

Optimal levels of Linoleic Acid in early life: what do we know?

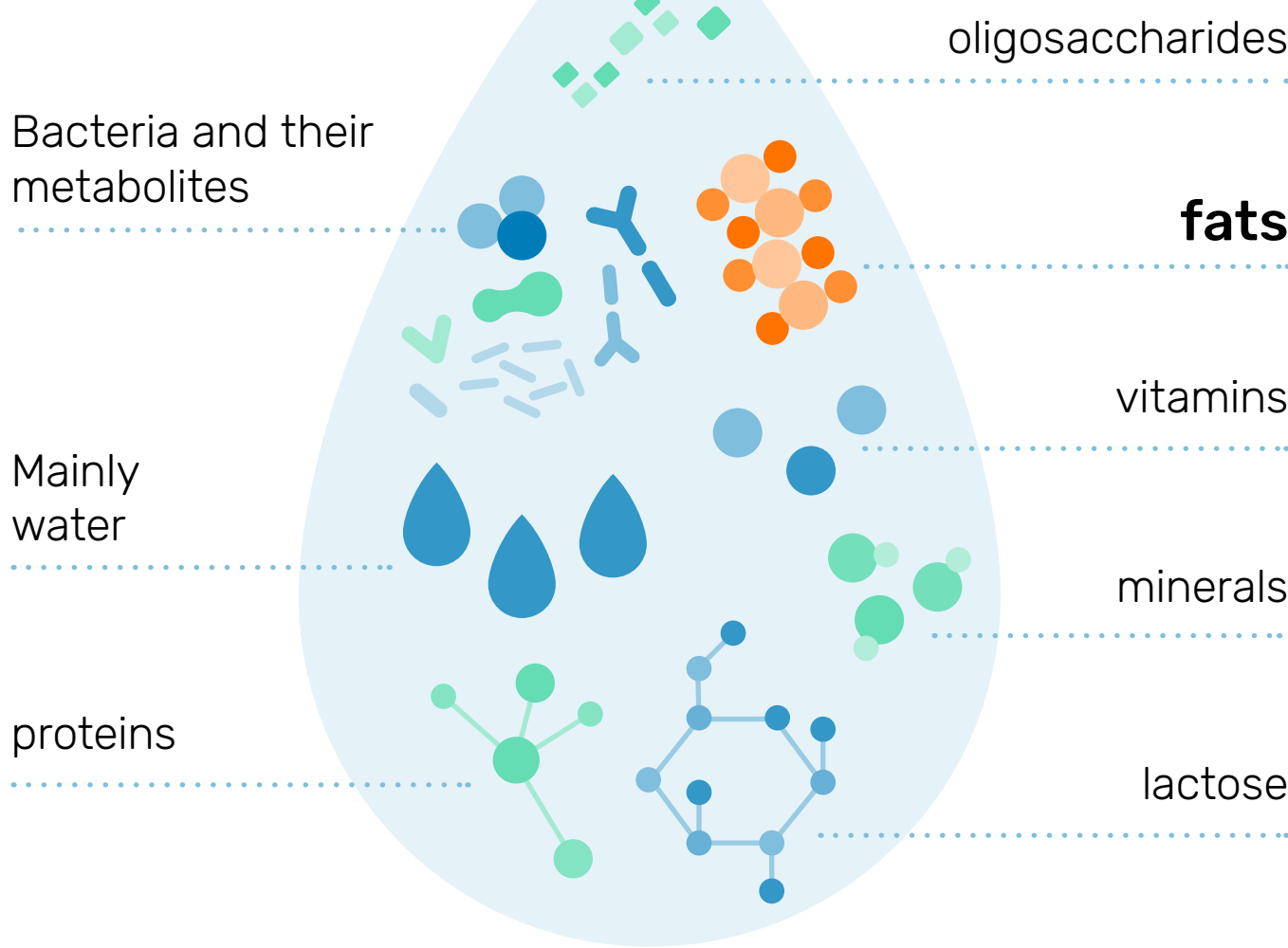


The World Health Organisation recommends exclusive breastfeeding for the first 6 months followed by continued breastfeeding and the right complementary nutrition up to 2 years of age and beyond **to achieve optimal growth, development and health.**¹

Infant formula should be designed to provide adequate nutrient and energy levels to facilitate healthy infant growth and development for those infants that do not have access to exclusive breastfeeding.²

BreastMilk: What's in it?

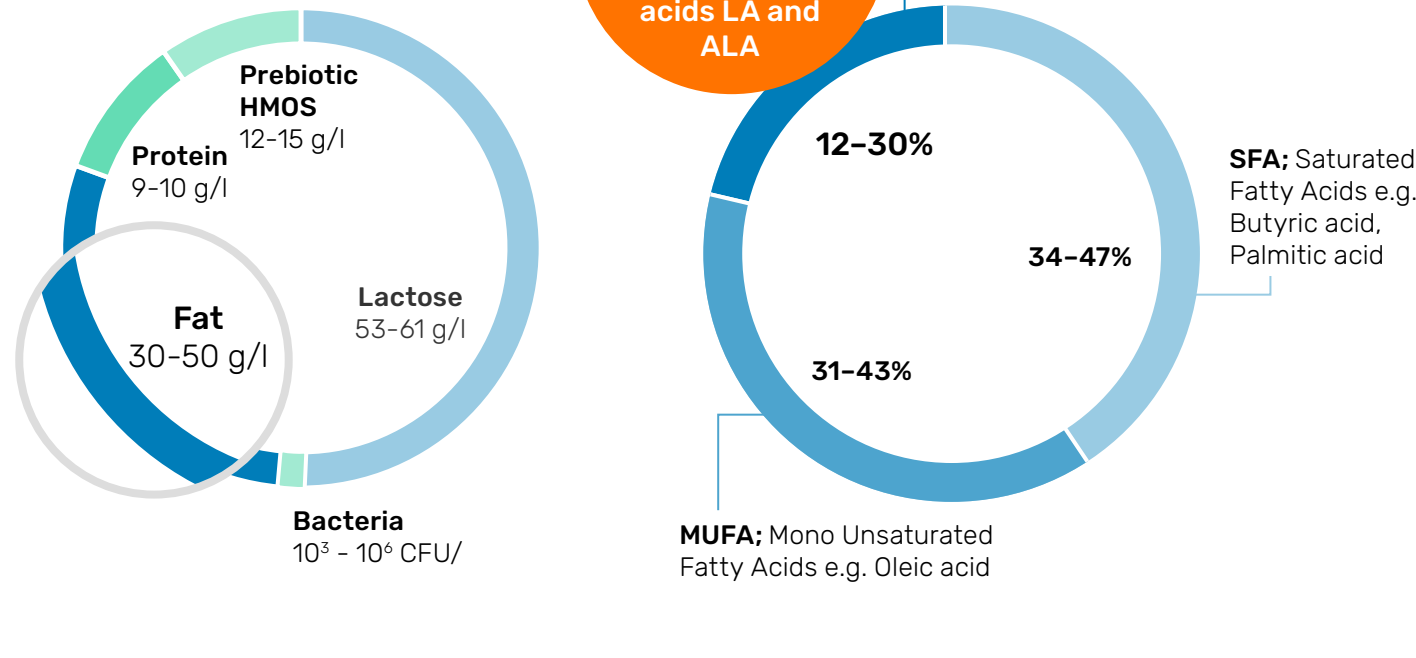
Breastmilk is an amazing complex and diverse matrix of nutritional and bioactive components*



*amongst other components

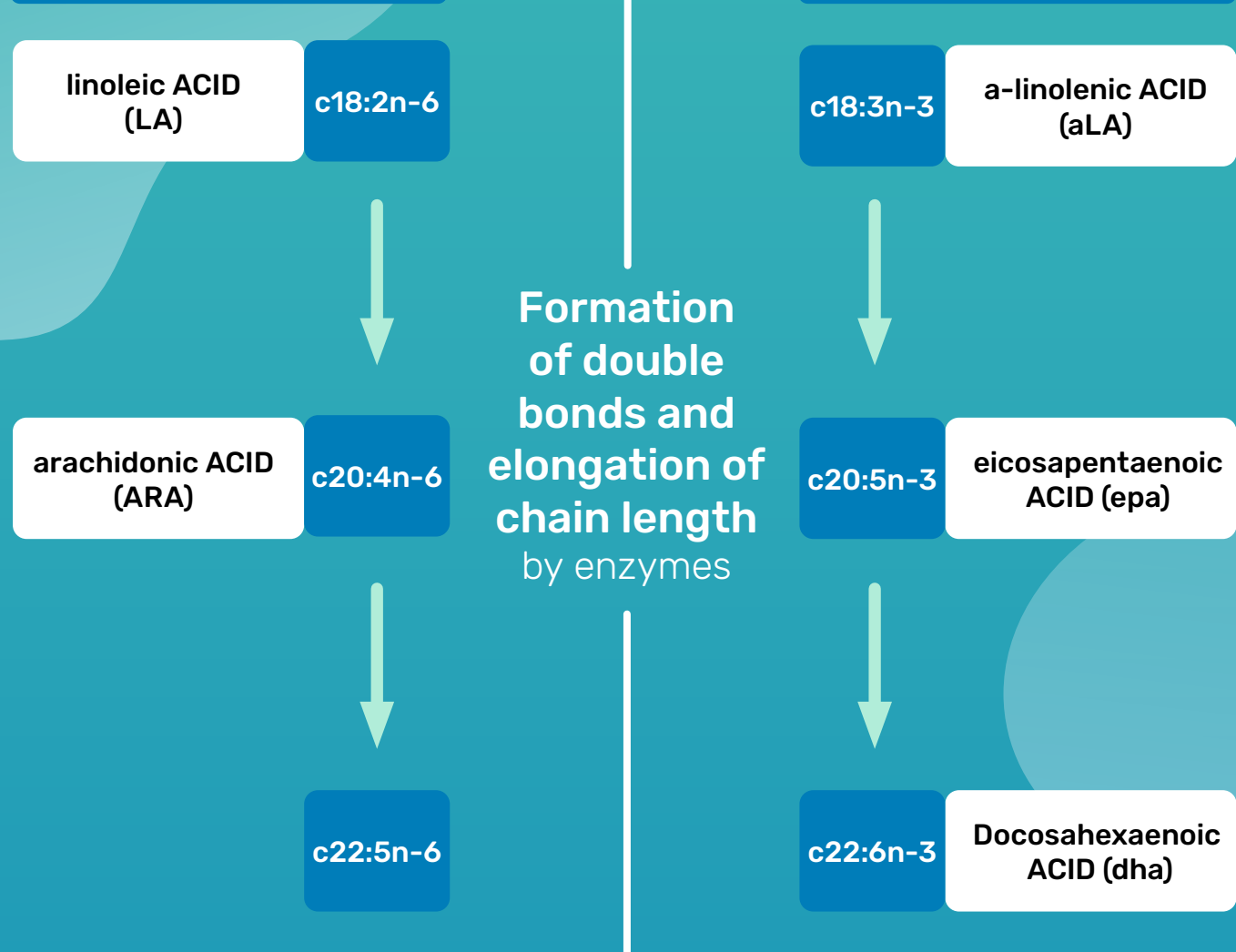
Fat is a key component of breastmilk

Fat provides 50% of the energy in breastmilk



i Various factors such as maternal diet, infections and lactation stage can influence the composition of fat in breastmilk.

LA & ALA can be converted to LCPUFAs, including ARA & DHA, by enzymes

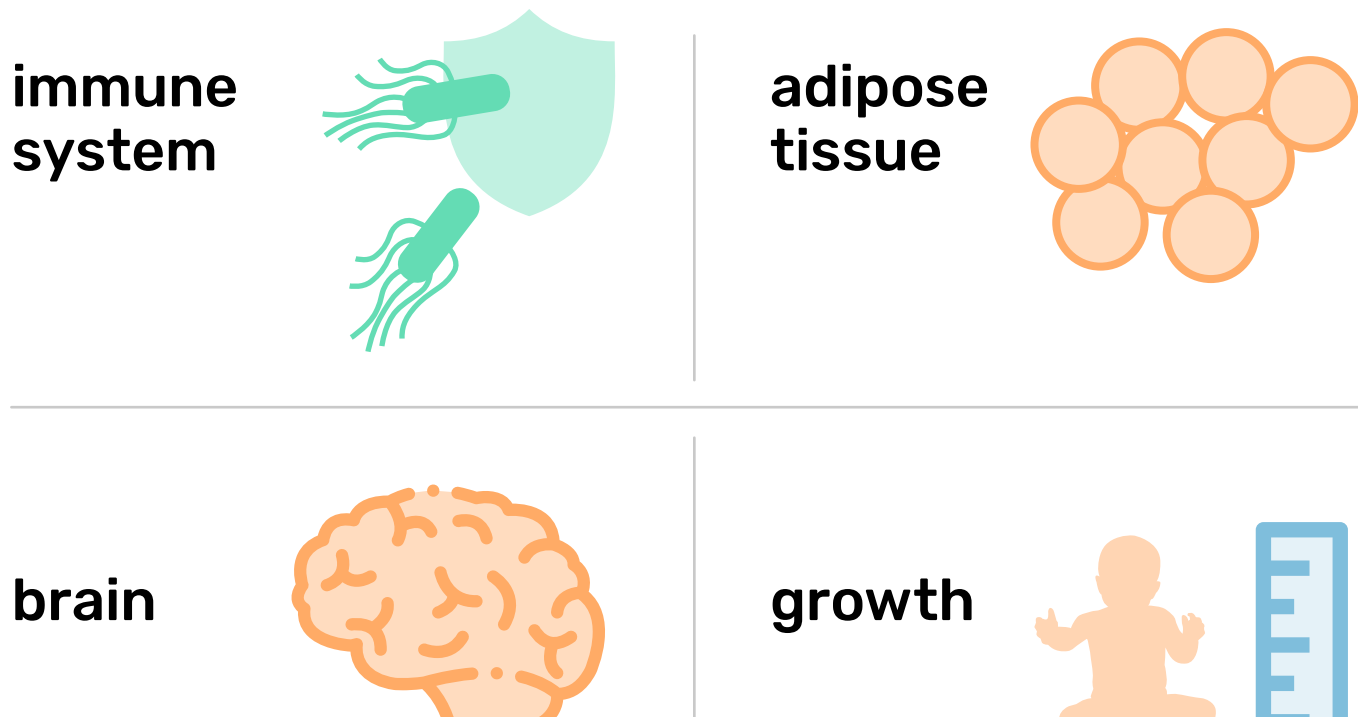


However, n-6 and n-3 PUFAs use the same set of enzymes, and therefore compete for conversion

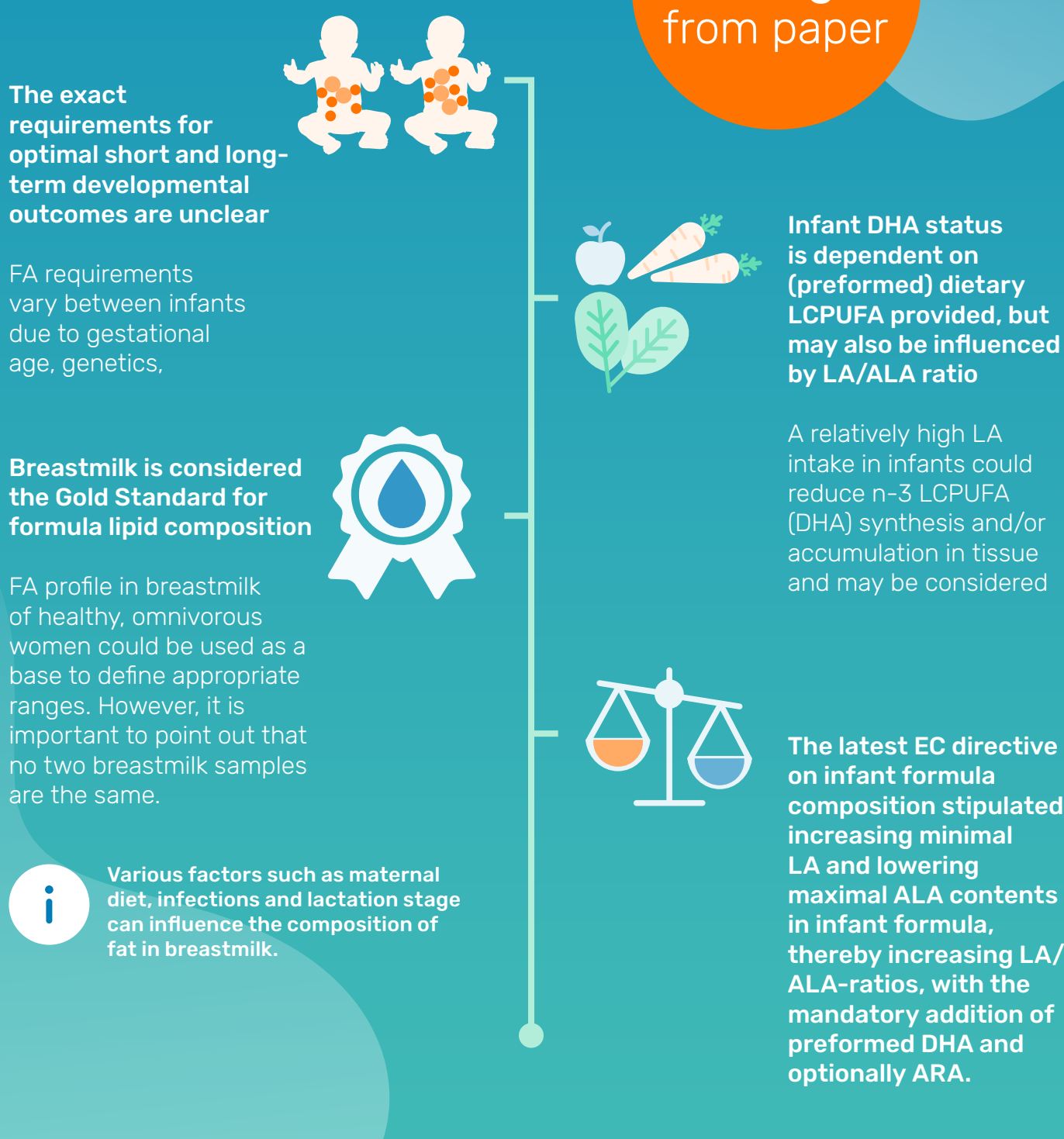
The absolute amounts & their ratio affect the **balance** between n-6 and n-3 LCPUFA synthesis



The amount and balance of dietary LA and ALA intake as well as the preformed n-6 and n-3 LCPUFAs in early life nutrition have the potential **to affect lcpufa status**. This has an impact on the **development** and **function** of:



Key messages from paper



A clear gap in knowledge exists regarding the potential impact of LA and ALA levels in infant formula in the presence of preformed LCPUFAs as in current formulas.

Hence, an urgent need exists for well-designed clinical intervention trials to create clarity about optimal and safe levels of LA and long-term implications on functional health outcomes.

More information



Check out the short interview with last author Dr. Beverly Muhlhausler

→ [Click here to view](#)



Check out the paper by Carlson et al. in Advances in Nutrition

→ [Click here to read](#)

References:

1. WHO, Secretariat. Infant and young child nutrition: 55th World Health Assembly (2002). Accessed here: https://apps.who.int/gb/archive/pdf_files/WHA55/ea5515.pdf

2. EFSA Panel on Dietetic Products, Nutrition and Allergies (NDA). EFSA Journal 12.7 (2014): 3760. Accessed here: <https://efsa.onlinelibrary.wiley.com/doi/abs/10.2903/j.efsa.2014.3760>

Based on the paper: Carlson et al. Advances in Nutrition. 2021; 00:1-14.