



The Bugs You Put Inside You



Dr. Kate Thomsen and Silky

This article take a final look at our emerging understanding of the human intestinal "microbiome" – the bugs that live in our intestines. Balancing the equilibrium of the different bacterial species in our intestines appears to be one of many goals for maintaining good health. Healthy intestinal ecology is designed to aid our immune system, protect us from microorganisms that can cause disease, help us detoxify, and improve digestion and absorption of food and nutrients.

Studying bugs that live in feces doesn't sound like an award winning career, but in the early 1900's a Nobel Prize winning Russian scientist, Eli Metchnikoff, associated healthy gut flora with extending lifespan. He studied various rural European communities that lived largely on milk fermented by lactic-acid producing bacteria. He proposed that their long lifespan was due to "seeding" their intestines with harmless lactic-acid bacteria which created a more acidic environment that suppressed the growth of other harmful bacteria. He created the "sour milk diet" (milk fermented with "Bulgarian Bacillus" – early "yogurt") which became a popular treatment in Paris at that time. By 1935, strains of Lactobacillus were found to be very active when implanted in the human digestive tract and began to be used therapeutically – especially

for relief of chronic constipation. The term "probiotic" was introduced in 1953 and now there is a World Health Organization definition: Live microorganisms which, when administered in adequate amounts, confer a health benefit on the host.

The science of intestinal ecology and probiotics is young. We know that an individual's intestinal ecology is unique due to factors including early development, their health conditions, diet, stress and use of antibiotics. For example only 30% of Caucasians (vs 60% of Asians) have the bacteria that makes the anti-cancer product equol from the soy isoflavone daidzein. Not everyone possesses the bacteria that make the anti-cancer product urolithin from strawberries and pomegranates. And only 30 -40% of the Western population have the bacteria that produces methane (which may be related to constipation).

Since we realize that different bacteria that live in the human gut have different properties, the administration of probiotics could be prescribed for specific conditions/complaints and individualized to match one's needs. However, the science is still young and not quite ready to give us this information. Currently we use probiotics for supportive treatment, not curative treatment. Uses include: diarrhea (from viruses and antibiotics), pouchitis, irritable bowel syndrome, bladder cancer, urinary and vaginal infections, eczema and Clostridium difficile infection (an antibiotic associated diarrhea).

Clostridium difficile (known as C diff) infection has become a vexing problem in hospitalized patients. Only 3 % of the general

population harbor C diff in their intestines but 10 – 20 % of hospitalized patients do because it is very easily transmitted despite vigorous efforts at sterilizing and sanitizing. When antibiotics are given, the intended target bacteria are killed but so are a lot of beneficial intestinal bacteria. This allows an imbalance to occur which, in the case of C diff overgrowth, causes diarrhea and potential life threatening consequences – especially in the elderly. A probiotic made from a yeast, Saccharomyces boulardii, has been shown to bind up the C diff toxins, decrease inflammation and diarrhea and decrease relapse of this infection. This would be the probiotic to take if you go into the hospital. It is also a good choice to take while you are taking antibiotics. Antibiotics are used to eliminate bacteria and since S boulardii is a yeast, it will survive through an antibiotic exposure.

Many holistic providers recommend people take a probiotic supplement daily, as they do a multivitamin. I think this is a good idea. These beneficial bacteria will not really colonize in you but as they travel through, their effect is the same as if they were living there. Certainly I recommend taking probiotics when taking antibiotics: S boulardii during the antibiotic treatment and a Lactobacillus/Bifidobacter mixture for at least one month afterward. There are food sources of beneficial bacteria as well. These include the fermented food products such as: yogurt, buttermilk, kefir, tempeh, miso, sauerkraut, kim chi and brewer's yeast. This is where it all started, after all.

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Considerations in Taking Probiotic Supplements:

- ✱ Taking a reliable brand. They are not regulated as drugs. Many brands are questionable. To some extent, you get what you pay for, so don't cheap out.
- ✱ Look for a high colony count (cfu = colony forming units). It should be at least 15 billion and this potency should be what is guaranteed at the time of expiration not manufacture.
- ✱ Most are best kept refrigerated – out of heat and light which may degrade their usefulness.
- ✱ Many varieties are out there. I like the long studied Lactobacillus and the highly beneficial Bifidobacter species. Even with these, there are many strains with differing abilities. When buying a product, ask a reliable source for specific information.
- ✱ These products are not to be used in critical illnesses. Bacteria can travel through a leaky gut to various organs in critically ill persons and seriously worsen their condition.

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A group is starting February 24th. Visit our website or call the office for details.



Dr. Kate Thomsen has a holistic health practice in Pennington, NJ. She is board certified in Integrative/Holistic Medicine. For more information visit online at www.drkatethomsen.com. For information about appointments or our upcoming group programs, call the office at 609-818-9700.



"Every human being is the author of his own health or disease."

–GAUTAMA SIDDHARTA