



CHILDREN'S MULTI PROBIOTIC

Restore ultimate intestinal flora balance

Nothing makes a parent feel more helpless than having a seriously ill child. Can some illnesses be prevented? Is it possible to boost the immune system of our babies and children and perhaps prevent or mitigate some of the childhood ailments such as diarrhea, eczema, and otitis media? Is it possible to support the immature gastrointestinal system of infants and children to enhance digestion and nutrient absorption as well as ease digestive troubles? More and more evidence points to the use of probiotics in infants and children as a healthful adjunct to their diet with studies showing fewer episodes of diarrhea, fewer ear infections and less atopic dermatitis when children were supplemented with specific strains of probiotics. Natural Factors Children's Multi Probiotic, when used daily, is a simple tool that parents can use to give their children's immune system a subtle boost.

WHO WOULD BENEFIT

All children could benefit, particularly during the annual flu season or when in contact with germs at day care, preschool and school. Even newborns, breast-fed and bottle-fed infants and toddlers can be protected with this formula.

USE WITH ANTIBIOTICS

Troubling research shows a link between children given antibiotics in the first year of life and their development of asthma. In a combined analysis of seven studies involving more than 12,000 youngsters, researchers found that children given antibiotics before their first birthday were more than twice as likely as untreated children to develop asthma in childhood. More courses of antibiotics bumped the risk up even higher. The reason for the link may be the "hygiene hypothesis." "Limited exposure to germs can lead to an over-sensitive immune system, which mounts an over-the-top response to such non-threatening agents as pollen and dust mites. The result is an allergic reaction, which in some people can include the airway inflammation that's the hallmark of asthma." (Toronto Star, *et al.*) It does make us think. Use antibiotics when necessary but be judicious since they kill needed "good bacteria" along with the bad. (Marra, *et al.*)

If a child is on antibiotics it is advisable to restore the good bacteria quickly by giving a child's probiotics formula two hours after the antibiotics are given and continuing long after the antibiotics are finished. The probiotics used in the Children's Multi Probiotic formula can prevent many childhood infections before they start, reducing the need for antibiotics.

HOW IMPORTANT ARE PROBIOTICS

We are completely sterile of microbes inside the womb. Once we are born we are bombarded with them until we have ten times more microbes than the number of cells in our body. So it's important to get these good bacteria to work with our body's immune system right from birth. According to Gary Huffnagle, PhD, one of the leading researchers into probiotics: "The good microbes – and this is where probiotics come in – keep the bad microbes in small numbers. But they also stimulate the immune system and improve our digestive function..." (Reilly)

Probiotic bacteria have an intimate and mutually beneficial relationship with our intestinal and immune cells. These "friendly microorganisms" aid in the digestion of food, generate important nutrients, positively stimulate the immune system, diminish allergic reactivity and prevent the reproduction and colonization of undesirable microbes. As well, probiotics neutralize toxins within the gut and they stimulate gut wall healing in those with a leaky gut. Impressive research has begun to demonstrate the superiority of specific strains of probiotic bacteria with the ability both to survive passage through the human gastrointestinal tract, while possessing a wide range of health-promoting qualities.

HOW IS CHILDREN'S MULTI PROBIOTIC UNIQUE

The formula consists of a unique seven-strain bacteria blend that reflects an infant's natural intestinal flora composition. Each was selected after a literature review of published clinical studies for probiotic species used in infants. Bifidobacteria represent the dominant family of friendly bacteria in infants, preventing constipation and promoting regular bowel movements. Due to the importance of bifidobacteria for infants and children, 50% of the Children's Multi Probiotic is composed of a mix of 3 strains of bifidobacteria, including *B. infantis* (specifically found in infants aged from 0 to 5 years), *B. bifidum* and *B. breve*.

COMBINED HUMAN AND DAIRY ORIGIN PROBIOTIC STRAINS

Although from different origins, both human and dairy strains play a similar role, restoring and maintaining healthy intestinal flora. Dairy strains are "transient" and do not implant in the gut, while human strains implant themselves to specific receptors in the human gut, staying longer. Bifidobacteria strains found in the large intestine are from human origin, while the lactobacilli strains in the small intestine can be either from dairy or human origin. The Children's Multi Probiotic formula provides five human and two dairy origin

strains to maximize protection for infants and children.

BIFIDOBACTERIA

Bifidobacteria, the most important bacteria in the large intestine, are anaerobic organisms with limited fermentation of carbohydrates. Studies show they do survive and reach the colon intact.

Discovered in 1899 by Dr. Tissier of the Pasteur Institute, France, from the feces of healthy, breast-fed infants, bifidobacteria are concentrated in the lower small intestine and large intestine. They act as guards to prevent harmful microbes from invading the small intestine where most digestion and nutrient absorption takes place. They account for 95% of the bacteria in the intestinal tract of newborns and breast-fed infants have more bifidobacteria than those bottle-fed. Some experts suggest that bifidobacteria give breast-fed infants heightened resistance to infection.

Bifidobacteria also lower the pH of the colon, make it more acidic, thereby inhibiting the growth of pathogens. Distinguishing themselves from their more well-known lactic acid bacteria counterparts, they produce both lactate and acetate, whereas lactic acid bacteria produce lactate only. Studies show bifidobacteria can suppress growth of salmonella and *E. coli*. "Bifidin, an antibiotic produced by *Bifidobacterium bifidum*, is effective against *Shigella dysenteriae*, *Salmonella typhosa*, *Staphylococcus aureus*, *E. coli*, and other bacteria. A high-molecular weight substance from *Bifidobacterium infantis* is also effective against *Shigella flexneri* 5503-01, *S. faecalis*, *E. coli*, and others." (Tomomatsu)

RESEARCH ON PROBIOTICS

Researchers studied the effects of *B. breve* on very low birth weight (VLBW) infants. They concluded: "*B. breve* can colonize the immature bowel very effectively and is associated with fewer abnormal abdominal signs and better weight gain in VLBW infants, probably as a result of stabilization of their intestinal flora and accelerated feeding schedules." (Kitajima, *et al.*) Children who attend daycare centres have a 1.5 to 3 times higher risk of

gastrointestinal and respiratory tract infections than those who do not. Curious, researchers decided to study the effect of long-term consumption of probiotic milk in children attending daycare centres. Children were given milk with or without *Lactobacillus GG* (also known as *Lactobacillus rhamnosus* and provided in this formula). Children in the lactobacillus group had fewer days of absence from daycare because of respiratory tract infections and fewer courses of antibiotics. The authors concluded: "*Lactobacillus GG* may reduce respiratory infections and their severity among children in day care. The effects of *Lactobacillus GG* were modest but consistently in the same direction." (Hatakka, *et al.*)

LACTOBACILLUS FERMENTUM

Natural Factors is the first company in North America to include *Lactobacillus fermentum*, a species that has been shown to have excellent probiotic properties for infants and children, helping episodes of diarrhea and easing atopic dermatitis.

Researchers who investigated the effects of *L. fermentum* VRI-003 PCC on moderate or severe atopic dermatitis in young children six to eighteen months of age found a significant improvement in the probiotic group but not the placebo group. According to the SCORAD (Scoring of Atopic Dermatitis) severity scale, 92% scored better at 16 weeks than at baseline. The controls saw only a 63% SCORAD improvement. Further tests showed that the probiotic group enjoyed a reduction in severe atopic dermatitis (AD) symptoms, with 54% recording a drop from acute to mild AD, compared with the placebo group who saw a 30% decline in severe conditions. The authors concluded, "supplementation with probiotic *Lactobacillus fermentum* is beneficial in improving the extent and severity of atopic dermatitis in young children with moderate or severe disease." (Weston, *et al.*)

COLOSTRUM

An additional ingredient in Children's Multi Probiotic is colostrum, the clear/cloudy "pre-milk" that is secreted from the breasts prior to producing milk. As a dietary supplement, it is usually derived from bovine sources (cows) and con-

tains various immunoglobulins and additional antimicrobial factors. Colostrum has been shown to be useful in gastrointestinal support and in diarrhea reduction.

DOSAGE

Take one to 3 grams (1 gram = 1/2 teaspoon) daily on a full stomach or as directed by a health care practitioner. May be mixed into infant formula, milk, juices, protein drinks, or sprinkled on cereal or fruit. The powder can also be applied to the nipples when breast-feeding.

SAFETY

All of these strains have been shown to be exceedingly safe. An *in vivo* clinical study on newborn infants (0-8 weeks) with orally administered bifidobacteria and lactobacilli at a daily dosage of 9 billion, showed no side-effects. Based on the available data and considering that a person's natural intestinal flora is composed of over 400 species of bacteria and contains over 100,000 billion micro-organisms, there is no risk in taking highly concentrated probiotics. The minimum recommended daily dose for children should be 1 billion.

If gastrointestinal symptoms are severe or do not abate, always consult your health care practitioner.

Protecting your child's health is vital. Proactively giving children the Children's Multi Probiotic can increase a parent's peace of mind and minimize sleepless nights.

KEY REFERENCES

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