Prebiotics: Supporting kids' health & well-being



Violette loves her ió fibrewater! (Press play below the picture.) ió fibrewater intake in infants and small children ages 2+

There have been numerous studies proving the safety and efficacy of chicory root fibre babies, infants and small children.

Sugars and natural sweeteners (such as the stevia and erythritol found in **ió** fibre**water**) are not recommended for infants until they are aged two. Please refer to the <u>dosages page</u> for further information.

One of the most common gastrointestinal complains in children is chronic constipation. Beneo conducted a pilot study in 17 children (2-5 years old). Those who received the prebiotics had significantly softer stools compared the control group. (1)

Benefits of chicory root fibre intake in kids

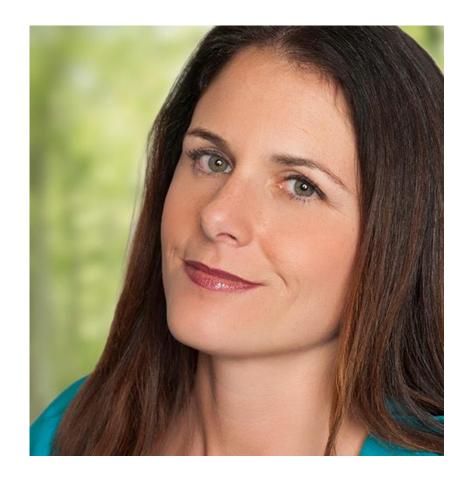
Chicory root fibre (inulin) is in follow-on formulas around the world, as it greatly increases healthy bacteria (probiotics) and is associated with a protective role in the development of a number of diseases later in life.



The importance of prebiotics in children

"Because the body can't digest prebiotics, they go right to the lower part of the digestive system and act as food for healthy bacteria to grow," says Nicole Avena, Ph.D., assistant professor of neuroscience at Mount Sinai School of Medicine and visiting professor of health psychology at Princeton University. "Or, if new bacteria are forming, prebiotics help them develop."

"In some ways, prebiotics are more important than probiotics because they feed probiotics. You can take all the probiotics in the world, but they won't produce health benefits if you don't also have prebiotics on board." Says Avena.



Prebiotics go beyond supporting the digestive system

- Help the body absorb calcium key for kids' bone growth
- Pre-empt blood sugar spikes
- Good for the brain

"Now that we're learning so much about gut-brain interaction, we know that many things related to brain development have a connection to what is happening in the gut," Avena says. "There is significant amount of research connecting probiotics and brain health, so, de facto, prebiotics are big part of that story too."



Chicory root fibre: Proven immune system booster in children

"A study by Lohner et al. investigated supplementation with prebiotic chicory root fibers in 219 kindergarten children (3-6 years old) over 6 months. Besides the fact that the gut microbiota composition and stool frequency was positively influenced through the prebiotic treatment, the children also experienced fewer incidents of fever and sinusitis. This research highlights that, even in this age group, the immune system can be strengthened with chicory root fibers.*

Further findings from this study showed benefits on the microbiota even in those children that had to undergo antibiotic treatment. Prebiotic chicory root fiber kept the level of bifidobacteria higher and more stable, reduced the antibiotic-induced disturbances of the microbiota composition. In general, the children undergoing antibiotic treatment showed a reduction of bifidobacteria. However, those children also receiving the prebiotic supplementation demonstrated a significantly higher presence of bifidobacteria versus the control. The study is further proof that prebiotic chicory root fiber maintains microbiota balance in children – even following antibiotic treatment."

ió fibrewater: A great way to boost your little one's fibre intake & reduce constipation

- According to the NHS, 1 in 3 children struggle with constipation in the UK at any one time
- Only 4% of children aged 11-18 years are meeting current fibre recommendations
- ió fibrewater is supported by an EU and GB NHC health claim for increasing stool frequency
- Chicory root fibre (inulin) is proven to improve stool consistency in constipated children



Chicory root fibre and weight management in children

Studies have found that supplementation of prebiotic chicory root fibre improves obesity outcomes in overweight/obese children and induced specific gut bacterial shifts.

ió fibrewater is a delicious, easy swap from flavoured water or drinks for children aged 2+.

Hydration + fibre + prebiotics = a great weight management tool.



TWO EUROPEAN FOOD SAFETY AUTHORITY (EFSA) & GB NHC HEALTH CLAIMS

Thanks to Beneo's proprietary research, Orafti HSI, and a select few chicory inulin's in the Orafti family, can be used in food & drink products with an accompanying EFSA health claim and this health claim and its conditions of use are listed on the Great Britain Nutrition and Health Claims (NHC) Register, (which now governs health claims in England, Scotland and Wales). ió fibrewater has approval to use these health claims on our labels and marketing.

Ingredient	Claims wording	Type of health claim	EFSA/NHC Opinion/status	Regulation (EU regulation retained in UK post-Brexit)
Native chicory inulin	"Contributes to normal bowel function by increasing stool frequency"	13(5)	Finished (ON-3951), 11.12.2014 →positive	Reg. (EU) No. 1924/2006 (Authorised health claim)
Native chicory inulin	"Consumption of foods/drinks containing non-digestible carbohydrates instead of sugars induces a lower blood glucose rise after meals compared to sugar-containing foods/drinks"	13(5)	Finished (ON-3513), 11.12.2013 →positive	Reg. (EU) No. 1924/2006 (Authorised health claim)

The official digestive health claim is featured on the packaging of ió fibrewater and as a result we can make associated general health claims on the front of our packaging and website, such as:

"Prebiotic"

"Supports a healthy gut and balanced digestive system"

"Slowing and lowering blood glucose rise"

For more information on these EFSA health claims please see this EFSA resource and the PDF (next page) regarding the Beneo-Orafti summary, and the Great Britain Nutrition and Health Claims register <u>Annex</u>.

Dosages for **ió** fibre**water**

Age	Bottle (ml)	Grams of fibre (g)	Time
2-4	170ml (1/3 bottle)	2g	2 weeks –after which gradually increase to tolerance as per required
5-14	250ml (1/2 bottle)	4g	2 weeks –after which gradually increase to tolerance as per required
15+	500ml (full bottle)	6g	2 weeks –after which gradually increase to tolerance as per required

Research on prebiotics for children

- Prebiotic fibers show gut and immune health benefits for children: RCT. <u>https://www.nutraingredients-usa.com/Article/2018/07/10/Prebiotic-fibers-show-gut-and-immune-health-benefits-for-children-RCT</u>
- Pediatric Applications of Inulin and Oligofructose. To access study: <u>https://academic.oup.com/jn/article/137/11/2585S/4664511?login=false</u>
- Functional Constipation and the Gut Microbiome in Children: Preclinical and Clinical Evidence. <u>https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7856458/</u>
- Inulin-Type Fructan Supplementation of 3- to 6-Year-Old Children Is Associated with Higher Fecal Bifidobacterium Concentrations and Fewer Febrile Episodes Requiring Medical Attention. https://academic.oup.com/jn/article/148/8/1300/5048772?login=false
- Effect of Prebiotic on Microbiota, Intestinal Permeability, and Glycemic Control in Children with Type 1 Diabetes. <u>https://pubmed.ncbi.nlm.nih.gov/31188437/</u>
- Prebiotics in infant formula could improve learning, memory and alter brain chemistry <u>https://prebioticassociation.org/prebiotics-in-infant-formula-could-improve-learning-and-memory-and-alter-brain-chemistry/</u>