

# Probiotics & Prebiotics

## *Digestive Microorganisms*

**What are probiotics?** Probiotics are microorganisms (live bacteria) that live in and on our bodies and have a beneficial effect on our health. There are many different beneficial species (or strains) of bacteria in the human digestive tract (also known as the gut or intestine). Probiotics may be taken as a powder or in capsule form; probiotics are also found in fermented foods, like yogurt, kefir, kimchi, sauerkraut, miso and tempeh.

**What are prebiotics?** Prebiotics promote the growth of healthy bacteria in the digestive tract. They serve as food for probiotics. Bananas, onions, garlic, leeks, artichokes, asparagus, oatmeal and legumes are all considered prebiotics. Humans are dependent on certain gut microorganisms for optimal health.

### **What do digestive microorganisms (the gut “microbiome”) do?**

- **They break down undigested food.** This releases micronutrients (like vitamin K) so we can absorb and use them.
- **They defend the digestive tract** from invasion by harmful microorganisms by competing with them.
- **They influence the immune system of the digestive tract.** This maintains a healthy balance that aids in the defenses against harmful pathogens and can decrease excessive inflammation. This healthy balance is also involved in maintaining oral tolerance (when the digestive tract knows that the food we eat is foreign to our bodies, but is harmless and can safely be allowed to enter our body.)

**Research indicates that symptoms of a food allergy or sensitivity in infants (especially eczema, an allergic rash) may be reduced when:**

- Pregnant mothers maintain a good bacterial balance in their digestive tract by taking certain strains of probiotics, and/or,
- Infants are given probiotics directly to impact their intestinal flora.

**There is NO agreement on which strains are the most helpful, and whether certain geographic regions are more likely to be helped by a certain strain. Research continues!**

### **Specific Probiotics for Infants:**

- **BioGaia Protectis Baby Drops** contain one strain of bacteria (*Lactobacillus reuteri*) that is found in the intestines of healthy breastfed babies. This strain has been shown in a few research studies to result in less crying (“colic”), spitting up, and constipation in both breastfed and formula fed infants. It is an oil-based product. ***Please note this product comes with or without Vitamin D.***
- **LoveBug Infant Probiotics for Colic, Reflux, Diarrhea, Constipation, & Gas** is a mixture of 6 different bacteria strains of *Lactobacilli* and *Bifidobacteria* that are normally found in the intestines of healthy breastfed babies. Several of the bacteria are felt to help the immune system in the gut wall learn to tolerate foreign proteins – especially *Lactobacillus rhamnosus*, which has been shown to decrease the



allergic skin rash called eczema in infants and toddlers. *L. reuteri* is the same type of bacteria that is in Gerber Soothe and Bio Gaia (see above). Other *Lactobacillus* strains in this product include *L. plantarum*, which appears to help keep tighter junctions between gut cells and *L. acidophilus*. The two *Bifidobacterium* strains are *B. lactis*, which is felt to help the immune system function optimally, and *B. infantis*, which has been shown to improve fussiness in babies < 3 months old. All of these are bacteria normally present in a breastfed baby's bowel. Probiotic preparations containing multiple strains may be preferred if you are wanting to try to improve the microflora after your baby was born via Cesarean or has received antibiotics. **PLEASE NOTE: THIS PREPARATION ALSO CONTAINS VITAMIN D!**

The American Academy of Pediatrics recommends an exclusively breastfed baby receive 400 IU vitamin D daily. ***If your baby is already receiving Vitamin D drops, or more than ½ of their daily intake is from formula, please talk to your baby's provider before using this product.***

- **Klaire Labs Therbiotic Infant Formula** is a mixture of 10 different bacteria strains of *Lactobacilli* and *Bifidobacteria* that are normally found in the intestines of healthy breastfed babies. This infant probiotic comes in a powder, which can be mixed with breast milk or formula and given once a day for infants six to twelve months of age. Per the manufacturer: "If the infant or child has a medical condition, taking prescription drugs, or under the age of six months, consult your healthcare professional before using this product."

#### **Specific Probiotics for Adults available at MilkWorks:**

- **Target b2** contains *Lactobacillus Fermentum* (CECT5716), which is clinically demonstrated to support breast health and improve breast pain that is thought to be due to an imbalance of the breast "microbiome," or the types of bacteria living in the breast. This condition is called "mammary dysbiosis" or "subacute mastitis." (Please see Plugged Ducts/Mastitis Handout for more information)
- **Therbiotic Complete** contains high doses of seven strains of *Lactobacilli*, four strains of *Bifidobacteria*, and *Streptococcus thermophilus* for mothers who feel they need a more comprehensive probiotic to optimize their gut health (eight of these strains are the same strains found in the Therbiotic Infant Formula probiotic).
- **How to Handle and Store Therbiotic Probiotics:** Refrigeration is recommended, but the capsules and infant powder are stable at room temperature for short periods of time. If you are traveling, carry only the amount that you will consume. You may keep them outside a refrigerator for a week or two at room temperature.

All probiotic products are live cultures of friendly bacteria. Their effectiveness can be adversely impacted by prolonged exposure to high temperatures and humidity.

- Store bottles in the refrigerator with the cap tightly closed whenever possible.
- Avoid handling the capsules and putting them back in the bottle.
- Use a dry spoon to measure the infant powder and do not dip your finger into the bottle.
- Do not mix with hot food or beverages. High temperatures will kill the live microorganisms. Mix or take probiotics with cold or slightly warm liquid

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