

ADVANCING METABOLIC INFANT NUTRITION

THE LATEST IN *EARLY YEARS* FORMULA INNOVATION

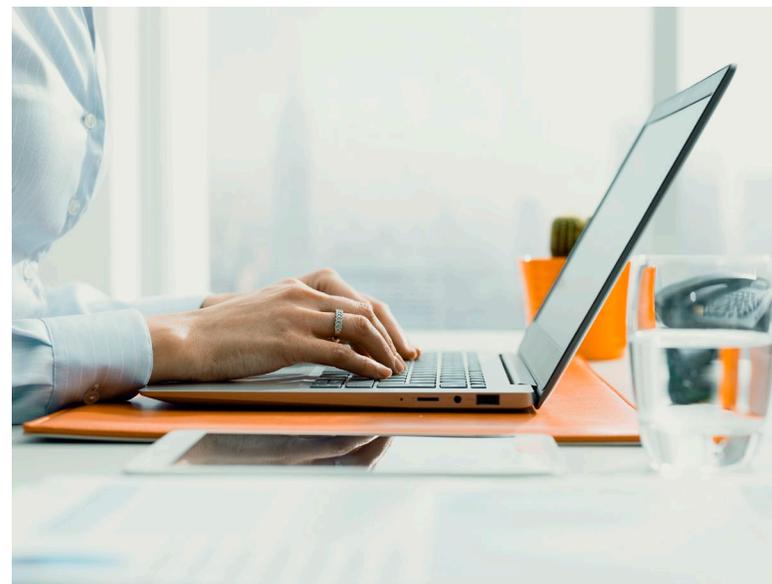
RACHEL POWERS, RD – MEDICAL AFFAIRS MANAGER, METABOLICS & KETOGENICS
FEBRUARY 24, 2026



NUTRICIA
LIFE-TRANSFORMING NUTRITION

LEARNING OBJECTIVES

1. Explore the latest amino acid (AA) profile enhancements in Anamix[®] Early Years for MSUD, GA-1, and MMA/PA and understand the clinical rationale driving these updates.
2. Recognize the expanded indication (in the U.S.) for GA-1 Anamix Early Years to include pyridoxine-dependent epilepsy (PDE) and learn best practices for using lysine-free formulas in PDE management.
3. Discover how the unique oligosaccharide blend in Early Years supports infant gut health and the immune system.



NUTRICIA IS DEDICATED TO PROVIDING SCIENCE- BACKED FORMULAS FOR IEMs

The
ONLY

Metabolic Infant
Formulas with GOS/FOS

3

UPDATED

AA Profiles Based on
IEM Research

PDE
INDICATION

for Lysine-Free Formulas



**MINOR CHANGES
IMPLEMENTED FOR ALL 8 EARLY
YEARS FORMULAS**

REGULATORY CHANGES REQUIRED A MINOR CHANGE TO MACRONUTRIENTS

		Current Periflex & Anamix Early Years Per 100 g powder	Updated Periflex & Anamix Early Years Per 100 g powder
Calories		473	466
Protein equivalent	g	13.5	13.5
Fat	g	23.0	23.0
Carbohydrate	g	53.0	53.7
Fiber	g	5.3	3.5
Galacto-oligosaccharides (GOS)	g	4.7	3.0
Fructooligosaccharides (FOS)	g	0.55	0.50

Updated Kcal/Can =
1864 (28 kcal less)

Fiber Declaration Requirements: now 2 kcal/g for soluble & 0 kcal/g for insoluble

- This impacts Calories, Carbohydrates, Fiber, and GOS/FOS
- The amount of fiber (GOS & FOS) added to the recipe HAS NOT CHANGED
- The GOS/FOS is still present at the levels consistent with the researched benefits

NO Change to Protein Equivalents or Fat

CLINICALLY INSIGNIFICANT CHANGES TO VITAMIN K, B12 & MANGANESE

		Current Periflex & Anamix Early Years Per 100 g powder	Updated Periflex & Anamix Early Years Per 100 g powder
Vitamin K	mcg	38.0	48.5
Vitamin B ₁₂	mcg	1.2	1.3
Manganese	mcg	390	39.0

Changes are based on ingredient information and analysis.



MSUD ANAMIX[®] EARLY YEARS UPDATE

MSUD ANAMIX EARLY YEARS AA PROFILE NOW MATCHES RESEARCHED COMPLEX MSD® PROFILE



- Same AA Profile per 10 g PE as Complex MSD Essential
- AA profile of Complex MSD was developed in 2005 at the Clinic for Special Children (CSC) in cooperation with Nutricia
- This AA profile is designed to minimize the influx of LEU into the brain by using the competition of certain AAs (LNAAs) at the blood-brain barrier

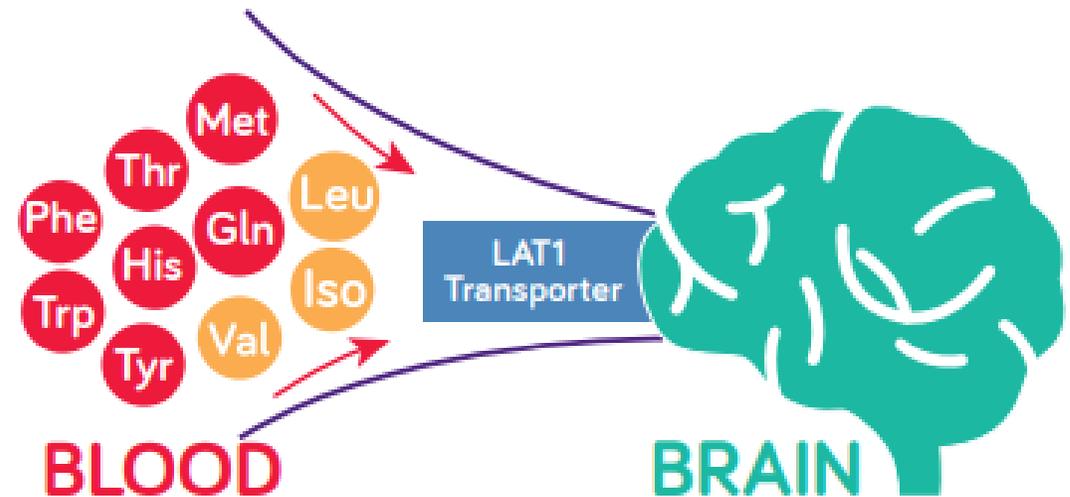
OUR UNIQUE AA FORMULATION

Most metabolic formulas:

Amino acid formulation is based on a high-biological value protein (like an egg or breast milk) and the offending amino acids are removed.

Complex MSD's formulation concept:

Add higher amounts* of the amino acids (in red) that compete for uptake at the blood brain barrier (BBB) with the BCAAs (in yellow) - mostly Leu.



*Compared to high biological value proteins

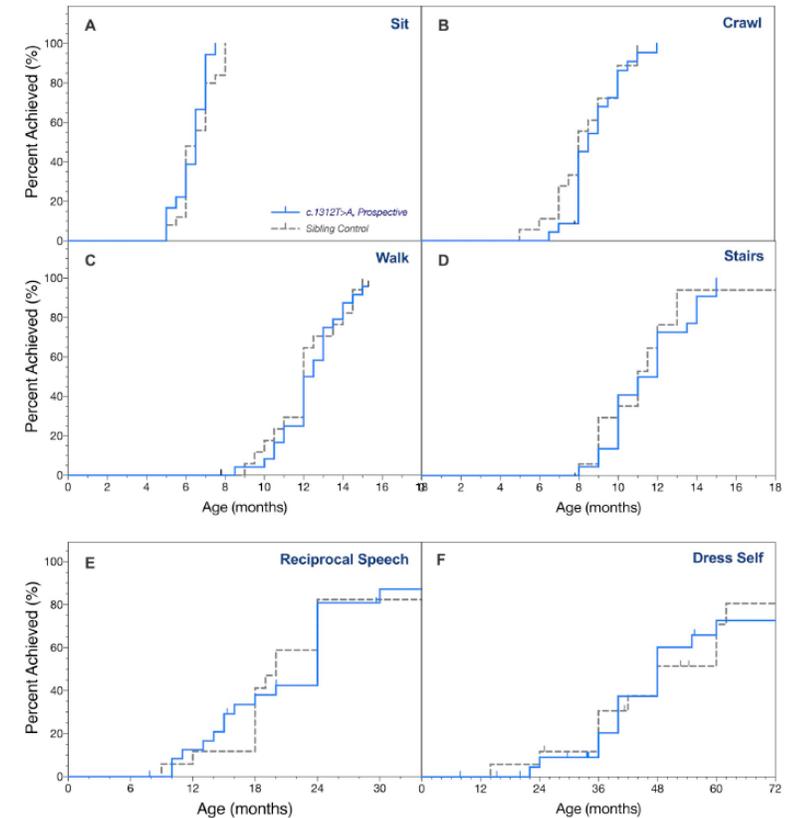
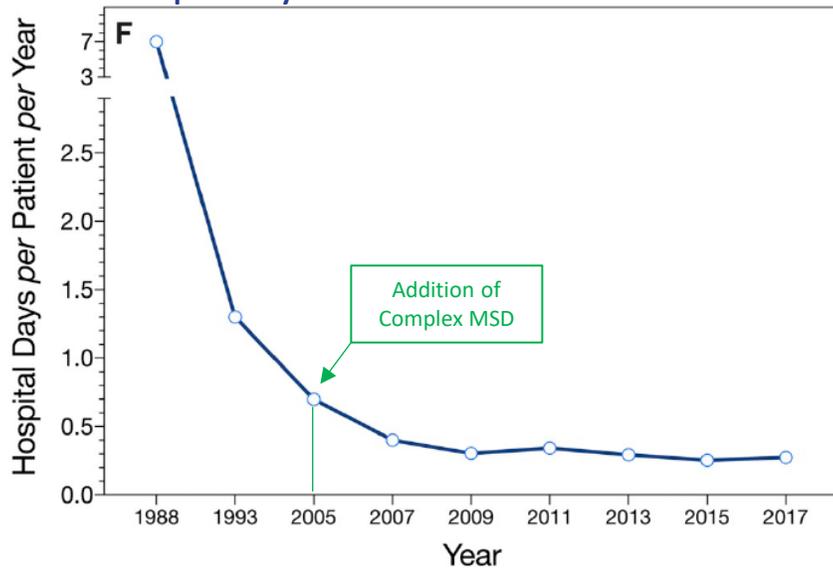
COMPLEX MSD® RESEARCH RESULTS

2010 Publication:

- Normal growth and development
- Improved metabolic control over previous formula usage
- Reduced hospitalization frequency & duration

2020 Publication:

- Normal growth and nutritional status
- Continued decreased hospitalization rate compared to pre-Complex MSD usage
- Normal achievement of childhood milestones comparable to unaffected age-matched siblings



[Click here for 2010 publication](#)

[Click here for 2020 publication](#)

[Click here for a summary of the science behind Complex MSD](#)

GA-1 ANAMIX[®] EARLY YEARS UPDATE

GA-1 ANAMIX EARLY YEARS AA PROFILE NOW MATCHES RESEARCHED GLUTARADE® PROFILE



- Same AA Profile per 10 g PE as GlutarAde Essential
- Nutrient profile of GlutarAde was developed in 2006 at the Clinic for Special Children (CSC) in cooperation with Nutricia
- This AA profile is designed to restrict the influx of LYS into the brain by using the competition of certain AAs (mostly arginine) at the blood-brain barrier

OUR UNIQUE AA FORMULATION

GlutarAde's formulation concept:

Increased levels of arginine with the goal of selectively blocking lysine transport into the brain and thereby limiting the production of glutaryl-CoA.

Formulated with the goal of having AA levels in the brain close to normal control (except higher ARG and lower LYS compared to control)

Patients on GlutarAde Formula:

- lower plasma lysine
- lower hydroxyglutarate excretion
- 3-fold lower hospitalization rate

} compared to data collected prior to using the study formulation

[Click here for 2011 publication](#)

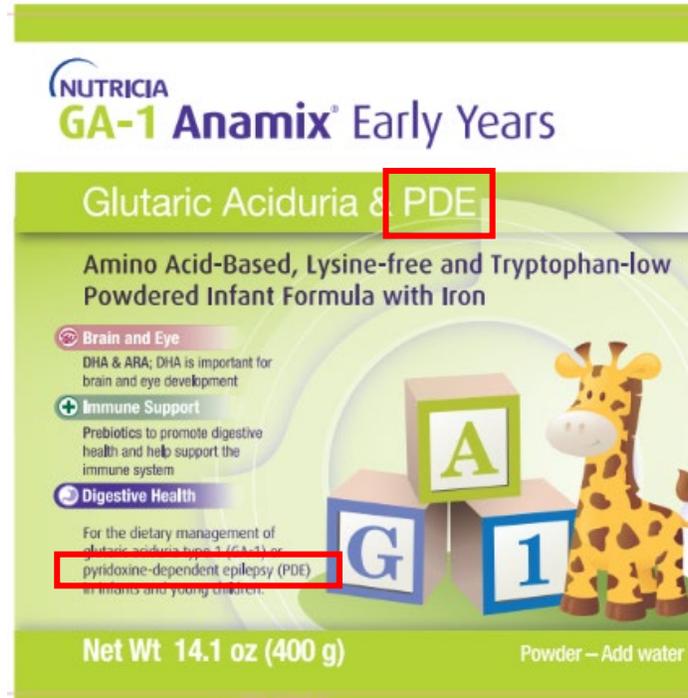
[Click here for 2020 follow-on publication](#)



Image from Strauss KA, et al. *Mol Genet Metab.* 2011;104:93-106.

GA-1 ANAMIX EARLY YEARS NOW INDICATED FOR PDE (U.S. ONLY)

- Management of PDE includes a lysine-restricted diet and pharmacologic doses of pyridoxine
- **PDE Consensus Guidelines:** *Strong recommendation* for use of lysine-free formula in infants & *conditional recommendation* to use lysine-free formula in children & adolescents
- Tryptophan in our two GA-1 formulas is sufficient to prevent deficiency



[Click here for 2020 PDE Consensus Guidelines](#)

No other PDE-indicated formulas on the market

MMA/PA ANAMIX[®] EARLY YEARS UPDATE

MMA/PA ANAMIX EARLY YEARS NOW WITH REDUCED LEUCINE

- LEU reduced to be comparable to levels in human milk
- Glutamine increased to keep PE the same
- Based on 2016 research by Manoli, et al showing that the MMA patients were ingesting too much LEU due to a combination of intact PRO intake meeting the DRI plus relatively large amounts of MMA formula
 - Recommendation to reduce LEU in MMA formulas

[Click here for 2016 Manoli, et al. publication](#)

NUTRICIA
MMA/PA Anamix® Early Years

Methylmalonic Acidemia & Propionic Acidemia

Amino Acid-Based, Methionine-, Threonine- and Valine-free, Isoleucine-low Powdered Infant Formula with Iron

Brain and Eye
DHA & ARA; DHA is important for brain and eye development

Immune Support
Prebiotics to promote digestive health and help support the immune system

Digestive Health
For the dietary management of methylmalonic acidemia (MMA) & propionic acidemia (PA) in infants and young children.

Net Wt 14.1 oz (400 g) Powder – Add water

**UNDERSTANDING THE BENEFITS
OF OUR UNIQUE
OLIGOSACCHARIDE BLEND**

INSPIRED BY BREAST MILK AND CARE FOR VULNERABLE INFANTS

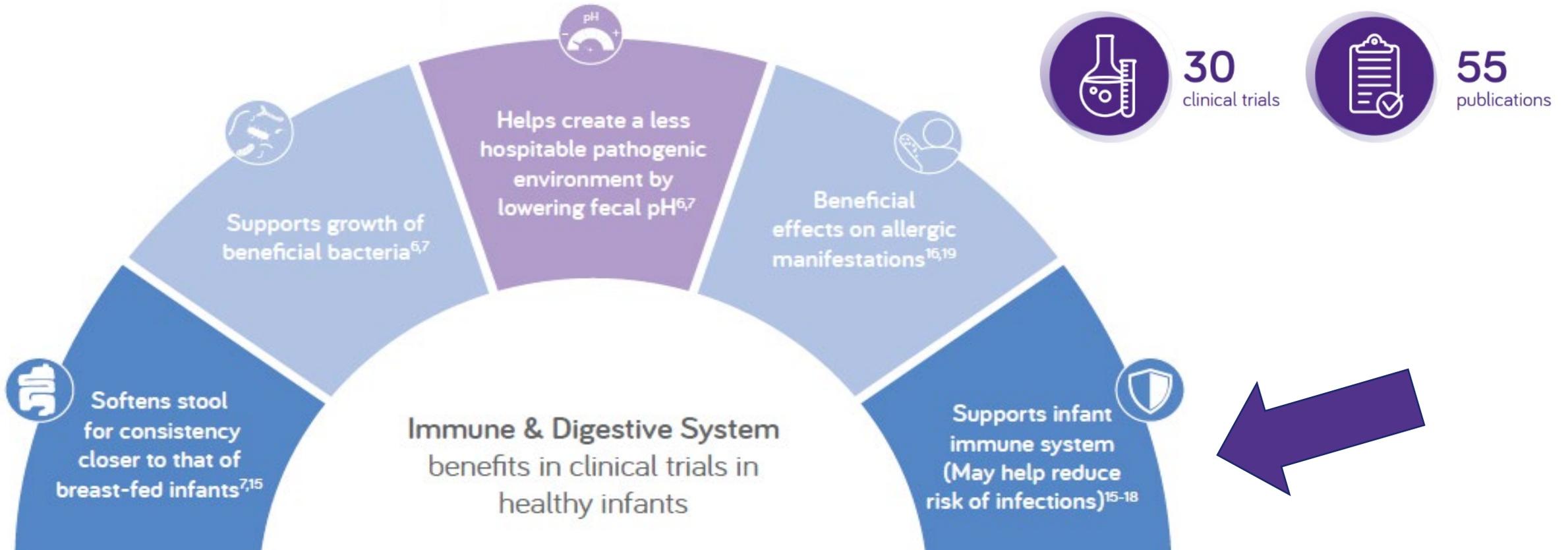
- Nutricia has researched breast milk for 40+ years to help inform our formula development
- Development and addition of our unique oligosaccharide blend (GOS/FOS) to infant formulas aims to mimic the levels and functionalities of human milk oligosaccharides

Nutricia's unique prebiotic oligosaccharide blend in Early Years formulas is born out of our research & commitment to infant nutrition.



THE BENEFITS OF OUR UNIQUE OLIGOSACCHARIDE BLEND ARE WIDELY SUPPORTED BY CLINICAL STUDIES

OUR BLEND IS THE MOST RESEARCHED PREBIOTIC COMPOUND IN INFANT FORMULAS



MINOR INFECTIONS CAN POTENTIALLY BE SERIOUS AND LEAD TO METABOLIC CRISIS FOR SOME METABOLIC PATIENTS

Minor infections such as gastroenteritis, fever, flu can lead to metabolic decompensation

- Hospitalization
- In some instances, irreparable neurological damage

The possibility of reduced infections may be of particular importance for these patients.

Reasons for 28 hospitalizations during the study.

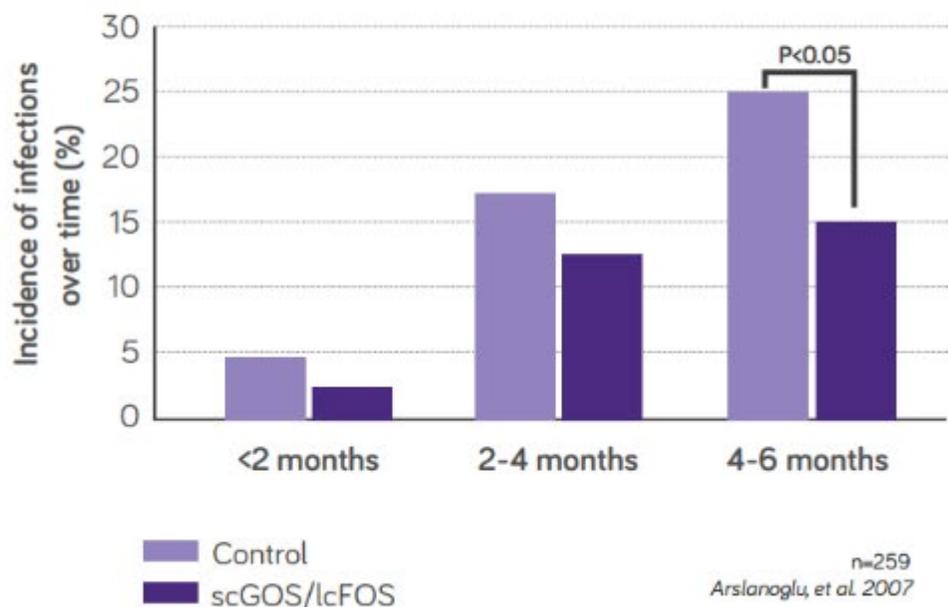
Indication for hospitalization	Number
Vomiting and viral gastroenteritis	11
Viral bronchiolitis	3
Sinusitis	3
Neonatal encephalopathy	3
Urinary tract infection	2
Cellulitis	1
Influenza	1
Viral meningitis	1
Bacterial pharyngitis	1
Esophageal candidiasis	1
Appendicitis	1

Strauss KA, et al Mol Genet Metab. 2010

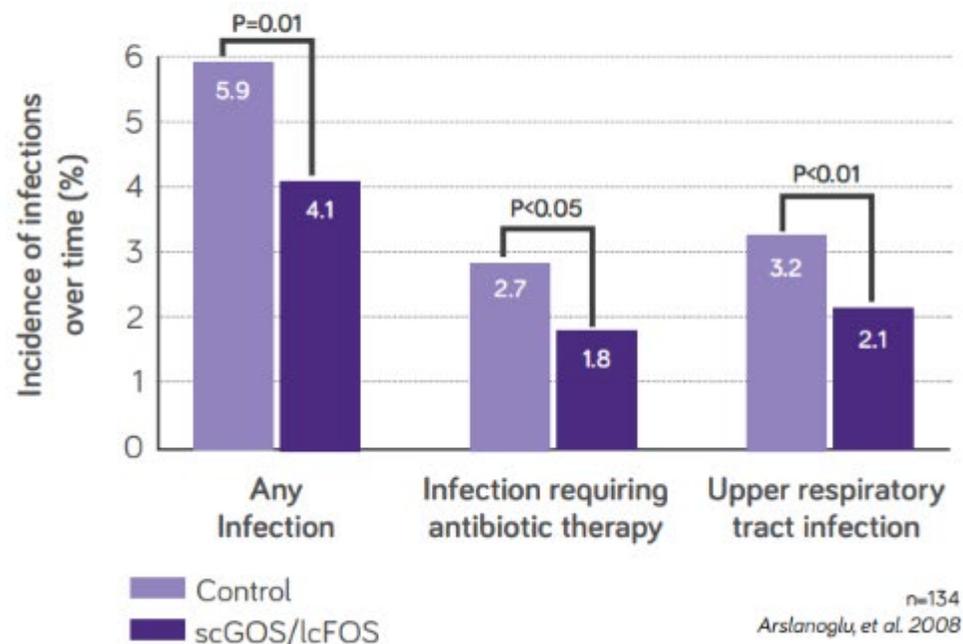
GOS/FOS SUPPORTS INFANT IMMUNE SYSTEM: MAY HELP REDUCE RISK OF INFECTIONS

ARSLANOGLU ET AL. 2007 & 2008 (HEALTHY TERM INFANTS)

FOR UP TO 6 MONTHS



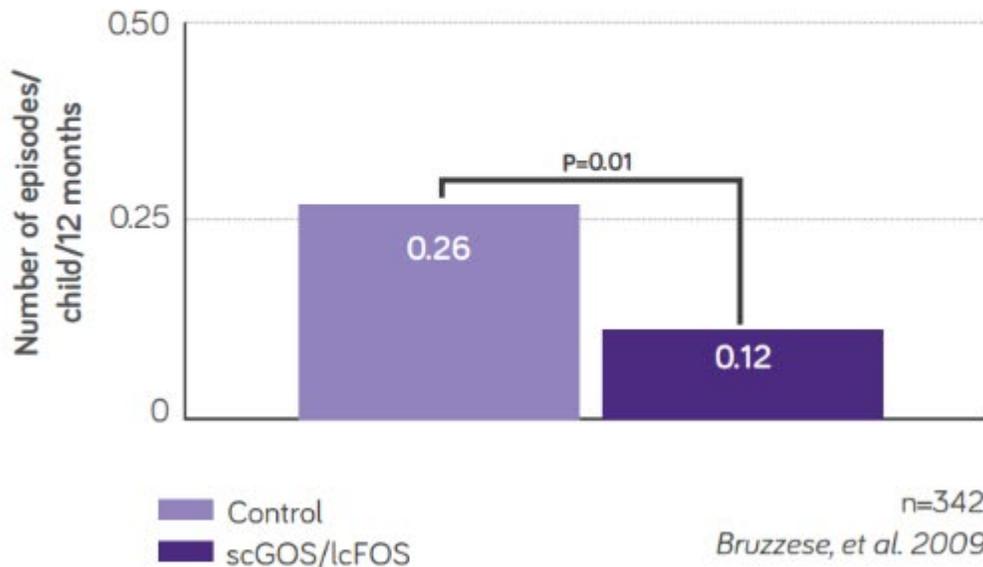
AFTER 24 MONTHS



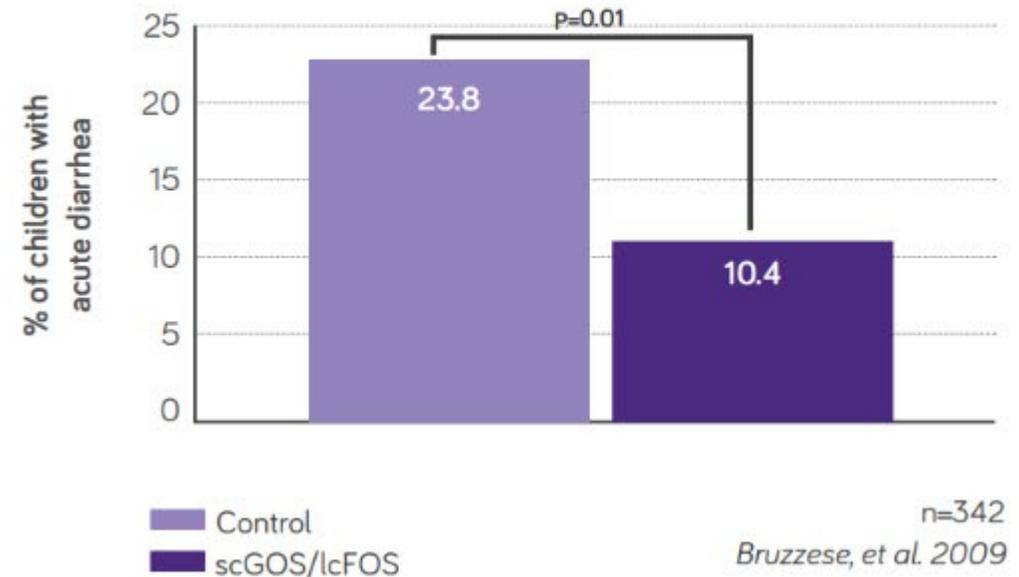
SIGNIFICANTLY REDUCED GASTROENTERITIS EPISODES WITH GOS/FOS

BRUZZESE ET AL. 2009 (HEALTHY TERM INFANTS)

scGOS/lcFOS leads to significant lower number of gastroenteritis episodes



scGOS/lcFOS results in 58% less acute diarrhea



Sig. difference in gastroenteritis; tendency for fewer resp tract infections; fewer antibiotic courses

Early Years: the *Only* Range of Metabolic Infant Formulas With **Prebiotic Oligosaccharides**

Tommy, PKU



	NUTRICIA	ABBOTT	MEAD JOHNSON	VITAFLO (PKU Only)
Prebiotic Oligosaccharides	✓	✗	✗	✗



LOGISTICS

THESE CHANGES COME WITH CODE & UPC CHANGES

UPDATED
CAN &
CASE
UPCs

UPDATED
CODES

NEW PRODUCT & NDC-FORMAT CODES

Product Name	Current Code	New code	Flavor	New UPC case	New UPC item	HCPCS*	New NDC-Case**	Packaging	New Calories/Can	Prepared Fluid Ounces/Can
PKU PERIFLEX® EARLY YEARS	90164	151618	Unflavored	749735116180	749735016183	B4162	49735-0116-18	6X400G	1864 calories/can	90 fl oz/can
MSUD ANAMIX® EARLY YEARS	90168	151627	Unflavored	749735116272	749735016275	B4162	49735-0116-27	6X400G	1864 calories/can	90 fl oz/can
HCU ANAMIX® EARLY YEARS	90169	151626	Unflavored	749735116265	749735016268	B4162	49735-0116-26	6X400G	1864 calories/can	90 fl oz/can
IVA ANAMIX® EARLY YEARS	90211	151625	Unflavored	749735116258	749735016251	B4162	49735-0116-25	6X400G	1864 calories/can	90 fl oz/can
SOD ANAMIX® EARLY YEARS	90212	151624	Unflavored	749735116241	749735016244	B4162	49735-0116-24	3X400G	1864 calories/can	90 fl oz/can
MMA/PA ANAMIX® EARLY YEARS	90215	151623	Unflavored	749735116234	749735016237	B4162	49735-0116-23	6X400G	1864 calories/can	90 fl oz/can
GA-1 ANAMIX® EARLY YEARS	90217	151622	Unflavored	749735116227	749735016220	B4162	49735-0116-22	6X400G	1864 calories/can	90 fl oz/can
TYR ANAMIX® EARLY YEARS	90218	151619	Unflavored	749735116197	749735016190	B4162	49735-0116-19	6X400G	1864 calories/can	90 fl oz/can

*S9453= For individuals who submit their bills to insurance on their own.

**Nutricia North America does not represent these codes to be National Drug Codes (NDCs). NDC-format codes are products codes adjusted according to standard industry practice to meet the format requirements of pharmacy and health insurance systems

TIMELINES FOR IMPLEMENTATION

Product	Canada Transition Dates 	U.S. Transition Dates 
SOD Anamix Early Years	N/A	March 2026
MSUD Anamix Early Years	Completed	April 2026
IVA Anamix Early Years	Completed	April 2026
PKU Periflex Early Years	Completed	Completed
HCU Anamix Early Years	Completed	Completed
MMA/PA Anamix Early Years	Completed	Completed
GA-1 Anamix Early Years	Completed	Completed
TYR Anamix Early Years	Completed	Completed

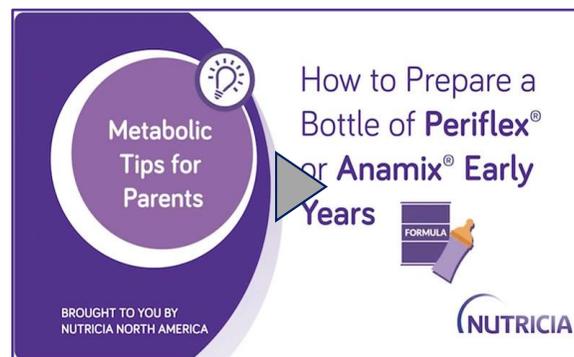
WE OFFER SUPPORT FOR YOUR YOUNGEST PATIENTS & THEIR FAMILIES

Infant Starter Kit



Request an infant starter kit with a free case of formula from your territory manager

Tips for Parents Video Series



Series of short videos including infant & toddler feeding tips

Formula Coverage Support



Support to help families obtain product insurance coverage and faster access to Nutricia products

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QUESTIONS?

