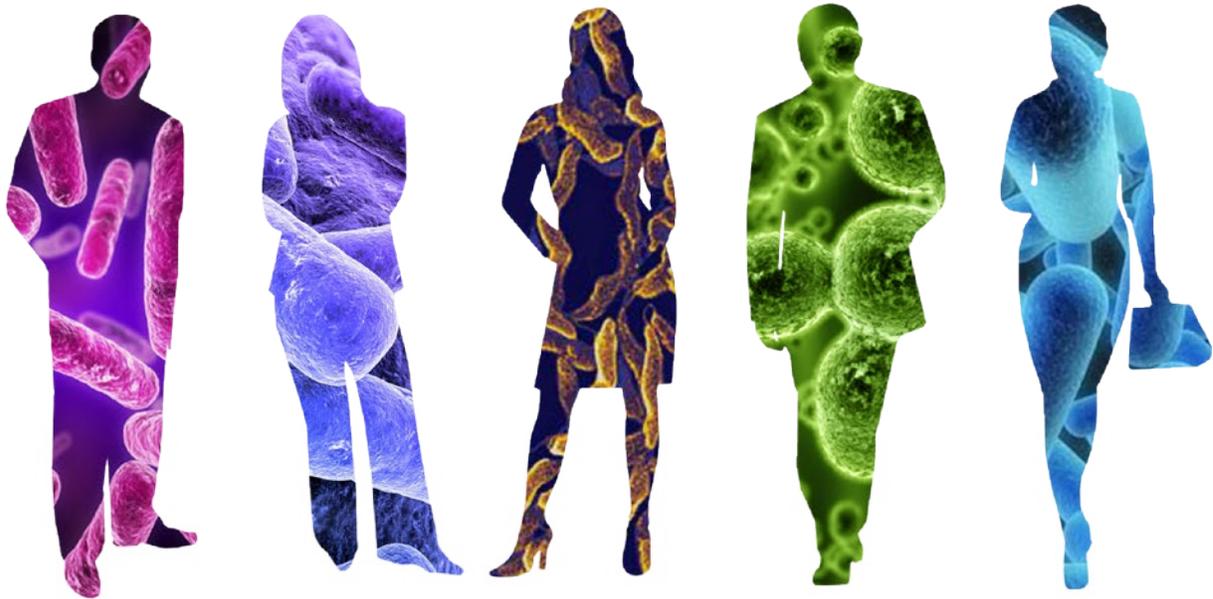


MICROBIOME

Nutritional Supplements

KIRKMAN[®]

The Importance of the Microbiome



Who would have guessed that having a good balance of trillions of bacteria and fungi in your body could be a good thing?

The Microbiome – It Could Be an Important Key to Elevating Health

These microorganisms make up a complex community of commensal, symbiotic and pathogenic living organisms that share space in the human body known as the microbiota. They possess their own genomes, that make up the body's "microbiome", a relatively new area of exploration for scientists that could hold the key to elevating health on a global scale.

Researchers interest in the microbiome was, in large part, prompted by results of the Human Genome Project, a 13-year, \$2.7 trillion initiative to map the human genome. During the long course of this international project, researchers became more aware that humans are not just a product of their genes but our genetic material may also be importantly impacted by the genomes of our bacterial inhabitants. In 2008, when the Human Genome Project was completed, the National Institutes of Health (NIH) launched the Human Microbiome Project with the goal of identifying and characterizing the microorganisms that are found in association with both healthy and unhealthy humans.

The Gut is the Focus

Much of the current research regarding the "microbiome" is centered on the gut, where the vast majority of microbes reside. The gut is an important source of tributaries to other parts of the body that control our health, like our immune system and our central nervous system. When the gut is healthy with beneficial microbiota, the immune system is strengthened so that it can fight off pathogenic microorganisms before they develop into illness or serious health conditions. Scientists also know that chemicals produced by gut microbiota communicate with the central nervous system and may affect cognitive functions, but exactly to what extent is still unclear to researchers.

What most scientists agree on is that the proper microbial symbiosis (balance of good and bad bacteria) is required for good health. Avoiding influences that can upset this balance and infusing influences that strengthen beneficial bacteria is key to optimal health.

What are these influences that can wreck havoc on your microbiome? The list of potential contributors is long but more research is needed to understand exactly how the microbiome is affected. Age and disease can degrade the presence of good bacteria in the gut as can

environmental toxins that are ubiquitous in the air we breathe, the water we drink and the food we eat. Chemicals used to process food and enhance fruits and some medicines, particularly antibiotics that are formulated specifically to kill certain bad bacteria also kill good bacteria and can cause illness.

A Common Sense Approach to Supporting the Microbiome

A common sense approach to microbiota health is a good default position to take while scientists rush to better define the microbiome. Remove toxins, add good bacteria and provide the body with the nutrients required for overall good health. By taking targeted and effective nutritional supplements, you can make up for the nutrients that may be missing from your diet to accomplish these purposes.

Kirkman® recommends a three product protocol to support microbiome health. All products in this protocol are casein and gluten free.

#4538-120 - Microbiome Toxicity Control



This product is a hypoallergenic blend of natural ingredients known to support the body's detoxification pathways. These natural pathways are mechanisms for removing environmental contaminants, which can invade the body from toxins in the air, water, food or other environmental sources.

Microbiome Toxicity Control is hypoallergenic, free of casein, gluten and common allergens

and contains the following:

- vitamin C, vitamin E and selenium which enhance the body's detoxification pathways;
- taurine, a sulfur based amino acid with detoxifying properties;
- curcumin (turmeric), a spice with clinical detoxification studies;
- milk thistle, a flowering plant which detoxifies the body's organs;
- glutathione, the body's most powerful

immune system supporter;

- N-acetyl cysteine, an ingredient known for strong antioxidant activity;
- calcium D-glucarate, which acts in a similar manner as natural fruits and vegetables, also known to support detoxification.

#4465-060 - Microbiome Probiotic 8-Strain Blend

Though a thorough genetic evaluation is needed to fully analyze the current state of a person's microbiome, adding beneficial bacteria by taking a high strength probiotic is a strategic way of getting a good "head start" toward a healthy microbiome. The two most important groups of beneficial bacteria residing in the intestines are the Lactobacillus and Bifidobacterium species.

Lactobacillus reside mainly in the small intestine while Bifidobacterium reside to some degree in the small intestine but are more predominant in the large intestine. Bifidobacterium strains are also of great importance to babies and nursing mothers.

Both Lactobacillus strains and Bifidobacterium strains have been clinically shown to help reduce the growth of pathogenic bacteria, ensure proper nutrient absorption, support healthy digestive





function and maintain the integrity of the intestinal wall. Kirkman's microbiome eight strain probiotic consists of 60 billion colony forming units of several different strains of these beneficial organisms including:

- Lactobacillus acidophilus
- Lactobacillus rhamnosus
- Lactobacillus plantarum
- Bifidobacterium longum
- Bifidobacterium bifidum
- Bifidobacterium lactis
- Bifidobacterium breve

This probiotic is a broad spectrum formulation that will provide a good overall foundation for a healthy microbiome. Eating healthy foods, avoiding processing chemicals from foods and avoiding environmental toxins can also play a positive role toward a healthy microbiome.

#4234-120 - Microbiome Broad Spectrum Enzyme w/DPP-IV

Microbiome Broad Spectrum Enzyme with DPP-IV is formulated to support digestive activity for a full range of foods.

A unique blend of 17 pure, plant-based enzymes that are recognized as essential for the effective digestion of all food groups, including proteins, carbohydrates, fats, sugars and fiber under a wide range of pH conditions are included in this formulation. The addition of the dipeptidyl peptidase-IV (DPP-IV) enzyme analog supports the ability of the body to degrade peptides formed from exposure to casein and gluten.



In situations where undigested protein fragments are left in the gut, a healthy microbiome can become unhealthy because of the disrupted messaging that has resulted. Individuals particularly sensitive to these undigested protein fragments can experience very negative responses which often manifest themselves as pain or negative behavior. DPP-IV can support the digestion of these undigested protein fragments and help prevent these undesirable responses.

Microbiome Broad Spectrum Enzyme with DPP-IV provides a comprehensive "foundation" of supplemental enzymes to support optimal digestion. Each enzyme works independently, but also in a complementary role to optimally impact digestion of all dietary components.

This proprietary product provides a combination of proteases, amylases, lipases, disaccharides and cellulases that replace the enzymes lost in cooking, thus lessening the burden on the body's digestive tract so that it can function optimally, while also supporting optimal nutrient absorption.

Why Kirkman's Nutritional Supplements?

Physicians often ask us how Kirkman's supplements compare with other brands. We say with confidence that they are superior! Kirkman® is the recognized brand leader of nutraceuticals for those with special dietary requirements, sensitivities and special needs. No other nutritional supplement company tests every ingredient in every product it manufactures* for more than 950 environmental contaminants. This is vitally important for individuals with special sensitivities. And experience counts when servicing health needs of sensitive individuals. Kirkman® has been serving our customers for more than 65 years with effective formulations that meet our customers' special needs.

*except lotions, creams and oils



The Purest Nutritional Supplements in the World!

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