

FRIENDLY HELP FOR BABY'S HEALTH

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The effects of friendly bacteria such as *L. acidophilus* in our intestines have been well documented. Not only are they said to have a positive effect on our health and well being but also, they are implicated in the denaturation of certain carcinogenic compounds, reduction of serum cholesterol and in the production of vitamins and hormones.

But it is not only adults who benefit from these friendly bacteria. Breast-fed babies generally have a lower incidence of colic and other digestive disturbances than bottle-fed babies, and this has been attributed to friendly microorganisms in the digestive system whose growth is encouraged by mother's milk.

The *acidophilus*-type microorganisms that predominate in the intestinal tracts of healthy, breast-fed infants are called *Bifidobacteria*. These beneficial microorganisms account for up to 99 percent of a healthy, breast-fed baby's intestinal flora.

Bifidobacteria are now believed to be very important to a young child's well being. Research has shown that bottle-fed babies have far fewer *Bifidobacteria* in their stools than breast-fed babies; and after breast-fed babies have been weaned, the type of *Bifidobacteria* specific to infants and small children, called *Bifidobacterium infantis*, is found only in small numbers. These numbers continue to decline as the intestinal flora shifts towards what is normally found in adults.

New Research--Scientific interest in *Bifidobacteria* has continued to grow as new research has shown that breast-fed babies are much less susceptible to infections than bottle-fed babies. For example, a study of infant intestinal flora was conducted in a rural area of Guatemala. Out of 210 babies born in the village, 109 were breast-fed. The breast-fed infants showed high concentrations of *Bifidobacteria*--nearly 100 percent. Only four of the breast-fed babies developed *Shigella* infections that can cause severe diarrhea. But the rate of *Shigella* infection for the non-breast-fed infants was much higher.

Bifidobacteria inhibit the colonization of the intestine by invading disease causing-bacteria through competition for nutrients and attachment sites. They also produce anti-microbial substances that inhibit growth of common pathogens. Nutritionally, *Bifidobacteria* encourage better weight gain in infants through nitrogen retention. They also assist in the absorption of calcium and other vitamins and minerals and help to produce lactose, the enzyme necessary for milk sugar digestion.

Natural Inoculation—Infants are inoculated with *Bifidobacteria infantis* and other friendly microorganisms as they pass through the birth canal. These friendly bacteria enter the baby's intestines through the mouth and feverishly attempt to attach themselves to sites on the gastrointestinal wall before other not-so-friendly microorganisms from the outside world try to do the same. Breast-feeding then fosters the growth of *Bifidobacteria*, particularly *Bifidobacteria infantis*. Babies delivered by Cesarean section do not receive such a healthy head start with these friendly microorganisms. If they are then bottle-fed as well, they end up with adult-type microflora that are not optimal for their health.

Unstable Environment—Even in healthy, breast-fed infants, however, the intestinal flora is relatively unstable. Small changes in an infant's environment may upset the balance of these friendly microorganisms, sometimes leading to bacterial "overgrowth" of the small intestine and stomach, reducing nutrient absorption and causing other types of problems.

Sudden changes in diet, vaccination, common infections and even sudden changes in the weather may cause such imbalances. Antibiotics, steroids and certain other drugs may also cause major imbalances in the microflora, with resultant diarrhea, thrush, or other problems.

Essential Formulas Note: Dr. Ichihiro Ohhira's probiotic capsules have been administered to infants and young children to aid in the control of diarrhea, colic, etc. For additional information, contact Essential Formulas Incorporated at Post Office Box 166139, Irving, Texas 75016-6139 • (972) 255-3918 • (972) 255-6648 Fax • research@EssentialFormulas.com.