

# Case Study: Infant with persistent vomiting, multiple food allergies, and FPIES – improvement with Neocate<sup>®</sup> Syneo<sup>®</sup> Infant formula

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## Patient history:

This patient was referred to a gastroenterologist as he developed bloody diarrhea at 3 weeks of age and was formally diagnosed with milk soy protein intolerance (MSPI), sometimes also described as multiple food allergies. He was born at 37 weeks and delivered via C-section. Pregnancy had been complicated by maternal diabetes. The mother reported he initially developed loose stools, screaming fits and vomiting at 2 weeks old. The significant vomiting was managed with thickened feeds and medication, including promotility agents. Despite maximized medical management he continued to vomit and was hospitalized for the first time at 1 month of age. During that admission he had an upper GI to rule out malrotation, which was normal with incidental note of mild dilatation in distal bowel. Of note, there was no history of food allergies in the family.

## Nutritional/Medical management:

Initially in the first couple of months he had difficulty gaining weight due to his feeding intolerance and frequent vomiting episodes. Mom was breastfeeding and was on a strict elimination diet. In addition to milk and soy, she had taken many other foods out of her diet. Her diet consisted only of potatoes, brown rice, broccoli, yellow squash, sweet potato, lettuce, celery, chicken and beef. She also supplemented his diet with formula, however he did not tolerate most of them.

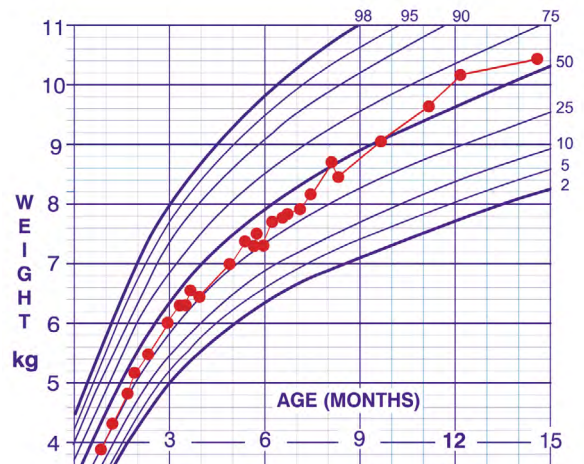
He had tried numerous formulas without improvement including a low-lactose formula, a partially hydrolyzed low-lactose formula, an extensively hydrolyzed formula, and a standard amino acid-based formula. With these formulas he exhibited pain behavior characterized by screaming fits to the point he was not consolable. Unfortunately, these formulas also did not improve his other symptoms he had been experiencing including rash, diarrhea and severe reflux.

Neocate Syneo Infant formula was introduced at approximately 5 ½ months old and, by 6 months old, he was successfully transitioned over completely to this amino acid-based formula with pre- and probiotics. Since changing over to Neocate Syneo the patient's symptoms markedly improved: the diarrhea resolved and vomiting episodes decreased, however he continued with persistent reflux symptoms. He continued with recurrent hive-like rash. With the change in formula, his pain behavior significantly improved thereby improving quality of life for both the patient and his mother. Due to Mom's concern that the infant was still exhibiting signs and symptoms of food allergies to breast milk with her strict elimination diet, she stopped breastfeeding completely.

When solids were introduced the patient started to show more signs and symptoms of food allergies. He would develop rash, watery and/or bloody diarrhea, and/or delayed projectile vomiting with solids (e.g. green beans, winter squash and carrots). He was diagnosed with food protein-induced enterocolitis syndrome (FPIES). Solids were stopped completely and he was kept on Neocate Syneo as his sole source of nutrition. In order to maintain appropriate growth (see Figure 1) given intolerance of solids and intolerance of large feeding volumes, his formula was concentrated from the standard concentration of 20 kcal/fl oz to 24 kcal/fl oz, and by 9 months of age his formula was mixed to 27 kcal/fl oz.



By keeping him on concentrated Neocate Syneo to limit volume of his feeds and adding a thickener as well as medications, his reflux was under better control.



### Conclusion:

This case study focuses on an infant with medical issues including multiple food allergies, gastroesophageal reflux, FPIES, and feeding intolerance. Neocate Syneo was chosen as it was an amino acid-based formula with pre- and probiotics that, out of all formula choices, was best tolerated in this patient. With use of this specific formula his stooling issues resolved and vomiting lessened so that he was able to gain weight appropriately. At his current age of 17 months old, his medical workup is ongoing.

Product usage:	Patient profile:
<ul style="list-style-type: none"> <li>✓ Oral sole source of nutrition</li> </ul>	<ul style="list-style-type: none"> <li>✓ Cow Milk Allergy (CMA)</li> <li>✓ Multiple Food Allergies (MFA)</li> <li>✓ Food Protein-induced Enterocolitis Syndrome (FPIES)</li> <li>✓ GI symptoms</li> <li>✓ Faltering growth</li> <li>✓ Symptoms not resolved with extensively hydrolyzed formula (eHF)</li> <li>✓ Symptoms while breastfeeding or symptomatic on breast milk</li> <li>✓ Gastroesophageal Reflux (GER)</li> </ul>

The opinions expressed are those of the author of this case study and not necessarily reflective of the views of Nutricia North America. Formula choices were made independently prior to the author's development of this patient case report.

Nutricia North America supports the use of breast milk wherever possible. Neocate® is a family of hypoallergenic, amino acid-based medical foods. Neocate is intended for use under medical supervision. Neocate® Syneo® Infant is indicated for the dietary management of cow milk allergy, multiple food allergies and related GI and allergic conditions, including food protein-induced enterocolitis syndrome, eosinophilic esophagitis and gastroesophageal reflux.