



THE ROLE OF INTESTINAL MICROFLORA IN THE HUMAN BODY:
DISRUPTIONS AND THEIR IMPACT ON HEALTH

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Abstract: *The intestinal microflora represents a vast community of microorganisms, including bacteria, fungi, viruses, and archaea. These microorganisms play a crucial role in maintaining human health, affecting digestion, metabolism, the immune system, and even mental health. In recent decades, research on the gut microbiota has gained significant importance as scientists increasingly realize how critically important the balance of these microorganisms is for the normal functioning of the body. Disruptions in the composition of the microflora, such as dysbiosis, can lead to a range of diseases, from digestive disorders to serious metabolic and mental health conditions.*

Keywords: *intestinal microflora, microorganisms, including bacteria, fungi, viruses, mental health, archaea.*

Disruption of the intestinal microbiota balance, known as dysbiosis, can occur for a number of reasons, including poor diet, stress, the use of antibiotics and other medications, infections, and diseases. Dysbiosis is accompanied by a decrease in the number of beneficial bacteria and an increase in pathogenic microorganisms, which disrupt normal gut functions and can lead to various diseases.

Digestive disorders. One of the most obvious consequences of dysbiosis is impaired digestion. This can manifest as stomach pain, constipation, diarrhea, bloating, heartburn, and irritable bowel syndrome (IBS). Disruption of the microbiota balance can slow down food digestion, worsen nutrient absorption, and lead to inflammation of the intestinal lining.

Decreased immune activity. Dysbiosis weakens the immune system because the beneficial bacteria that play a role in protecting the body are in the minority. This increases susceptibility to infections and may contribute to the development of allergies and autoimmune diseases.

Metabolic disorders. Dysbiosis can become a risk factor for the development of obesity, type 2 diabetes, cardiovascular diseases, and other metabolic disorders. Some bacterial strains affect the absorption of carbohydrates, fats, and proteins, which can lead to excessive fat accumulation or impaired glucose metabolism in the body.

Mental health disorders. Changes in the composition of the gut microbiota can impact mental health. Dysbiosis has been linked to the development of depression, anxiety, and even cognitive decline. The mechanism of interaction between the microbiota and the brain



occurs through the nervous system, hormones, and immune molecules, creating a connection between the gut and the brain.

Inflammatory diseases. Dysbiosis can lead to chronic inflammation, such as inflammatory bowel diseases, including Crohn's disease and ulcerative colitis. When the microbiota balance is disrupted, inflammation of the intestinal wall increases, contributing to the development of chronic diseases.

The intestinal microflora is an integral part of overall human health. Disruption of the microbiota balance can lead to a range of diseases, including digestive disorders, immune disorders, metabolic diseases, and mental health conditions. Maintaining a healthy balance of the microbiota through proper nutrition, moderate use of antibiotics, probiotic and prebiotic use, and stress management plays a crucial role in the prevention and treatment of various diseases.

REFERENCES:

1. Baryshnikova N.V., Orlova N.A., Belousova L.N. The role of probiotics in the complex therapy of inflammatory bowel diseases. *Gastroenterology. Supplement to the Consilium Medicum Journal*. 2014;1:33-37.
2. Kornenko E.A. The role of intestinal microbiota and probiotics in inflammatory bowel diseases. *Gastroenterology of St. Petersburg*. 2015;1-2:6-9.
3. Osipenko M.F., Skalinskaya M.I., Razmeritsa A.A. Probiotics and inflammatory bowel diseases. *Gastroenterology. Supplement to the Consilium Medicum Journal*. 2013;2:28-31.
4. Pavlenko V.V., Kataganova G.A., Aleksandrova S.B., Korablina N.V., Pavlenko A.F. Probiotics and inflammatory bowel diseases: Assessment of the efficacy of the probiotic complex "Bactistatin" in the therapy of ulcerative colitis patients. *Modern Problems of Science and Education*. 2015;5:75.