

Make Tasty and Nutritious Baby Food with Rice



The first 1000 days of life start from the time of conception to the second birthday. It is a period of rapid physical growth and accelerated mental development. Hence, good nutrition in the first 1000 days is the utmost foundation in enabling a child to grow, learn and thrive as well as offers a unique opportunity to build lifelong health and intelligence.

The World Health Organization (WHO) recommends that infants should be exclusively breastfed for the first 6 months and then start receiving complementary food (CF) to provide critical nutrients¹². Commercial CF includes baby cereals, fruit and vegetable purees, and baby cookies. It represents children's first exposure to a broad range of solid foods, contributing to both nutritional intake and development of eating skills during the first two years of life⁵.

Consumer demand for convenience and healthier, more natural CF products for their children, has driven demand for rice-based ingredients. Here's why this trend is expected to continue.

Nutritional Profile & Digestibility

Rice is characterised by a carbohydrate content of nearly 75-85% which provides most of the calories associated. With an excellent essential amino acids profile, it is able to better fulfil the nutritional requirements of babies¹⁰. Minerals like iron, copper, zinc, calcium, magnesium, phosphorus and manganese are also found in adequate amounts in rice¹¹. It is also a good source of fibre, thus rendering it a wholesome food⁴. Likewise, it is ideal for baby's consumption because of its easy digestibility¹, as rice has the highest protein digestibility among wheat, maize, oats and other staples³.

Hypoallergenic & Gluten Free

Rice-based products are also widely used during weaning and to feed young children due to its availability, bland taste and relatively low allergic potential⁹. Consumption of rice and rice-based foods is also particularly high for infants and young children affected by celiac disease, their only viable treatment being a gluten-free diet^{2,6,7}.

Natural & recognisable

Purity and transparency are the critical criteria in developing baby food products. With 61% of consumers worldwide regarding rice starch as natural, it is the ideal ingredient for innovating baby foods so that they meet the demand of increasing clean labels trends. This allows manufacturers to claim their products as "all natural", "organic" and "non-GMO"⁸. Adding to the natural origin of rice, the incorporation of rice ingredients also contributes to the creation of unique textures with excellent product stability¹.

To summarise,

Good nutrition and a balanced diet help babies grow up healthy. Rice-based baby foods are widely used to feed infants and young children due to its promising nutritional

benefits. Rice ingredients are ideal in delivering the essential nutrition and astonishing mouthfeel, texture & stability in a natural way. At DPO, we are honoured to be in partnership with **Beneo Remy**, to bring you a wide range of specialty rice ingredients choices that will elevate the quality of your baby food products.

References

- ¹Beneo. (2020). Matching today's expectations. Specialty rice ingredients for better nutrition. Belgium: Author.
- ²Da Sacco, L., Baldassarre, A., & Masotti, A. (2013). Diet's role in the toxicity of inorganic arsenic (iAs): A journey from soil to children's mouth. *Journal Of Geochemical Exploration*, 131, 45-51. <https://doi.org/10.1016/j.gexplo.2012.11.014>
- ³FAO. (n. d). Nutrient composition and protein quality of rice relative to other cereals.
- ⁴Fernando, B. (2013). Rice as a Source of Fibre. *Rice Research: Open Access*, 1(2), e101. <https://doi.org/10.4172/jrr.1000e101>
- ⁵Koo, Y., Chang, J., & Chen, Y. (2018). Food claims and nutrition facts of commercial infant foods. *PLOS ONE*, 13(2), e0191982. <https://doi.org/10.1371/journal.pone.0191982>
- ⁶Munera-Picazo, S., Burló, F., & Carbonell-Barrachina, Á. (2014). Arsenic speciation in rice-based food for adults with celiac disease. *Food Additives & Contaminants: Part A*, 31(8), 1358-1366. <https://doi.org/10.1080/19440049.2014.933491>
- ⁷Newton, K., & Singer, S. (2012). Celiac disease in children and adolescents: special considerations. *Seminars In Immunopathology*, 34(4), 479-496. <https://doi.org/10.1007/s00281-012-0313-0>
- ⁸Prepared Foods. (2020). BENEEO: Rice Starch.
- ⁹Signes-Pastor, A., Carey, M., & Meharg, A. (2016). Inorganic arsenic in rice-based products for infants and young children. *Food Chemistry*, 191, 128-134. <https://doi.org/10.1016/j.foodchem.2014.11.078>

¹⁰Thomas, R., Bhat, R., & Kuang, Y. T. (2015). Composition of amino Acids, fatty acids, minerals and dietary fiber in some of the local and import rice varieties of Malaysia. *International Food Research Journal*, 22(3), 1148-1155.

¹¹Vunain, E., Chirambo, F., Sajidu, S., & Mguntha, T. (2020). Proximate Composition, Mineral Composition and Phytic Acid in Three Common Malawian White Rice Grains. *Malawi Journal Of Science And Technology*, 12(1), 87-108.

¹²World Health Organisation. (2021). Infant and young child feeding.