

Microbe Mania

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During the second world war, when the Germany began its north African campaign, it encountered an enemy more crippling than any opposing army. That adversary appeared as a disease, which is commonly called dysentery and decimated the ranks. Doctors soon discovered the Bedouin cure for this nasty affliction which was a meal of fresh camel dung. Not sure what type of wine would be recommended for this one. Of course the medical staff wasn't exactly dung-ho about serving steaming plates of



camel do-do to already wretched soldiers. So they pulled out their trusty microscopes, isolated the little microbe that solved the fire hose bowel syndrome and grew it in a sterile culture to feed to the sick. This is only one example of the continuing research into the complex nature of the microbial world of the human intestine.

Scientists still are not sure how many species of bacterium live inside the colon. They do know that these single celled creatures likely outnumber the total number of cells that compose our physical body (that number is in the tens of trillions) as well as 60% of the fecal matter we pass.

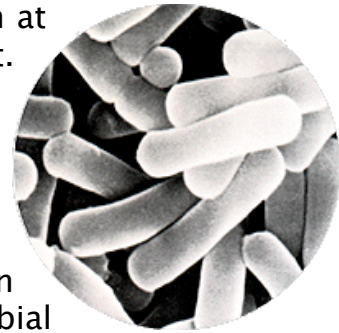
Intestinal bacteria fall into two general categories based on whether they prefer an oxygen environment (aerobic) or a non oxygen environment (anaerobic). Both kinds are essential for healthy digestion, assimilation, proper immune response and provide the necessary nutrients for proper brain function. Although there are at least 500 different types of bacteria in the gut, we can focus on the four main classes. The first is bacteriodes which are anaerobic and are inherited from our mother both through fetal development and feeding on our mother's milk. The bacteriodes like to munch on fiber, which they break down into useful fatty acids and recycle bile acids, which break down fats. Bacteriodes cannot be consumed because they are anaerobic and would all be destroyed before they found their home in the colon. Thus we must give them what they need to thrive in our diet, which is plenty of fiber.



The second class of intestinal flora is the e-coli bacterium. Yes I did say it right. The e-coli are likely the second largest colony in your intestine being responsible for the healthy fermentation of various food components into useful things like folic acid, co-enzyme 10 and three

important precursors to brain chemicals. If these little guys do not exist in healthy numbers, your mood, energy level and ability to concentrate will be adversely affected. E-coli can be supplemented by a product made in Germany called Multiflor.

Coming in at number three is the lactobacillus which is common in fermented milk products like yoghurt. The main function of these lactose lovers is to produce lactic acid which keeps the colon at the correct ph for all the other friendly's to coexist. Proper ph is essential for all bacteria to thrive and most can only exist in a narrow range between the acidic and the alkaline. This makes the lactobacillus group the police force in your intestine. If the ph is off, then lots of other nasties will move into your neighborhood and anyone who has had Bali belly can attest to the deleterious effects of this microbial malfeasance.



Finally we move to the bifidous bacteria which also aid in digestion by decomposing foods that could cause allergies and seem to be important in preventing colon cancer.

Each of these classes of bacterium could be a discussion in themselves. Often digestion problems may be a symptom of unbalanced intestinal flora which leads to questions about the diet. One option is to supplement healthy microbes in formulas called pro biotics. Many of the pro biotic supplements available are not very effective. The simplistic reason for this is that most do not contain enough live culture of the actual microbes we may need. Capsules of pro biotic lactobacilli and bifidi are often freeze dried to give them a shelf life, but his process often bursts the cell walls, making most of them useless except as digestible food. That is why these manufacturers advertize the counts in their labels, meaning that some do survive the process. This leads us to consider food that has been altered by bacteria, and are still active, as your best bet for supplementing your bacterial bedfellows. Such foods as fresh yoghurt, sauerkraut, kefir, rejuvelac, miso, and feta cheese can contain living bacteria. Eating a healthy diet which is balanced and does not contain excessive amounts of sugar (which causes premature fermentation in the upper gut) alcohol, or highly acid causing foods is essential. Too much fiber can also be a problem, producing higher than normal counts of e-coli in the colon. The use of antibiotics can be highly detrimental to healthy microbial colonies so supplementing is a really good idea after a course of this type of medicine. In this short article I can only provide a basic overview and the conditions for each person may vary but some simple suggestions are as follows. Try to find liquid pro biotic supplements that have been cultured at body temperature and reached a stasis point by achieving a ph level that neutralizes the bacterium but does not kill them. One such product now available is EM-pro which I have found at Down to Earth.

When you buy yoghurt, make sure it is unsweetened and then leave it out for one night, unopened. If the lid on your tub is bulging the next morning, then you know you have live culture in the yoghurt. In Ubud, places like Bali Buddha, Down to Earth, Soma and Alchemy are beginning to provide products like kombucha, fermented vegetables and coconut water which contain live culture.



A good idea is to test a small amount in your system to see how you react. Some experienced travelers consume a local fermented food when they arrive, to acclimatize their bodies to the microbial locals. Colonics are often helpful because they act like street cleaners in the cities, flushing out any stuff that your colon has not pushed out on its own. The internet has many good sites for doing some research. One is Drmyhill.com which formed the basis for this article. There is a whole other world going on in your intestines. Why not think of it as a garden you want to grow and treat it accordingly.