The changing nutritional needs of infants and the composition of breast milk

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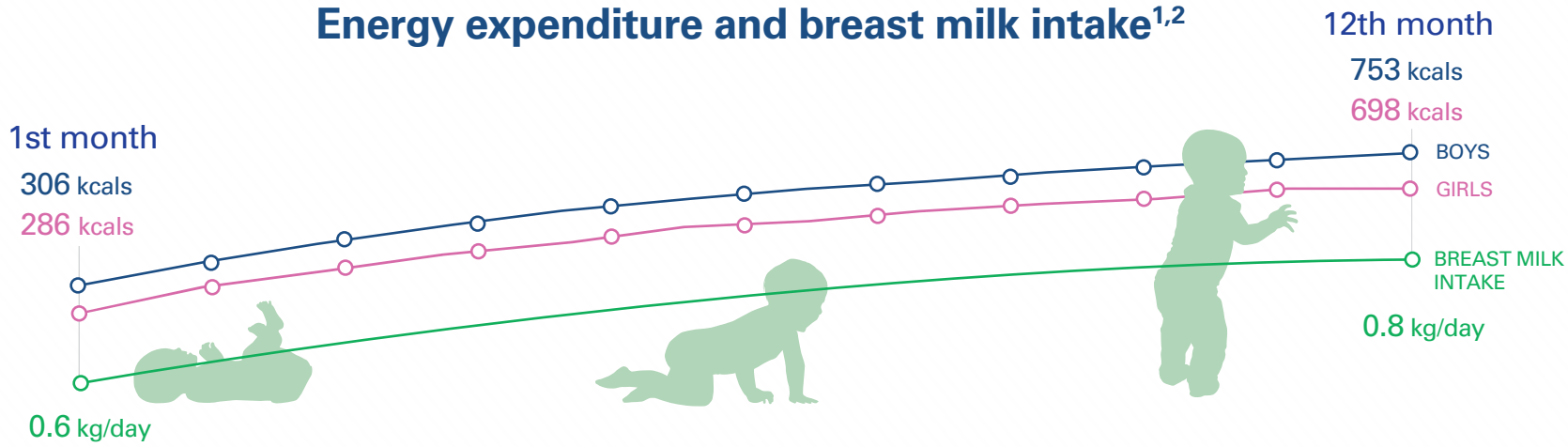
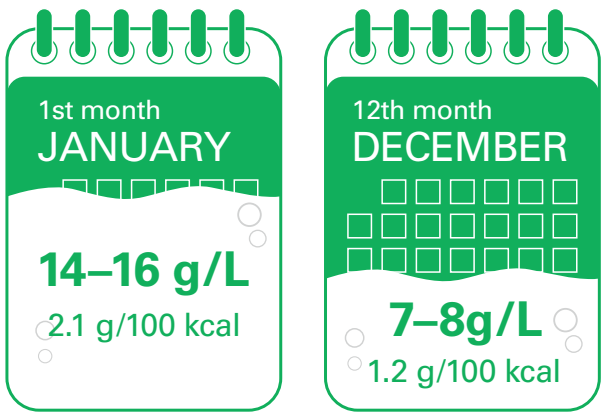
Breast milk is a dynamic solution which changes to **match the evolving nutritional needs** of developing babies. Lower protein intake in infancy may **decrease the risk of being overweight or obese** later in life.

Energy expenditure and breast milk intake[1,2]



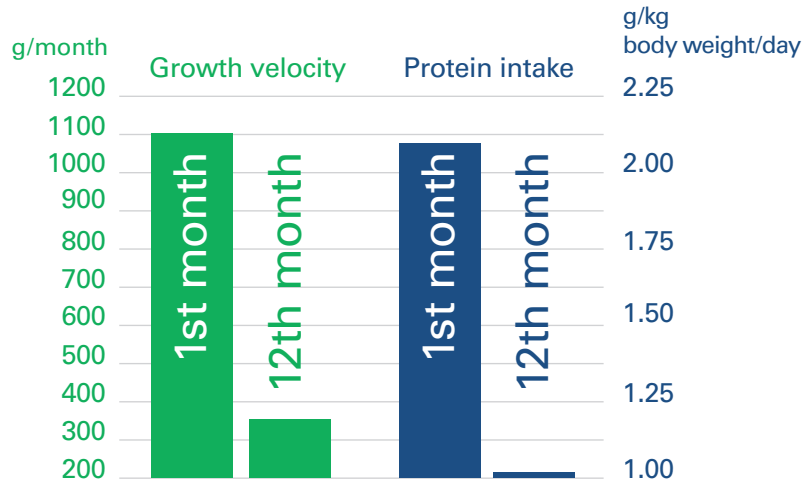
Infants' total energy expenditure increases rapidly, doubling during the first year of life.[1] This is reflected in a corresponding increase in breast milk consumption.[2]

Protein content of breast milk[3]



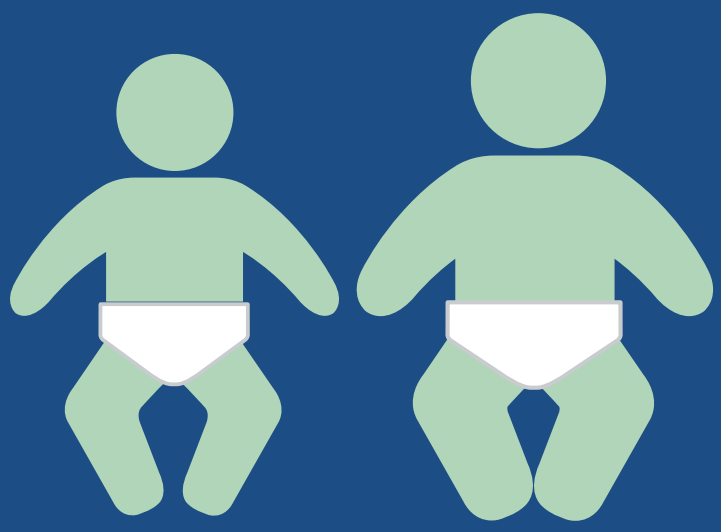
Protein content varies at each stage of lactation and decreases significantly after several months of breastfeeding.

Growth velocity and protein intake[4]



Growth velocity rapidly slows in the first 6 months, which coincides with a reduction in protein intake.

Early protein hypothesis[5]



Low protein infant formula is associated with lower weight in infants up to 2 years of age, which suggests that lower protein intake in infancy may decrease the risk of obesity later in life.

References
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4. Van't Hof MA, et al. Euro-Growth references on increments in length, weight, and head and arm circumferences during the first 3 years of life. Euro-Growth Study Group. J. Pediatr Gastroenterol Nutr. 2000;31(Suppl. 1):S39–47.
5. Koletzko B, et al. Lower protein in infant formula is associated with lower weight up to age 2 y: a randomized clinical trial. Am J Clin Nutr. 2009;89:1836–45.