Journal of Gastrointestinal & Digestive System

Ho M, J Gastrointest Dig Syst 2024, 14:06

Commentary Open Access

The Effects of Probiotics on Digestive Function and Immunity

Mandy Ho*

Department of Gastroenterology, Kyungpook National University, Korea

Description

The digestive system is a remarkable network of organs and processes that work in harmony to break down food, absorb nutrients, and eliminate waste. It is essential for human survival and plays a pivotal role in overall health and well-being. This article explores the anatomy, functions, processes, and health aspects of the digestive system. The GI tract is a continuous tube that begins at the mouth and ends at the anus. The entry point for food, where digestion begins with chewing and saliva. A muscular tube that transports food to the stomach. A sac-like organ that mixes food with digestive juices. The primary site for nutrient absorption. Absorbs water and forms waste. The process of consuming food and beverages. It begins in the mouth, where chewing and saliva break down food into manageable pieces. Food is moved through the digestive tract by peristalsis, a series of wave-like muscle contractions. Physical breakdown of food into smaller pieces, starting in the mouth and continuing in the stomach. Enzymes and digestive juices chemically break down food molecules into simpler forms. Nutrients are absorbed into the bloodstream or lymph through the walls of the small intestine. Indigestible substances and waste products are excreted as faces. Digestion begins in the mouth with mastication (chewing) and the action of salivary amylase, which starts breaking down starches into sugars. The oesophagus transports food to the stomach, where gastric juices and enzymes like pepsin digest proteins. The duodenum receives bile and pancreatic enzymes to further digest food. The jejunum and ileum are the primary sites of nutrient absorption. Water and electrolytes are absorbed here, and gut bacteria help ferment undigested carbohydrates. Waste is stored in the rectum and excreted through the anus. Digestive health is crucial for overall well-being, but several conditions can disrupt it. Chronic acid reflux that irritates the oesophagus. A functional disorder causing abdominal pain, bloating, and changes in bowel habits. Includes Crohn's disease and ulcerative colitis, characterized by chronic inflammation of the GI tract. Hardened deposits in the gallbladder that can block bile flow. An autoimmune disorder triggered by gluten ingestion, damaging the small intestine. Common issues that can result from diet, medication, or underlying conditions. A balanced diet is vital for a healthy digestive system. Here's how various nutrients contribute. Soluble fiber (found in oats, beans, and fruits) helps regulate blood sugar and cholesterol. Insoluble fibre (found in whole grains and vegetables) promotes regular bowel movements. Probiotics (in yogurt and fermented foods) support gut bacteria. Prebiotics (in garlic, onions, and bananas) nourish probiotics. Water aids digestion and prevents constipation by softening stool. Fats like omega-3s reduce inflammation and support nutrient absorption. Minimizing refined sugars and fats prevents digestive issues like bloating and indigestion. Physical activity promotes peristalsis, improving digestion. Chronic stress can disrupt the gut-brain axis, leading to digestive issues. Poor sleep quality is linked to gastrointestinal disorders. Eating slowly and chewing thoroughly aids digestion. Regular medical evaluations can help detect and manage digestive issues early. Emerging research highlights the role of gut bacteria in digestion, immunity, and even mental health. Advances in nutrigenomics are paving the way for tailored dietary recommendations based on genetic profiles.

Acknowledgement

None.

Conflict of Interest

The authors declare that they have no competing interests.

***Corresponding author:** Mandy Ho, Department of Gastroenterology, Kyungpook National University, Korea, E-mail: mandy_ho@gmail.com

Citation: Ho M (2024) The Effects of Probiotics on Digestive Function and Immunity. J Gastrointest Dig Syst 14:843.

Received: 02-December-2024, Manuscript No. JGDS-25-156765; **Editor assigned:** 04-December-2024, PreQC No. JGDS-25-156765 (PQ); **Reviewed:** 18-December-2024, QC No. JGDS-25-156765; **Revised:** 23-December-2024, Manuscript No. JGDS-25-156765 (R); **Published**: 30-December-2024, DOI: 10.4172/2161-069X.1000843

Copyright: © 2024 Ho M. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.