

The Role of Beneficial Microorganisms in The Body

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A diverse range of microorganisms can be found in various regions of the body, such as the digestive tract, respiratory system, skin, and other areas. These microorganisms not only lack pathogenic characteristics but also offer advantageous effects that aid in disease prevention. Microbes exert their beneficial influence through a multitude of mechanisms, including food digestion, enhancement of gut functionality, production of nutrients, detoxification processes, stimulation of cellular differentiation, prevention of pathogen colonization, modulation of the immune system, and impact on communication between the gut and other organs. The intestinal microbes, which form the largest microbial community in the body, play a significant role in food fermentation, production of short-chain fatty acids and vitamins, generation of bioactive substances, and protection against pathogens. Additionally, they engage in intricate interactions with the immune system in the gut, which is considered the body's largest immune organ. These interactions play a crucial role in the bidirectional communication between the intestine and other organs, including the brain, liver, lung, and kidney. The purpose of this article is to provide an overview of the positive aspects of microorganisms in the body by examining the resident microorganisms in different body parts and highlighting their benefits for the host.

Keywords: Microbiota, Gut, Brain, Mouth, Lung, Butyrate, Acetate, Propionate, Cancer, Pathogen

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