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Synergistic Role of Probiotic Based Diet in Managing IBD



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Inflammatory bowel disease (IBD) is characterized by repetitive episodes of inflammation of the gastrointestinal tract caused by an abnormal immune response to gut microflora. Gut flora and diet act as vital role for cause and management of Inflammatory bowel disease as the gut microbiota variety and richness is determined by food we eat on daily basis. High fiber diet and fermented products increase the amount of beneficial bacteria Lactobacillus and Bifidobacterium in the gut while high fats, sugar or processed food increase the amount of pathogenic bacteria and they are responsible for gut inflammation. In Pakistan rising cases of inflammatory bowel disease are due to unhealthy diets, sedentary lifestyles, stress, and misuse of widespread use of antibiotics for self-medication disrupts gut balance, leading to adverse side effects, increased costs, and complications in managing disease.

An imbalance between the types of organism present in a body's natural microflora, especially that of the gut, contribute to a range of conditions of ill health or dysbiosis. Many cases of inflammatory bowel disease in Pakistan go undiagnosed, which may be linked to the rising number of colorectal cancer. Studies show that ulcerative colitis is more common among South Asians, including Pakistanis, than in Europeans. It is expected that in 2030 the prevalence of IBD, will be significantly increasing with some of the highest rates of increase seen within pediatrics and the elderly populations due to consumption of junk foods. IBD growing issue demands sustainable and targeted solutions to ease the healthcare burden and improve quality of life. In current years, probiotic-based therapies have emerged as promising adjuncts in IBD management. Probiotics are live beneficial microorganisms that work by restoring microbial balance, enhancing mucosal barrier function, and modulating the immune response. Several clinical and preclinical studies have demonstrated that certain probiotic strains can reduce intestinal inflammation, alleviate symptoms, and even promote mucosal healing in IBD patients. Human health and disease are significantly influenced by the gut microbiome. Human gastrointestinal tract is home to trillions of microorganisms that form a dynamic and essential ecosystem. In healthy individuals, these microbes maintain immune homeostasis, protect the mucosal barrier, and inhibit pathogenic organisms. In IBD, however, this balance is disrupted a phenomenon known as gut dysbiosis. This microbial imbalance leads to an overactive immune response and sustained inflammation.

Probiotics have ability to alter gut composition and rejuvenate the growth of useful gut microbes, therefore there is a need to develop probiotic based products improve the gut-microbiota. This method can be regarded as a safe alternative for an over-reliance on antibiotics and may strengthens immunity, may cultivate a healthy gut flora, and will help in fighting infections. Mutually dependent approaches for managing IBD are probiotic and diet. As diet While diet shapes gut environment while restore microbial balance by probiotics and together they deal a harmless, natural, and holistic attitude to regulate inflammation and recover patient health state in low resources.

