

## Babies' Nutrition in the First 12 Months for Better Growth and Development



Adequate nutrition is one of the important factors influencing a baby's growth and development<sup>6</sup>. The growth rate is the fastest in the first three months after birth, reaching about 30 grams per day. The growth rate subsequently slows down to about 15 grams per day by 3-6 months and about 10 grams per day from 6-12 months<sup>5,6</sup>. Malnutrition in the first year of life can have a long-lasting impact on physical and mental development<sup>8</sup>. Therefore, proper nutrient intake is important to lower morbidity and mortality, reducing the risk of chronic disease throughout their life span, and promoting regular mental and physical development<sup>1,8</sup>.

### Fuel Up on Macronutrients

Carbohydrates are necessary for babies as it serves as a primary energy source to fuel body activities while protein is needed for other essential body functions such as building and repairing tissues<sup>7</sup>. Fat provides essential fatty acids such as ALA (Alpha Linoleic acid) and LA

(Linoleic Acid) that is required for normal brain and eye development, psychomotor and healthy cognitive development<sup>4</sup>.

### **Get More Minerals**

Iron is a major component of haemoglobin which helps carry oxygen to the brain for it to function. It also supports proper growth of healthy blood cells and prevent iron-deficiency anemia<sup>6</sup>. Zinc is necessary for cell growth and immune functions<sup>1</sup>. Zinc deficiency can affect babies' growth and may also reduce resistance to infections<sup>1</sup>.

Calcium plays an important role in the development of bone mass<sup>6</sup>. In the first 6 months of life, the adequate intake for Calcium is 210mg/day while for 6–12 -month-olds, the adequate intake is 280 mg/day<sup>2,7</sup>. Phosphorus is also essential for healthy bones in babies and supports proper growth and development<sup>3</sup>. When a baby is born preterm, bone fractures and poor growth can occur if they do not receive enough calcium and phosphorus<sup>3</sup>. Sodium is required to maintain the water balance in a baby's body and ensure proper functioning of cell membranes and other body tissues, while iodine is essential for thyroid hormones synthesis and to prevent goiter<sup>1,7</sup>.

### **Don't Forget Vitamins**

Babies need vitamins to grow and be healthy as well, especially preterm babies. They need Vitamin A which essential for formation and maintenance of healthy skin, hair, and mucous membranes<sup>6</sup>. Babies also need Vitamin C to protect against infections, build bones and muscles, and help wounds heal<sup>1</sup>. Inadequate intake of Vitamin C can lead to scurvy<sup>7</sup>. Vitamin D on the other hand, is essential for calcium absorption and keeps babies' bones and teeth healthy<sup>3,6</sup>. Its deficiency in is associated with rickets and osteopenia of prematurity<sup>1</sup>. Vitamins E also is needed to protect cells from damage and strengthens the immune system of babies<sup>1,7</sup>.

## In Conclusion

Optimal nutrition with the right balance of various nutrients is essential for babies' growth and development. At DPO International, we are honoured to be in partnership with **Hexagon** to bring you a wide range of ingredient choices that will elevate the nutritional quality of your baby food products.

## References

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