

THE IMPORTANCE OF PREBIOTICS AND PROBIOTICS

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Have you heard about the *microbiome*? This term refers to the trillions of microorganisms living inside the human body (often referred to as *flora*). By far, most of these microbes reside deep within the intestinal tract, chiefly the colon (or large intestine). The resident flora of your intestinal tract assists with the digestive process, manufacture certain nutrients (including vitamin K and some of the B vitamins), and release substances that play a part in overall health (such as helping to regulate metabolism and immune response). Researchers are finding a complex relationship between these intestinal microbes and most other body systems, with new evidence rapidly emerging.

What foods we take in has a significant role in the exact composition of intestinal flora. For instance, when these microbes feed on choline, a nutrient found in red meats, fish, poultry, and eggs, a metabolite called TMA is formed. TMA is then converted by the liver to a substance strongly associated with the formation of plaque in the arteries. A more positive effect results from eating a high fiber diet, which may enhance the growth of intestinal bacteria that produce short-chain fatty acids, chemicals which seem to improve regulation of body weight, blood sugar levels, and blood pressure. Current research is investigating how high sodium intake changes the composition of intestinal flora, the interaction of microbes and vegetables that may help relax blood vessels, and how these microbes may influence kidney function.

What are *prebiotics*? They are not living organisms, but rather a form of soluble, fermentable fiber. The fiber found in prebiotics cannot be digested in the stomach, which allows these nutrients to pass into the intestinal tract unchanged. Once there, the fiber is utilized by intestinal flora to produce short-chain fatty acids, substances which – as noted above – have healthful benefits. Feeding intestinal flora with this fiber is vital in another way. Without enough of these prebiotics, intestinal bacteria will look elsewhere for nutrients, and it is thought that they will ingest the mucous lining of the intestine. Damage to the intestinal lining can put

the body at greater risk for intestinal inflammation or infection.

Experts recommend that prebiotics should be consumed through diet rather than by taking a supplement. Supplements are quite costly and there is no concrete proof that they are beneficial. Foods rich in prebiotics include garlic, onions, beans, asparagus, dandelion greens, and Jerusalem artichokes. Bananas provide prebiotics only when they are not ripe. A fiber called “resistant starch” is also suggested, and can be found in oats, potatoes, rice, and pasta that has been cooked and cooled. Try making a healthy potato or pasta salad, or serving cold, cooked rice over a base of greens, vegetables, and grilled chicken.

And now on to *probiotics*, which are live microorganisms that have been found to be good for intestinal health. Dozens of different probiotic bacteria exist, but the two most common groups are *Lactobacillus* and *Bifidobacterium*. Besides improvement of digestive processes, these bacteria are being linked to decreased incidence of bowel inflammation, better regulation of blood sugar levels, decreased cholesterol levels, and even improved mood.

As with prebiotics, scientists say that natural dietary sources of probiotics are generally better than supplements. Natural sources contain a greater variety of bacteria than found in supplements, and this diversity helps create a better bacterial ecosystem in the body. Also, it is important that these “good” bacteria are alive and well when ingested. Bacteria found in foods such as yogurt, kefir, sauerkraut, kombucha, and kimchi, for instance, feed on the carbohydrates surrounding them, helping them stay alive until you consume them. The bacteria in supplements do not have anything to feed on, so many of them may die off before being consumed.

One instance where you might want to take probiotic supplements is when you have been prescribed antibiotics. Antibiotic therapy, especially for a prolonged period of time, destroys many of the beneficial bacteria, shifting the balance and allowing “bad” bacteria to grow un-

checked. Diarrhea is a common side effect of this process, and evidence is strong that taking probiotic supplements can lessen the incidence and severity of antibiotic-associated diarrhea.

Probiotic supplements are regulated by the FDA as foods, not as medications, so be cautious when purchasing supplements. Ask your health care provider if taking probiotics is right for you. Some individuals with immune system problems or other serious health problems should not take them. Some relatively minor side effects may happen when taking probiotic supplements: upset stomach, mild diarrhea, gas, and bloating. These symptoms generally appear during the first few days after starting supplements and wear off with time. In rare cases, allergic reactions can occur.

This column is not intended as a substitute for medical advice, diagnosis, or treatment. You are urged to seek the advice of a health care practitioner for any questions or concerns you may have about your medical condition or treatment.

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Nov./Dec. 2018

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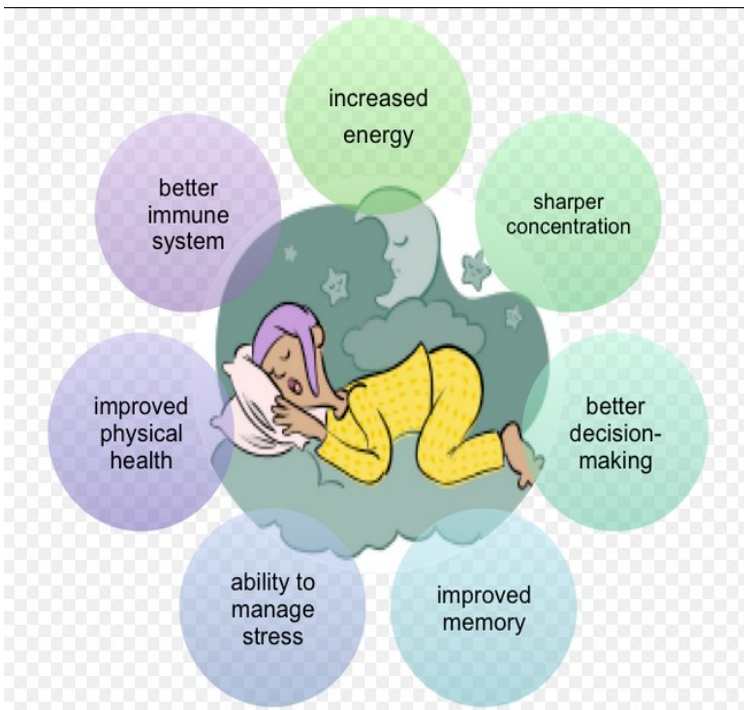
Check out RC39 website <http://rc39.ny.aft.org/> where you can read recent NYSUT RC39 newsletters in color, AFT and NYSUT news releases, and much more.

YOUR HEALTH CONNECTION

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As we age, “a good night’s sleep” may become more difficult to achieve. And not getting enough sleep is proven to have significant negative effects on health. For example, if you don’t sleep well, there is a rise in the hormone *ghrelin*, which makes you hungrier, while the hormone *leptin*, which signals when you’re full, tends to drop. These changes not only alter your hunger cues and eating patterns, but may also slow your metabolism.

Sleep can’t be stockpiled, so spending extra time in bed on weekends does not help. Most technological devices emit a blue light that suppresses melatonin and makes you less sleepy. Shut off your electronics at least thirty minutes before bedtime. Try to maintain a consistent bedtime each day, and start a routine to help you relax before then. Reading, meditation, or a warm bath often work.



A more secure retirement

Union workers are more likely to have employer-provided pensions than non-union workers. Meanwhile, in 2012, 77 percent of union members were covered by defined-benefit pensions, as compared to less than 20 percent of non-union workers.

Information provided by the Center for American Progress, the Bureau of Labor Statistics, UC Berkeley Labor Center, Labor Project for Working Families, the Center for Economic and Policy Research and Employee Benefits Research Institute.



RC39 needs member participation

RC39 President Pete Herron

The RC39 newsletter is by and for its members. All members are encouraged to submit (email preferred) an article. The article can be a creative writing piece, something on a retiree issue (union, health insurance, pending legislation, etc.), travel, hobbies, volunteer activities, or whatever you think would be of interest to RC39 members.

RC39 needs new leadership. All RC39 deliberations are done by email. Members can request to be placed on the RC39 officer email list. Everyone on the list will be able to participate in all email discussions. Only elected officers will be able to vote. This is a great way to learn what is involved in being a RC39 officer.

You can contact me at rc39pete@optonline.net, or 98 Rocky Point Landing Rd., Rocky Point, NY 11778. Looking forward to hearing from you.

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RC39 Newsletter is looking for comments, suggestions and articles from its members.



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