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Nutrition Nuggets

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Probiotics – the Friendly Bacteria

Did you know that over 400 species of microorganisms call your digestive system home and the majority are not only beneficial, but are absolutely essential for good health? These helpful bacteria are called probiotics – which means "for life" – and they have numerous functions, the majority of which have yet to be identified. It is well established that they aid in digestion, promote bowel regularity, are involved in the synthesis of some vitamins, and are an integral part of immune response.

Beneficial Bacteria Improve Our Nutrition

- The acid environment they create facilitates the absorption of minerals, particularly calcium, iron, and magnesium.
- They are able to synthesize vitamins, particularly the B vitamins and a form of vitamin K.
- Probiotic organisms create enzymes which aid digestion such as lactase by lactic acid bacteria, necessary for the digestion of lactose or milk sugar.

Beneficial bacteria enhance immune response by stimulating the production and activity of immune cells located in the mucosa lining our digestive tract, respiratory system, and urinary tract. Roughly 70% of the body's immune capacity resides in these tissues which act as a front-line defense against a wide variety of invaders.

Probiotics Protect Our Health

- They help prevent vaginal yeast infections as well as protect against urinary and respiratory tract infections.
- These good bugs are protective against harmful intestinal organisms by competing for growth and binding sites.
- Lactic acid bacteria have repeatedly demonstrated efficacy in the treatment and prevention of acute diarrhea in both children and adults.
- A healthy gut microflora reduces allergic sensitivity to foods and environmental allergens by strengthening immune response.

In addition to its important function of attacking harmful organisms, the immune system must not react against nutrients and body tissues in order for our health to remain stable. It is now known that microbial stimulation of the immune cells of our intestines decreases its susceptibility for excessive reactivity and this reduces risk for auto-immune disorders.

Influences on Our Gut Flora

Our diet and lifestyle have direct effects on the amounts of beneficial and harmful bacteria in our digestive tract. Intestinal microflora can be negatively affected by stress, medications, poor diet, disease, aging, and a variety of other factors.

Probiotic bacteria require food to thrive and fiber is their preferred diet. Fiber is the indigestible component of plant cell walls that lends form and structure to stems, leaves, etc. Many types of fiber exist and are primarily found in fruits, vegetables, whole grains, beans, seeds, and nuts.

When probiotic organisms digest fiber, they produce acids that keep the pH of our gastrointestinal tract low (acidic). Beneficial bacteria thrive in an acid environment whereas harmful bacteria thrive under alkaline conditions.

People who eat a lot of refined and processed foods with very little roughage sometimes suffer from an under population of beneficial bacteria along with an overgrowth of harmful organisms. Subsequently, health problems can ensue from the negative balance of microflora.

Effect of Antibiotics

Beneficial bacteria produce antimicrobial compounds which inhibit the growth of harmful organisms and this helps to prevent diarrhea, infections, and other illnesses. During antibiotic therapy, we inadvertently kill off the good microbes in our body along with those that cause illness.

Both during and after antibiotic therapy, it's wise to include probiotics in the diet to help keep the intestinal flora in balance and reduce antibiotic side effects like diarrhea. Additionally, the elimination of protective bacteria typically results in a weakening of immune response. This can lead to problems such as allergies which frequently trigger asthma.

Increasing the Population

It's not difficult to re-colonize the gastrointestinal tract or increase the numbers of beneficial bacteria with:
1) Dietary fiber
2) Fermented foods like yogurt and fresh sauerkraut
3) Probiotic supplements

Health food outlets and drug stores carry various probiotic supplements and generally, this only needs to be taken for a few weeks. Not all the beneficial organisms we consume will colonize in our digestive tract, but if we provide them with a good food supply, we increase their survival rates.

In addition to whole plant foods, there are many commercial fiber supplements available on the market, but consuming natural foods has major advantages. First, you get several different types of fiber in any one food source as opposed to generally one or two in a supplement, plus you get all the protective nutrients so abundantly found in whole foods.

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