SOME BACTERIA FOR BRUNCH?

Health-boosting probiotics are all the rage, but shop carefully

By Katherine Leitzell

nakd Juice Co. of Azusa, Calif., launched a new juice smoothie this fall that contains an unlikely ingredient—live bacteria. Certain cereals, baby formulas, dairy drinks, and other food products have also had such microbes intentionally added during their manufacture. These are just the latest in a glut of foods and beverages that contain probiotics, which are harmless microorganisms that have a variety of potential health benefits. At least some of these microbes appear capable of improving digestion, preventing diarrhea, or strengthening the immune system, studies show. However, many probiotic-containing products have not been subjected to rigorous research. So consumers must shop carefully in order to benefit.

Probiotics are a term for various “friendly” microorganisms—certain types of bacteria and yeast—that may provide consumers with health benefits. It might seem counterintuitive to gobble bacteria for better health, but a healthy human gut teems with hundreds of varieties, most of them harmless or even beneficial. Those microbes, most commonly strains of Lactobacillus and Bifidobacteria, vastly outnumber the body’s human cells and help maintain a healthy digestive system, in part by inhibiting the growth of potentially infection-causing microbes.

Taking probiotics may be most helpful when a person’s normal collection of gut bacteria has been disturbed, which can result from food poisoning, for example, or from using antibiotics. Those drugs can kill helpful and harmful microbes alike. Some evidence suggests that popping a capsule full of probiotics or downing a teeming cup of yogurt each day might help prevent gastrointestinal infections in the first place—and may combat some chronic conditions such as irritable bowel syndrome and allergies.

Food makers are also touting additives called prebiotics, a fancy term for fibers and sugars that can help probiotic bacteria thrive. Recent research suggests that probiotics might hold many of the same benefits as prebiotics.

No guarantee. Labels on supermarket shelves can be misleading, however. Products and pills that contain probiotics and prebiotics aren’t necessarily proven to work. “All probiotics are not equal,” says William Chey, a gastroenterologist at the University of Michigan. Even strains of bacteria that share the same Latin name may work differently, says Gary Huffnagle, professor of internal medicine at the University of Michigan and coauthor of The Probiotics Revolution. “Among Lactobacillus acidophilus,” he says, “there are really potent [beneficial] strains and others that just make yogurt.” That species and other lactobacilli help turn milk into yogurt, which is one reason that dairy products dominate the probiotic-food market. The bacteria must be added to most other products.

One of the most-tested probiotic strains is Lactobacillus rhamnosus GG, which is found in the dietary supplement Culturelle and Dannon’s Danimals yogurt. Since 1985, when scientists at Tufts University discovered it, “LGG has been subjected to hundreds of studies and found to be beneficial against diarrhea, dental infections, and respiratory infections. A study in the British Medical Journal last August found that the strain could also treat childhood diarrhea; in the trial, kids who consumed an LGG-packed supplement recovered in three days on average rather than five days.

But since LGG is patented, some companies use other L. rhamnosus strains that have not been tested as rigorously. Other bugs appear to help in certain ailments. The supplement called Align, for example, contains Bifidobacterium infantis 35624, which has been proposed as a possible remedy for irritable bowel syndrome. That disorder may affect as many as 1 in 5 Americans and is marked by bloating, abdominal pain, and irregular bowel movements. (The product also can lessen “a range of episodic
digestive upsets," according to manufacturer Procter & Gamble.) A recent analysis of 13 clinical trials involving various probiotics showed that the bacterium in Align was the only one to have been proved efficacious for IBS.

Chey, who worked on the study (and who has worked for P&G as a consultant), says the impetus for the research came from patients asking about probiotics for various gastrointestinal disorders. Chey regularly recommends probiotics to patients with certain chronic gastrointestinal problems, and he says there’s good evidence to support the use of Align for irritable bowel syndrome, for example, and some evidence for the use of the yogurt Activia for irregularity. Activia’s maker, Dannon, spikes the product with *Bifidobacterium animalis* lactis (trademarked as Bifidus regularis in the United States). One of several studies that have tested it found that women who consumed three servings a day of Bifidus regularis-containing milk moved food through their colons about 18 percent faster.

Probiotics are potential immunity boosters, too. The dairy drink DanActive, another Dannon product, contains *Lactobacillus casei* immunitas. A trial published last summer in the *British Medical Journal* showed that seniors who drink DanActive during and after antibiotic treatment are less likely to develop diarrheal illnesses such as *Clostridium difficile* infections, which are hazards of antibiotic use. Of patients who drank DanActive, 12 percent developed diarrhea, and none developed *C. difficile*; 34 percent of a control group got diarrhea, and 17 percent fell ill with *C. difficile*.

Other food companies have jumped on the probiotics bandwagon, adding bacteria to new kinds of products. Naked’s probiotic juice contains a strain of *Bifidobacterium lactis* that several studies have found to protect the elderly against gastrointestinal infections. Last year, Kashi released a probiotic-enriched cereal, but the strain it contains has been subjected to few peer-reviewed published trials. (The company asserts that the bugs reach the intestine alive and increase the amount of friendly microbes.) Even baby foods have followed the trend. An infant formula from Nestlé is one of several such probiotic products to hit shelves recently. It contains bacteria that the company says are similar to those found in the digestive systems of breast-fed babies. Nestlé-sponsored studies suggest the formula boosts levels of key antibodies that help the immune system develop. Some experts are optimistic that probiotics may help formula-fed babies gain some of the immunity-building benefits of breastfeeding.

**Prebiotics too.** As probiotics have grown popular, prebiotics have emerged as another category of so-called functional food. Recent studies support the idea that certain compounds—the nondigestible carbohydrates inulin (also known as oligofructose), galactooligosaccharide, and lactulose—can stimulate the growth of friendly bugs in the gut. Prebiotics might have health benefits similar to probiotics, and they’re easier to incorporate into one’s diet: Consumers can get prebiotics without even buying special products, Huffnagle says, because many fruits, vegetables, whole grains, and other high-fiber foods naturally contain the stuff.

When choosing a probiotic product, experts advise, look for specifics, including the bacterial genus, species, and strain as well as the number of bacteria, usually measured in millions or billions of colony-forming units or CFUs. Vague statements like “proprietary formula” should be a red flag, they say. Since many probiotic products don’t list the exact strain they contain—leaving consumers with no way of knowing whether the product is really effective—the best way to find an effective product is in some cases to experiment with several, Huffnagle says. Such trial and error, he says, “is tedious, but it’s the only way to do it right now.”

That’s partly because the Food and Drug Administration hasn’t established a definition for *probiotic*—so the presence of that word on a label has little practical meaning. Groups such as the International Probiotics Association, an organization of manufacturers, healthcare professionals, and scientists, are working to develop an independent certification system for probiotic products. Such a system would help ensure safety and quality, says Chey. “It’s a little bit like the Wild West right now.”

Probiotic bacteria (shown in yellow and red) can thrive in yogurt.