



## Center for Integrative Medicine

**Dietary Supplements: Probiotics** 

**Probiotics** are healthy bacteria that normally live in our GI tract (intestines). Our intestines typically contain trillions of these helpful bacteria. They help maintain healthy GI and immune function. They make antimicrobial substances (mucin) that decrease the ability of other bacteria to "stick" to the gut; they make vitamin K; they foster IgA maturation; they make the intestine less leaky and more acidic, protecting us from disease-causing bacteria. Taking antibiotics or eating a low fiber diet can reduce the number of probiotics, and make it easier for unfriendly bacteria to multiply, causing symptoms such as constipation or diarrhea.

**Prebiotics** are the "foods" for probiotics, such as indigestible starches and sugars found in fruits, vegetables, whole grains and beans. One commonly used prebiotic is *inulin* which is mildly sweet plant fiber; large amounts can cause gas and bloating.

**Synbiotics** are combinations of probiotics and prebiotics.

Some studies suggest that probiotics can help with:

- Colic
- Diarrhea associated with
  - Acute infectious diarrhea
  - Antibiotics e.g., C. difficile diarrhea and side effects from treatment for H pylorii; chemotherapy
  - Traveler's diarrhea
- Lactose intolerance
- Irritable bowel syndrome, abdominal pain, ulcerative colitis, and pouchitis
- NEC (necrotizing enterocolitis) in premature infants
- Allergies and eczema
- Other conditions, such as cold and flu prevention, dental cavities, constipation, vaginal infections, and respiratory infections; boosting immune response to immunizations

There are no RDA or minimum daily requirements for probiotics established by the FDA, the Institute of Medicine, or the American Academy of Pediatrics. Probiotics are regulated like food rather than like drugs in the US, and the FDA has not approved their use specifically to prevent or treat disease.

Strains: Our bodies contain many, diverse types of probiotic bacteria. The specific supplement strains that have been studied the most often are: Lactobacillus (L.) rhamnosus GG, L. reuteri, and Saccharomyces. Research is still needed to determine which people with different conditions benefit most from which combination of probiotic supplements.

Sources: Probiotics are found in fermented foods, such as yogurt, kefir and tempeh. The amounts in food are lower than the amounts in supplements.

Yogurt products with the most testing contain dairy and require refrigeration:

Activia contains 1 billion Bifidobacterium (B) animalis DN-173 010 (regularis) per 100 gram serving.

<u>DanActive (Actimel)</u> contains 100 million *L bulgaricus, casei*; and S. thermophilus per serving.

Yakult is a Japanese probiotic drink containing 6.5 billion cfu of L caseii Shirota per 2.7 ounce serving

YoPlus contains 1 billion L. bulgaricus, S. thermophilus, B. lactis and inulin (a prebiotic).

Amounts of probiotic bacteria are claimed at the time of manufacture and may be lower by the time you eat them. Probiotic *supplements* are regulated more like food than like medications. Different products contain different amounts of different strains. Because probiotics are living organisms, there may not be as much in the purchased product as there was at the time of manufacturing. See list on next page for some product comparisons.

Safety: People who are very sick, who have central intravenous lines, or severely suppressed immune systems should talk with their health professional before starting probiotics. Some people experience diarrhea, constipation, or gas from one probiotic product, but not from another. Observe your own reaction carefully. Some people who initially experience bloating or gas may find that after a few days these symptoms resolve.

## **Probiotic Supplement Products**

These products have been recommended by GI specialists or integrative pediatricians. Manufacturers may change ingredients. See ConsumerLab.com to compare the quality of different products.

Product Name/Distributor	#CFU/Serving	Organism Type B= Bifodobacter; L=
Froduct Name/Distributor	(in billions)	Lactobacillus; S= Streptococcus; Sac =
	(III DIIIIOIIS)	Saccharomyces;
3-in-1 Natren Healthy trinity	30 billion	L acidophilus, B bifidum, L bulgaricus,
BioGaia (drops, chewable tablets, rehydration	0.1 – 0.2 b	L. reuteri
solution, straws, lozenges)- OK at room temp.	(100 – 200 million)	L. Teuten
Culturelle. OK at room temp.	10 b	L. rhamnosus GG
Femdophilus (Jarrow formula)	5 b	L rhamnosus GR, L reuteri RC-14
iFlora 4-KIDS (powder). ConsumerLab's 2009	4 b per ¼ tsp.	B. infantis; B lactis; B longum; L
review found it contained 20% of labeled amount.	4 b per /4 tsp.	acidophilus; L paracasei; L rhamnosus
Florastor – OK at room temp (cap or powder).	61.6 b	Sac. boulardii
	75 b	
GNC Probiotics Ultra 75 Probiotic complex		L acidophilus, B bifidum, B lactis
Kirkman Labs Ultra Pro-Bio (chewable). Free of	20 b	L rhamnosus, acidophilus, plantarum,
gluten, casein, corn, soy, sugar, egg, fish, or nuts;		casei; B bifidum; S thermophilus
no artificial flavors, colors or sweeteners. Requires		
refrigeration.	4 h	Disatis hilidum langum and hyaya
Kirkman Bifido complex. No dairy, gluten, corn,	1 b	B lactis, bifidum, longum, and breve
soy, yeast, sugar, starch, or gelatin. No artificial		
colors, flavors, preservatives, or sweeteners.		
Requires refrigeration.	15 h nor con	L saidamhilea D lastia
Metagenics Ultra Flora Plus	15 b per cap	L acidophilus, B lactis
Nature's Bounty Extra Strength probiotic acidoph.	3 b per cap	L acidophilus, B Lactis, L salivarius, L
Naturals Way Drives devalue Outines 44 Drehistic	05.6	bulgaricus
Nature's Way Primadophilus Optima, 14 Probiotic	35 b	L. casei, B. longum, L. acidophilus, L.
Strains Plus NutraFlora (Enteric-Coated)		plantarum, L. rhamnosus, L.rhamnosus,
		B. breve, B. bifidum, L. lactis, S.
		thermophilus, B. infantis, L. bulgaricus,
Nestrition Nove Drive a dombitue Optimus	7 h nor con	L. salivarius, L. helveticus
Nutrition Now Primadophilus Optimua	7 b per cap	L acidophilus, L plantarum, L
		rhamnosus, L casei, L paracasei, L
Dharmay III C (against a Mindlinky navydar	0 h nor 1/ ton	salivarius, B bifidum, B longum
Pharmax HLC (capsules, Mindlinkx powder,	8 b per ¼ tsp.	L. acidophilus, crispatus, rhamnosus; B
straws). No dairy, casein, wheat, gluten, soy, corn,		bifidum, lactis
or nuts.	25	D. hifidum, langum, lastic and brave.
Therbiotic Complete by Klaire labs. Includes inulin.	25	B. bifidum, longum, lactis and breve; L.
Free of milk/casein, fish, nuts, wheat, corn, and		rhamnosus, acidophilus, casei,
soy; no sugar, artificial colors, sweeteners, or		plantarum, salivarius, bulgaricus,
flavors. Requires refrigeration.  Vitamin World Probiotic 10 (similar to Puritan's	5 h nor con	paracasei; S. thermophilus; L plantarum, B bifidum, L rhamonsus, L
Pride probiotic 10)	5 b per cap	bulgaricus, L salivarius, L brevis, L
Fride problotic 10)		
VSL# 3 (packets of powder). Keep refrigerated.	450	acidophilus, B lactis
Shipped directly from manufacturer. For use by	430	S. thermophilus, B.breve, B. longum, B. infantis, L. acidophilus, L. plantarum, L.
patients with ulcerative colitis, ileal pouches, or		casei, L. bulgaricus
		Casei, L. Duigaricus
IBS. Physician supervision only.	1	

Enteric coating may protect products as they proceed through the stomach. Bifidobacter, Lactobacillus, and Strep species do not require this enteric coating.

Keep all supplements dry and away from heat and light to reduce decomposition and degradation.

## www.wakehealth.edu/CIM - See Quick Link to Dietary Supplements