

*The pediatric formula industry is continually creating and marketing new pediatric formulas to either supplement a child's diet or provide 100% of a child's nutrition if they cannot eat by mouth. This can be very confusing for parents (and health care providers!) to decide which one is best suited for your child. This TelAbility handout will outline the different formulas available for children ages one and above, instances where you would use them and what characteristics make each of them unique.*

### **"Follow-up" Formulas**

These formulas are marketed as an alternative to whole cow's milk when a child turns one. They are slightly less expensive than infant formulas, but more expensive than a carton of whole milk. One of the main selling points of these formulas is that they are fortified with iron, while whole milk is a poor iron source. As iron-deficiency anemia can be common in children both with and without disabilities, these formulas can provide a good iron source in the diet, especially if the child is a "picky eater".

**Examples:** Enfamil Next Step(cow's milk based) Next Step Soy (soy based)

#### **Features:**

- ❖ 20 calories per ounce
- ❖ Same iron content as iron fortified infant formulas
- ❖ Not intended to be used as a child's only source of nutrition
- ❖ Advertised for up to 18 months and beyond but the manufacturer does not suggest its use before 9-10 months of age.

#### **Compared to whole milk:**

- ❖ Lower in protein, riboflavin, calcium, phosphorus, and magnesium
- ❖ Higher in vitamin A, zinc, and iron

#### **"Organic Formula"**

Nature's One has introduced Baby's Only Organic Toddler Formula, an organic follow-up formula for children older than 1 year. It is available in natural food stores in the U.S.

#### **Features:**

- ❖ 20 calories per ounce
- ❖ Protein source: certified organic nonfat milk
- ❖ Carbohydrate source: certified organic brown rice syrup
- ❖ Fat source: certified organic sunflower, soybean and coconut oils

### **Increased Calorie Formulas**

When children reach a year of age, it is expected they will consume an adequate amount and variety of solid foods along with cow's milk and/or other dairy products. This, however is not always the case. Some children have special medical circumstances in which they need liquid formulas, either orally or by feeding tube, past infancy.

### Examples

#### Pediasure, Kindercal, Nutren Junior, and Resource Just for Kids

- Because infant formulas are not designed to meet the protein, calorie, vitamin and mineral needs of children over one year of age, these nutritionally complete formulas can be used instead.
- They are designed to be consumed by mouth or tube feeding for children ages 1 - 10 years.
- Their energy and nutrient distribution is in between that of infant and adult formulas.
- Children less than about 20 pounds may not do well with these formulas, as the protein load may be too high and put too much stress on their kidneys.

#### **Features:**

- ❖ Caseinate based (intact cow's milk protein) \*\* Nutren also uses whey as part of their protein source-this is sometimes easier to digest for some children
- ❖ 30 calories per each ounce
- ❖ Lactose free (which can help some children tolerate the formula better)
- ❖ At least 20 % of fat content is MCT( Medium Chain Triglycerides-a fat that is easier to digest than other oils)
- ❖ Available with fiber (5 - 6 grams per liter of formula)
- ❖ Not supplemented with fluoride
- ❖ Some come in a variety of flavors, which can help children from "burning out" on the supplement if they drink it by mouth.

#### **Volume needed to meet 100%of a child's RDA (Recommended Daily Allowance for Children):**

Pediasure  
1000 milliliters (ml) for 1 - 6 years  
1300 ml for 7 - 10 years

Kindercal  
950 ml for 1 - 10 years

Nutren Junior  
1000 ml for ages 1-10

Resource Just for Kids  
1000 ml for ages 1-10

#### **Possible uses:**

- ❖ Oral supplement for a child with feeding difficulties who cannot consume adequate solid foods
- ❖ Any child requiring a tube feeding

### **Compleat Pediatric Blenderized**

#### **Features**

- ❖ Designed to be used as a tube-feeding product for children ages 1-10
- ❖ Made from whole foods (blenderized fruits, vegetables, meats) Provides fiber as a natural component versus an added product (helpful with constipation)
- ❖ 18% of fat calories from MCT oil

#### **Possible Uses**

- ❖ Some parents like the idea that this tube feeding is “more natural” as it is made from whole foods versus components of food.

### **More “Specialized” Formulas: Protein Modified Pediatric Products**

Sometimes the above formulas are not tolerated well by children. Children who have slow gastric emptying (when contents of the stomach do not digest very fast) or malabsorption (when all of the components of the formula are not able to be digested), may need a formula with altered ingredients to help them grow properly.

Several pediatric products contain alternative protein sources for children unable to tolerate other proteins in formulas. The protein component in these products is more predigested or elemental than the formulas listed above.

#### **Examples**

Peptamen Jr, Pepdite One Plus, Neocate One Plus, Neocate Junior, Pediatric Vivonex, Elecare

#### **Features**

- ❖ Peptamen Jr., Pro-peptide and Pepdite One Plus all contain peptides (partially digested) of hydrolyzed (broken down) whey, while Neocate One Plus, Neocate Junior, Pediatric Vivonex and Elecare contain synthetic free amino acids (these do not contain any trace of milk protein-they are also referred to as “non-allergenic”).
- ❖ Both contain a fat mix of MCT and other fats found in standard formulas.
- ❖ Peptamen Jr. comes with flavor packets to help make it taste better and Pepdite One Plus has a banana- flavored package available.

#### **Possible Uses**

- ❖ These formulas are generally used as tube feedings when there is intolerance to all other formulas (cow’s milk, soy, hydrolyzed casein). An intolerance could mean that a severe allergic reaction, diarrhea or malabsorption could occur when the formula is consumed.

As technology becomes more advanced, so do the options available for these formulas. Some of the “future” formulas on the horizon contain ingredients that are made to specifically help certain diseases (example: a new one has just been developed specifically for Crohn’s disease.) Even as this article is written, more new pediatric formulas are “in the works.

*For more information on pediatric nutrition formulas, contact your local nutritionist or the author of this handout, Sharon Wallace, RD, CSP at [sharonwallace@nc.rr.com](mailto:sharonwallace@nc.rr.com)  
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### **References**

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