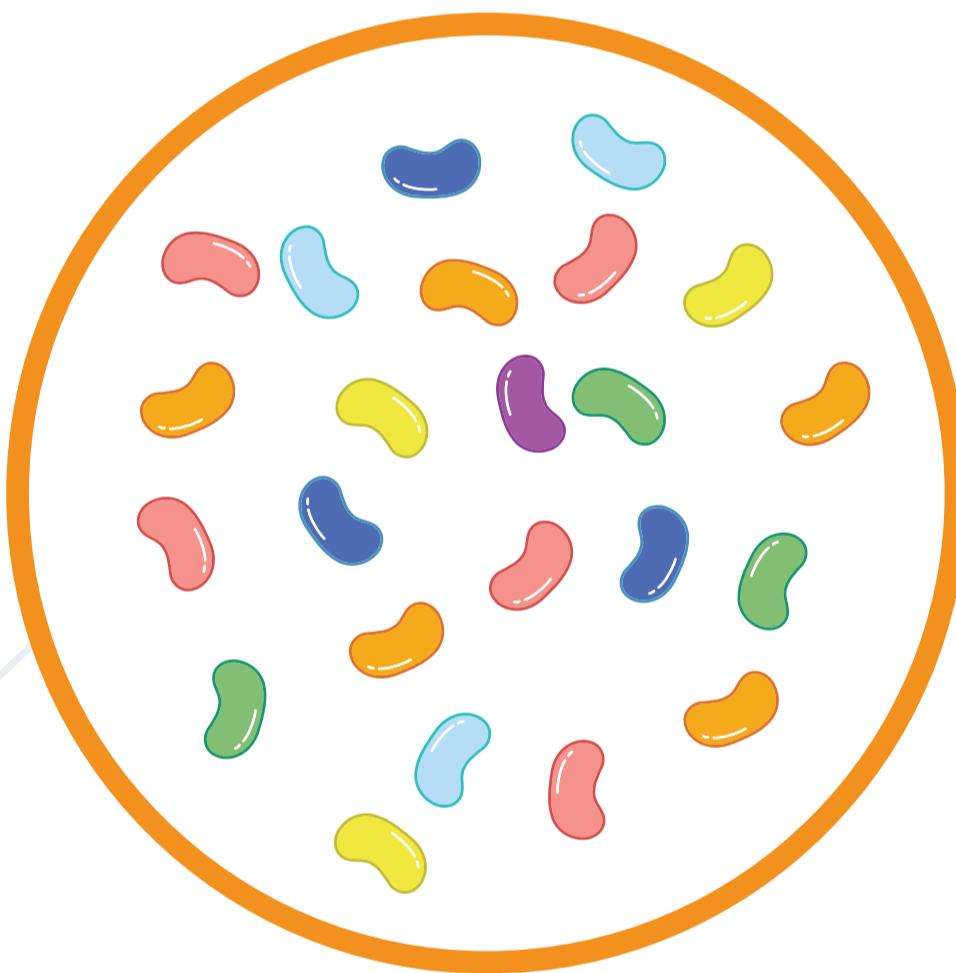
Faecalibacterium prausnitzii and several other bacterial species dominant in the infant gut were cultured in media with different concentrations of calcium soaps.

Results

Calcium soaps may influence the development of the infant gut microbiota by limiting the growth of important beneficial bacteria, which creates a risk of the onset of a disbalanced gut microbiota.



Without calcium soaps



0.01 mg/ml calcium soaps



0.06 mg/ml calcium soaps

● *F. prausnitzii* ● *B. infantis* ● *B. bifidum* ● *B. longum* ● *B. breve* ● *B. thetaiotaomicron* ● *B. fragilis*

Conclusion

Calcium soaps may have an impact on the development of the infant gut microbiota by limiting the growth of important beneficial bacteria in early life stages.



Infant formula with high levels of β -palmitate can reduce calcium soap formation. In addition, research has also shown that infant formula with high levels of β -palmitate may be beneficial for a well-balanced gut microbiota.³

References: 1: Wang et al. 2020 (submitted), 2: Milani et al. 2017, 3: Havlicekova et al. 2016.

Disclaimers:

- Ausnutria acknowledges that breastfeeding is the best food for infants aged 0-6 months and supports prolonging breastfeeding to 24 months (age 2).
- For health care professionals only.