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GENERAL ACUPUNCTURE

What's Bugging You? Probiotics & Your Health

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An estimated 100 trillion microorganisms representing more than 500 different species inhabit every normal, healthy bowel. Gut-dwelling bacteria keep pathogens in check, aid digestion and nutrient absorption, and contribute to immune function.

The use of probiotic supplements is expanding dramatically as our understanding of how probiotics work grows and we identify which strains are effective for specific conditions. When practitioners and consumers behold the vast sea of probiotic choices, it is important that they understand how probiotics work, how they get into the gut and what factors to look for that hold the best chance for maximum efficacy.

Potential Health Benefits

There have been many studies on probiotics that indicate numerous health benefits including stimulation of mucosal immunity; reduction of inflammatory or allergic reactions; reduction of blood cholesterol; anti-colon cancer effects; and clinical reduction of atopic dermatitis, diarrhea and constipation.[1]

Some digestive disease specialists are recommending probiotics for gastrointestinal disorders that do not respond well to conventional medicine, such as irritable bowel syndrome and Crohn's disease. Because these disorders are so frustrating to treat, many people are utilizing probiotics as a method of treatment. Clinical studies have also shown that probiotic therapy may delay the development of allergies in children, and treat and prevent vaginal and urinary infections in women.[2]

Considering the impressive reputation probiotics is generating, it is not surprising that there continues to be considerable interest in their use as biotherapeutic agents. In addition, with consumers becoming increasingly savvy as to the link between diet and health, and the fact that most probiotic-containing foods and supplements are perceived as safe and natural, global demand is on the rise.[2]

Why We Need Probiotics

Unfortunately, a plethora of factors in modern living destroy gut bacteria. One of the biggest culprits is the indiscriminate use of antibiotics. While antibiotics can and should be used when necessary, the consequence of their regimen is the destruction of all bacteria in the body — good and bad alike. Most consumers do not make the necessary efforts to restore the good bacteria when the course of treatment ends.

Other medications such as antidepressants, benzodiazepines and sleeping pills also interfere with gut microflora. SSRIs divert serotonin from the digestive track to the brain, creating chemical imbalance

in the gut. Gut receptors are sedated by these chemicals, causing digestive disruption and constipation. The use of antibacterial soaps, chlorinated drinking water and sterilized foods (pasteurization) have also destroyed naturally occurring beneficial bacteria.

Vital for Women's Health

Beneficial bacteria colonize in the urinary tract and vagina, giving women a particular need for healthy digestive flora. The particular types of bacteria found there belong to the *Lactobacillus* species, as well as the strain *Bacillus coagulan*.

All of these bacteria are prolific producers of lactic acid, which helps to keep the pH level of the vagina and urinary tract slightly acidic. Yeast and other undesirable bacteria do not thrive in an acidic environment. If these bacterial environments become unbalanced, the unwanted bacteria begin to multiply, causing yeast infection, bacterial vaginosis or urinary tract infection.

Interestingly, when women suffer from one of these infections, the common remedy is antibiotics. They kill all of the bacteria present, including the desirable bacteria, and the stage is set for another potential bout of bacterial imbalance.

Listen to the Second Brain

There are two thin layers of more than 100 million nerve cells lining your gastrointestinal tract, from esophagus to rectum, called the enteric nervous system (ENS). It controls digestion from swallowing to the release of enzymes that break down food, to the control of blood flow that helps with nutrient absorption, to elimination, according to Jay Pasricha, MD, director of the Johns Hopkins Center for Neurogastroenterology:[3]

"The ENS communicates back and forth with our first brain — with profound results," explains Dr. Pasricha. "It may trigger big emotional shifts experienced by people coping with IBS and functional bowel problems. Researchers are finding evidence that irritation in the gastrointestinal system may send signals to the central nervous system that trigger mood changes."

This may be why people with certain gastrointestinal disorders also suffer from depression and anxiety. Treating the gut first (with probiotics) may be the best available route to improve all of the symptoms of digestive disorders, including psychological implications.

Successful Colonization Depends on Delivery

Because they are live organisms, unless they reach their destination in the lower bowel and thrive, probiotics have no discernible value to the host. Probiotics must adhere to the intestinal cells and be able to co-aggregate as part of the natural gut flora. This presents challenges in both pharmaceutical and commercial products, which must deliver adequate amounts of viable bacteria and provide protection from the harsh gastric environment.[4]

Studies have shown that at least 10-20 billion viable cells must reach the intestine for health benefits to be achieved. To include additional billions CFU does not increase efficacy; the number of billions CFU that survive obstacles such as stomach acid, bile, hydration / activation and other environmental issues are what make a probiotic supplement effective.

Pharmaceutical formulations for the delivery of probiotics currently include, among others, beads, capsules and tablets. Health care practitioners may want to carefully consider the method of delivery chosen by the brand of probiotic supplement they recommend to patients. If the formulation process includes heat, freezing / drying, or the final product contains inadequate protection against the digestion process, cell viability may be disrupted or lost.

Research supports optimum efficacy in formulations that incorporate both pharmaceutical and commercial food-based ingredients together to have an effective dosage form that ensures optimum survival of probiotic bacteria for successful delivery.[5]

There is no doubt that probiotics are a key to optimum health for humans of all ages. Their role in digestive and urogenital health, as well as providing effective treatment for gastrointestinal disorders and post-antibiotic regimens, are just a few of the benefits that have contributed to a rapidly expanding probiotic market. As chiropractic care includes a holistic approach to health maintenance, providers may want to include probiotics in their integrative protocols for a wide range of health conditions.

References

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SEPTEMBER 2017