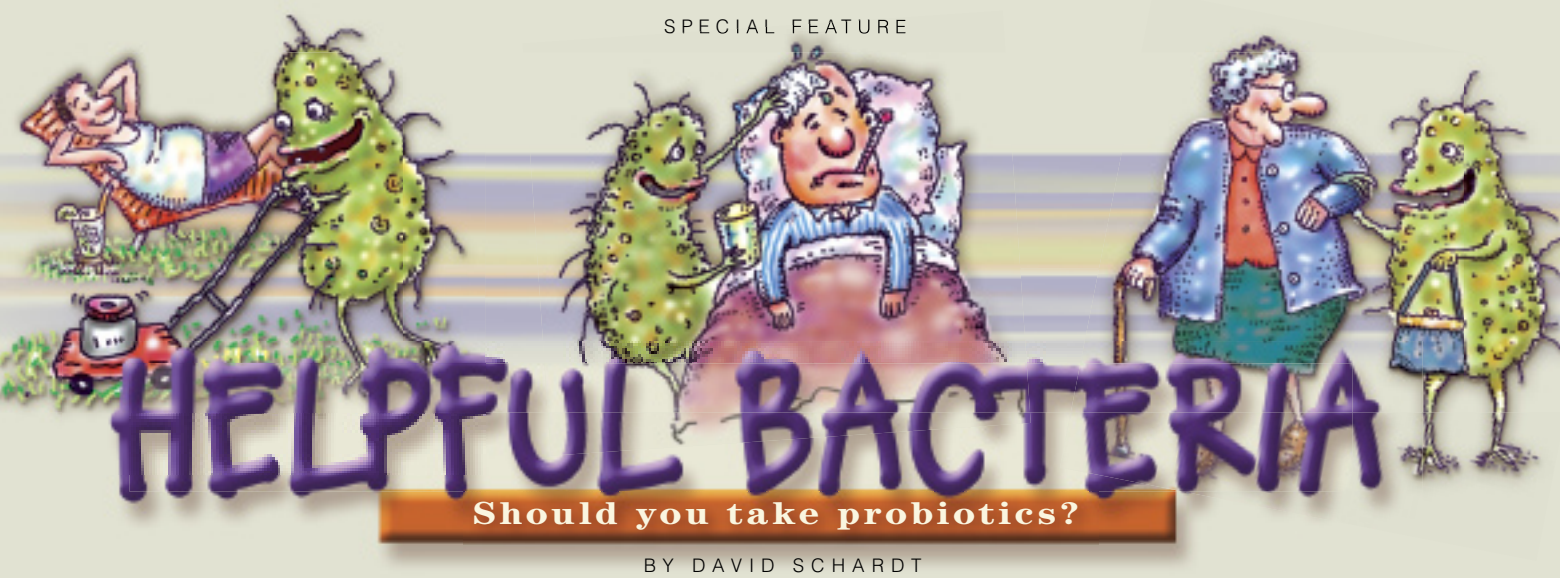

HELPFUL BACTERIA

Should you take probiotics?

BY DAVID SCHARDT

You are not alone. Living on and in your body are trillions of bacteria, a good chunk of them in your gastrointestinal tract. Lay them end to end and they would circle the earth 2½ times.

While the vast majority of those bugs are harmless (the harmful ones are largely disarmed by your immune system), some are beneficial. They may crowd out disease-causing bacteria, for example, or help you digest fiber.

Not surprisingly, some companies have started adding helpful bacteria—called probiotics—to their yogurts, drinks, and supplements.

Are they worth taking?

"We believe that there might be value in adding certain living, non-disease-causing bacteria and other microbes to our diets," says Mary Ellen Sanders, president of the International Scientific Association for Probiotics and Prebiotics. (*Pre*biotics are ingredients that stimulate the growth of *pro*biotic bacteria.) The California-based nonprofit group was started in 2002 with a grant from yogurt maker Dannon.

But probiotics won't help everyone, say experts.

"If you're healthy and are not planning to take antibiotics, go into the hospital, or maybe take a trip out of the country, there is no benefit from taking probiotics," says microbiologist Lynne McFarland of the Veterans Administration Puget Sound Health Care System in Seattle, Washington. McFarland is co-author of *The Power of Probiotics*, which is due out next spring.

Here's the lowdown on some of the most popular probiotic foods and supplements.

Illustrations: Loel Barr. Photos: Nick Waring.

Activia Yogurt

What's in it: *Bifidum regularis*, Dannon's name for *Bifidobacterium animalis* DN-173 010.

Cost: $20-$60 a month for one to three 4-oz. yogurts a day.

Claims: "I'm bloated, irregular," says the young woman in the TV ad. "I eat Activia every day," says her friend. It's "clinically proven to help naturally regulate your digestive system in two weeks," adds the announcer. Sure enough, two weeks later, the young woman feels okay.

Evidence: Dannon can point to no research showing that Activia helps people who are bloated and irregular. The company has funded four studies that gave healthy men and women 4 to 12 ounces of Activia a day.[1-4] After two weeks, it took, on average, 10 to 30 fewer hours for food to travel from one end of their GI tracts to the other (called transit time).

Speeding up transit time "can lead to a reduction in the quantity of gas present in the digestive tract and a reduction of the bloating sensation in healthy individuals," says Miguel Freitas, Dannon's scientific affairs manager.

But the researchers didn't measure gas output, or even ask the participants if they felt any better, probably because the volunteers weren't suffering from any digestive distress in the first place. In fact, many were chosen precisely because they had no history of GI tract problems.

Activia may shorten transit time, but would it help people who suffer from irregularity, bloating, and gas? No one knows.

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1 *Bioscience and Microflora 20*: 43, 2001.
2 *Aliment. Pharmacol. Ther. 16*: 587, 2002.
3 *Microb. Ecology Health Dis. 13*: 217, 2001.
4 *Microb. Ecology Health Dis. 15*: 15, 2003.

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Stonyfield Farm Yogurt

What's in it: *L. acidophilus*, *Bifidus*, *L. casei*, and *L. reuteri* 55730. Stonyfield Farm says that it sells the only U.S. yogurt with *L. reuteri*.

Cost: About $30 a month for one 6-oz. tub a day.

Claims: *L. reuteri* can fight "viruses and bacteria associated with diarrhea and gastrointestinal disease" and "harmful bacteria such as *Salmonella*, *E. coli*, *Staphylococcus*, *Candida* yeast, and other harmful microorganisms."

Evidence: Only one published study has tested Stonyfield's strain of *L. reuteri* in adults. Among 128 day workers at a Swedish company, those who took a daily supplement of *L. reuteri* for 80 days were just as likely to call in sick as those who got a placebo.[1]

But among night workers, none of the 26 who got the *L. reuteri* took sick leave, compared with nine of the 27 who got the placebo. The researchers speculated that the *L. reuteri* bacterium may have bolstered the workers' immune systems, which could have been weakened by the stress of working nights. Clearly, one study on some 50 people isn't enough to say.

In several small studies in infants and children, drinks containing, *L. reuteri* cut the rate of diarrhea by about one-third and shortened its duration by about a day.

[1] *Environ. Health* 4: 25, 2005.

DanActive Drink

What's in it: *L. casei Immunitas*, Dannon's name for *Lactobacillus casei* DN-114 001.

Cost: $40 a month for two 3.3-oz. bottles a day.

Claims: On Dannon's Web site, grandparents drink DanActive to "help strengthen my body's natural defenses," Mom drinks it to help "keep my balance and my defenses at their best," older teens drink it to stay healthy despite a "stressful and hectic lifestyle which may run me down," and younger kids drink it because they're exposed to junk that's "not really clean."

Evidence: DanActive *didn't* prevent infection or disease in the only study that looked. Dannon researchers gave 180 Italian men and women (average age 67) seven ounces (two bottles) of DanActive every day for three weeks. It was an "open pilot" study, so the DanActive drinkers knew they were taking something that might help them. Nevertheless, they were just as likely to get colds and gastrointestinal illnesses as the 180 seniors who didn't drink DanActive.[1]

But when the DanActive drinkers did get colds, they lasted an average of 1½ days less than the non-DanActive group's colds. The researchers recommended doing a larger, double-blind study, which wouldn't tell participants whether they were getting DanActive or a placebo. Guess Dannon didn't agree, since it's been three years and no other studies have been done.

The company makes no mention on its Web site that one out of four DanActive drinkers in the Italian study suffered so much bloating, gas, and nausea that the researchers had to cut their daily allotment of DanActive in half.

[1] *J. Nutr. Health Aging* 7: 75, 2003.

Kashi Vive Cereal

What's in it: *Lactobacillus acidophilus* LA14.

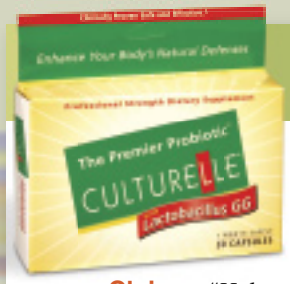
Cost: About $27 a month for one 1¼-cup serving a day.

Claims: Probiotics "promote digestive balance and immunity," says the box of "the first probiotic digestive wellness cereal."

Evidence: No published research has tested the *L. acidophilus* strain in Vive for any health benefits. So why did Kashi choose it? "Because it survives digestion," said a company spokesperson. And what, exactly, does it do after it has survived?

"We don't have any information about that," said the spokesperson.

Culturelle



What's in it: *Lactobacillus rhamnosus GG* (ATCC 53103).

Cost: $20 a month.

Claims: "Helps promote regularity." "Helps reduce bowel and stomach discomfort."

Evidence: The two small studies that looked at whether *Lactobacillus GG* (LGG) can "promote regularity" (in 15 Finnish women and 43 Polish children) came up empty.[1,2] But the bacterium does seem to help prevent diarrhea in children given antibiotics. In two studies of a total of 300 children, those who got the probiotic pills along with an antibiotic were 70 percent less likely to report loose stools than those who got a placebo.[3]

But *Lactobacillus GG* flunked its big trial in adults at the Mayo Clinic in 2001. Researchers there gave 302 hospitalized patients who were being treated with different antibiotics either LGG or a placebo. LGG made no difference. After two weeks, 29 percent of those taking the probiotic reported having diarrhea, compared with 30 percent of those taking the placebo.[4]

[1] *J. Pediatr. 146*: 364, 2005.
[2] *Eur. J. Clin. Nutr. 60*: 319, 2006.
[3] *Can. Med. Assoc. J. 175*: 377, 2006.
[4] *Mayo Clin. Proc. 76*: 883, 2001.

Align

What's in it: *Bifidobacterium infantis* 35624.

Cost: $30 a month.

Claims: "A majority of Americans" could benefit from taking Align every day to deal with occasional intestinal discomfort.

Evidence: No studies have tested Align in healthy people. "The published studies to date have involved people with IBS," says Align's manufacturer. In IBS, or irritable bowel syndrome, the nerves and muscles in the bowel are extremely sensitive, leading to severe cramping, bloating, gas, diarrhea, and constipation.

Two new studies suggest that the bacterium in Align might help people with IBS. In the larger one, researchers at the University of Manchester in England gave 173 women with IBS either the bacterium in Align or a placebo every day. After four weeks, the Align takers reported less abdominal pain, bloating, gas, and straining.[1]

[1] *Am. J. Gastroenterol. 101*: 1581, 2006.

Multibionta

What's in it: A multivitamin plus *Lactobacillus gasseri* PA 16/8, *Bifidobacterium bifidum* MF 20/5, and *Bifidobacterium longum* SP 07/3.

Cost: $7 a month. (Multibionta is available only at CVS/pharmacy.)

Claims: Helps "people who feel down or susceptible to a state of poor health."

Evidence: In the only good study, researchers in Germany gave 225 healthy men and women the probiotics in Multibionta every day over two successive cold seasons.[1] The probiotic takers came down with the same number of colds as 229 men and women who received a placebo.

But their colds were, on average, two days shorter than the placebo takers' colds; their fevers lasted, on average, six hours (versus 24 hours for the placebo takers'); and they reported lighter bronchial symptoms.

Worth taking? Maybe, but it would be a surer bet if future studies confirmed the German results.

[1] *Vaccine* online (doi:10.1016/j.vaccine.2006.05.048).

Florastor

What's in it: *Saccharomyces boulardii*, a yeast that can reside temporarily in the GI tract.

Cost: $42 a month.

Claims: Can "help" with diarrhea caused by antibiotics, food poisoning, traveling to other countries, and *Clostridium difficile* infections that people pick up in hospitals.

Evidence: "There are well-done, big, blinded studies that show that *S. boulardii* is good for preventing diarrhea associated with taking antibiotics," says Lynne McFarland of the Veterans Administration Puget Sound Health Care System. (McFarland is the former director of scientific affairs for Florastor's manufacturer.)

When McFarland pooled the results of six good studies in a recent meta-analysis, she found that giving *S. boulardii* to antibiotics takers cut their risk of diarrhea by more than half.[1]

"And there are two well-done trials showing that it can reduce, by 40 percent, recurrences of diarrhea from *Clostridium difficile* infections in hospitalized patients," she adds.

Can Florastor prevent traveler's diarrhea? "There are a couple of studies, but they're old and have some problems," says McFarland, "so it's not clear how effective it might be for that."

[1] *Am. J. Gastroenterol. 101*: 812, 2006.