Announcement 11/14/11
Formula Update
Contact: Karen Henry

Nestle has recently announced the re-formulation and re-packaging of some of their specialty formulas beginning in January through February of next year. **Nutren Junior, Nutren Junior with Fiber, Peptamen Junior, Peptamen Junior with Prebio,** and **Peptamen Junior 1.5** will be reformulated to meet the 2011 IOM nutrient recommendations for calcium and vitamin D, as well as packaged in BPA free cartons instead of cans. Names and quantity per unit and case will remain the same. For an example visual of the new cartons - please see the bottom of the following page. To accommodate the change, the unit description in AIM has been changed from cans to "containers" for these products, to allow either cans *or* cartons to be bought with the checks. There will be no need to switch food packages for the new packaging. Examples of how checks are now printing for these formulas are as follows:

24 CONTAINERS (250 ML EACH) READY-TO-USE NUTREN JUNIOR WITH FIBER

24 CONTAINERS (250 ML EACH) READY-TO-USE PEPTAMEN JUNIOR

Feel free to contact Karen Henry if any questions. Thank you.

N FACTOR is helping your pediatric patients grow and develop

NUTREN JUNIOR®—50% whey protein formula to support pediatric patients with the following conditions:

• Poor growth • Malnutrition • Requiring short- or long-term enteral feeding

MORE WHEY PROTEIN THAN ANY OTHER STANDARD PEDIATRIC FORMULA TO PROMOTE TOLERANCE[1,2]

• Rich in cysteine, a critical component of the body's central antioxidant, glutathione[3,4]

HIGH MCT CONTENT TO ENHANCE ABSORPTION[5-7]

• Contains 20% of fat from MCT to promote lipid absorption

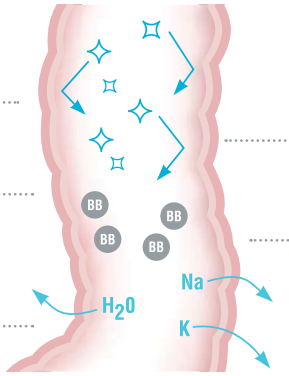
NUTREN JUNIOR® FIBER ALSO AVAILABLE WITH A UNIQUE FIBER BLEND TO SUPPORT DIGESTIVE HEALTH

• Fiber blend includes PREBIO1™ soluble fiber to help promote the growth of beneficial bacteria + insoluble fiber to help support normal bowel function

Prebio1®

REPORTED BENEFITS OF INSOLUBLE FIBER

- **Regulates intestinal transit time[8]**
- **Regulates stool patterns[9]**
- **Regulates stool consistency**
  - **–Increases consistency of watery stool[10]**
  - **–Softens hard stool[11]**



REPORTED BENEFITS OF PREBIOTICS

- **Increased gut barrier integrity[12-15]**
- **Decreased gut permeability[16]**
- **Balance of microbiota via promotion of potentially beneficial bacteria[17-19]**
- **Improved absorption of electrolytes[20]**
- **Improved absorption of water[21,22]**

= Potentially pathogenic bacteria BB = Beneficial bacteria

New look and improved formula

Nutren JUNIOR®

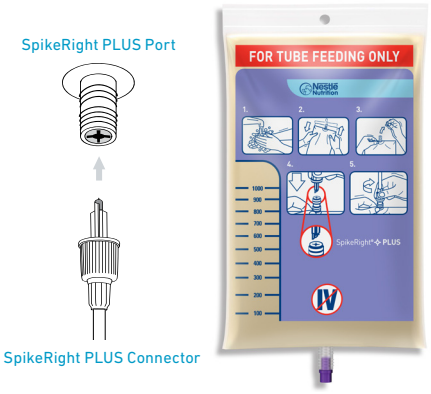
NUTREN JUNIOR is the only standard formula with 50% whey protein, designed to promote tolerance

NUTREN JUNIOR®—Enhancing feeding for pediatric patients

- Formulated with **CalciLock™** blend, a unique combination of essential nutrients including calcium, phosphorus, magnesium, zinc, and vitamins C, D & K to help build strong bones
- Now with enhanced label design in a convenient, easy-to-use **BPA-free*** carton
- NUTREN JUNIOR formulas have been reformulated to meet the 2011 IOM nutrient recommendations for calcium and vitamin D, and now meet or exceed **100% of DRIs** (ages 1-13) for protein and 25 essential vitamins and minerals[18,23†]

AVAILABLE IN ULTRAPAK® CLOSED SYSTEM

- Exclusive design to support infection control
- New SpikeRight® PLUS port designed to be incompatible with IV systems
- Potential cost savings due to reduced formula waste[24]
- Less preparation time compared to open systems[25]



*Made without the use of bisphenol A (BPA).

†Dietary Reference Intakes (DRI) represent the Recommended Dietary Allowance (RDA) values, unless unavailable, in which case Adequate Intake (AI) value was used.

‡MCT provided 10.8 g per 1000 mL.

§Includes 40% vitamin A activity from beta-carotene.

Ordering information

PRODUCT	PRODUCT CODE	CASE UPC (GTIN)	PACKAGING
NUTREN JUNIOR® Vanilla	9871616062	007-98716-16062-9	24-250 mL cartons/case
NUTREN JUNIOR® FIBER Vanilla	9871616063	007-98716-16063-6	24-250 mL cartons/case
NUTREN JUNIOR® ULTRAPAK®	9871677380	007-98716-77380-5	1000 mL bag/case
NUTREN JUNIOR® FIBER ULTRAPAK®	9871677400	007-98716-77400-0	1000 mL bag/case

Nutritional Information

Nutrients	NUTREN JUNIOR 1000 ML	NUTREN JUNIOR FIBER 1000 ML
Calories (kcal)	1000	1000
Total Fat (g)‡	49.6	49.6
Sodium (mg)	460	460
Potassium (mg)	1320	1320
Total Carbohydrate (g)	110	110
Dietary Fiber (g)	--	6
Protein (g)	30	30
Vitamin A (IU)§	3320	3320
Vitamin C (mg)	100	100
Calcium (mg)	1200	1200
Iron (mg)	14	14
Vitamin D (IU)	600	600
Vitamin E (IU)	28	28
Vitamin K (mcg)	60	60
Thiamine (mg)	2.4	2.4
Riboflavin (mg)	2	2
Niacin (mg)	9.6	9.6
Vitamin B_6 (mg)	2.4	2.4
Folic Acid (mcg)	280	280
Vitamin B_{12} (mcg)	6	6
Biotin (mcg)	200	200
Pantothenic Acid (mg)	10	10
Phosphorus (mg)	840	840
Iodine (mcg)	100	100
Magnesium (mg)	200	200
Zinc (mg)	10.8	10.8
Selenium (mcg)	30	30
Copper (mg)	1	1
Manganese (mg)	1.6	1.6
Chromium (mcg)	30	30
Molybdenum (mcg)	60	60
Chloride (mg)	1080	1080
Choline (mg)	300	300
L-Carnitine (mg)	40	40
Taurine (mg)	80	80
M-Inositol (mg)	80	80
Water (mL)	852	851

Nutrition. The factor that can make a difference.

References: 1. Boirie Y et al. Slow and fast dietary proteins differently modulate postprandial protein accretion. *Proc Natl Acad Sci U S A.* 1997;94:14930-14935. **2.** Ksiazyk J et al. Hydrolyzed versus nonhydrolyzed protein diet in short bowel syndrome in children. *J Pediatr Gastroenterol Nutr.* 2002;35:615-618. **3.** Bray TM et al. Tissue glutathione, nutrition, and oxidative stress. *Can J Physiol Pharmacol.* 1993;71:746-751. **4.** Rowe B et al. Effects of whey and casein based diets on glutathione and cysteine metabolism in ICU patients. *J Am Coll Nutr.* 1994;13:535. **5.** Bach AC et al. Medium-chain triglycerides: an update. *Am J Clin Nutr.* 1982;36:950-962. **6.** Ruppin DC et al. Clinical use of medium chain triglycerides. *Drugs.* 1989;20:216-224. **7.** Wanten GJ et al. Cellular and physiological effects of medium chain triglycerides. *Mini Rev Med Chem.* 2004;4:847-857. **8.** Castillejo G et al. A controlled, randomized, double-blind trial to evaluate the effects of a supplement of cocoa husk that is rich in dietary fiber on colonic transit in constipated pediatric patients. *Pediatrics.*2006;118 :e641-e648. **9.** Dahl WJ et al. Increased stool frequency occurs when finely processed pea hull fiber is added to usual foods consumed by elderly residents in long term care. *J Am Diet Assoc.* 2003;103:1199-1202. **10.** Khoshoo V et al. Addition of fiber to an elemental diet is well tolerated. *J Pediatr Gastroenteral Nutr.* 2006;43:E14-E76. **11.** Palacio JC et al. Dietary fiber's physiologic effects and potential applications to enteral nutrition. In: *Clinical Nutrition: Enteral and Tube Feeding.* 2nd ed. Rombeau JL, Caldwell MD (eds). Philadelphia: WB Saunders Co; 1990: 556-574. **12.** Roediger WE. Role of anaerobic bacteria in the metabolic welfare of the colonic mucosa in man. *Gut.* 1980;21:793-798. **13.** Scheppach W et al. Effect of short-chain fatty acids on the human colonic mucosa in vitro. *JPEN.* 1992;16:43-48. **14.** Ichikawa H et al. Gastric or rectal instillation of short-chain fatty acids stimulates epithelial cell proliferation of small and large intestine in rats. *Dig Dis Sci.* 2002;47:1141-1146. **15.** Faust K et al. The addition of prebiotics to a whey-based peptide liquid diet alleviates weaning-induced intestinal injury in piglets. Presented at Clinical Nutrition Week, Phoenix, Arizona; 2007. **16.** Mariadason JM et al. Effect of short-chain fatty acids on paracellular permeability in Caco-2 intestinal epithelium model. *Am J Physiol.* 1997;272:G705-G712. **17.** Bouhnik Y et al. Short-chain fructo-oligosaccharide administration dose-dependently increases fecal bifidobacteria in healthy humans. *J Nutr.* 1999;129:113-116. **18.** Gibson GR et al. Selective stimulation of bifidobacteria in the human colon by oligofructose and inulin. *Gastroenterology.* 1995;108:975-982. **19.** Zheng S. Nutritional support of pediatric patients with cancer consuming an enteral formula with fructooligosaccharides. *Nutr Res.* 2006;26:154-162. **20.** Holtug K et al. An in vitro study of short-chain fatty acid concentrations, productionand absorption in pig (Sus scrofa) colon. *Comp Biochem Physiol.* 1992;103:189-197. **21.** Binder HJ et al. Short chain fatty acids stimulate active sodium and chloride absorption in vitro in the rat distal colon. *Gastroenterology.* 1989;96:989-996. **22.** Bowling TE, Raimundo AH, Grimble GK, et al. Reversal by short-chain fatty acids of colonic fluid secretion induced by enteral feeding. *Lancet.* 1993;342:1266-1268. **23.** Institute of Medicine Food and Nutrition Board. *Dietary Reference Intakes for Calcium and Vitamin D.* Washington, DC: National Academy Press; 2011. **24.** Wagner DR et al. Evaluation of "closed" vs "open" systems for delivery of peptide-based enteral diets. *JPEN.* 1994;18:453-457. **25.** Knoll DM et al. A quality improvement approach to validate extended hang time for enteral feeding systems (abstract). *JADA.* 1996;96(9 suppl):A39.

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