

Infant Gastrointestinal the State as a Disease Motive: Programming Considerations

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Abstract

The gut microbiota consists of trillions of bacteria, viruses, and fungi that form a perfect symbiosis with their host. They perform immunological, metabolic, and endocrine functions in the body. Microfora is formed in the uterus. Dysbiosis is a microbiome disorder characterized by an imbalance in the composition of the microbiota and alterations in its function and metabolic activity. Causes of intestinal dysbiosis include maternal nutritional deficiencies, hormonal

Therapeutic directions of treatment of Intestinal Dysbiosis

Development of the fetal gut microbiota begins during life in the womb, and a microbial imbalance in the maternal gastrointestinal tract may contribute to the fetal gut microbiota. The composition of the gut microbiota determines the appropriate type of immune response and the strength of intercellular connections in the gut epithelium. One of the basic types of intercellular junctions in the gut is tight junctions (TJs). TJs are multipotent complexes of integral membrane proteins (claudins and occluding) and cytoplasmic membrane proteins. They are key regulators of intestinal permeability and maintain cell polarity by restricting protein movement across the cell membrane. Impaired intestinal colonization can compromise the intestinal barrier and loosen intercellular junctions by affecting the expression and function of TJ-forming proteins. There is evidence that disruption of the intestinal epithelial barrier increases the movement of bacteria and bacteria-associated products across the epithelium.

Conclusions

The gut microbiota of newborns is highly diverse. Therefore, its composition influences delivery methods, nutrition, maternal antibiotic and probiotic use, environment, maternal socioeconomic status, geographic location, infection with pathogenic microorganisms, and