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Is there a relationship between intestinal microbiota, dietary compounds, and obesity?

Joanna Kałużna-Czaplińska, Paulina Gątarek, Max Stanley Chartrand, Maryam Dadar, Geir Bjørklund

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Abstract

Background

The links between gut microbiota and obesity are complex and multidirectional. A large number of studies have demonstrated the provoking effect of microbiota as the main environmental factor on the metabolic, and physiology status of its human host, as well as energy harvest. Dietary compounds are a source of energy and metabolites for gut bacteria. Dietary compounds also change the composition of gut microbiota and can influence the production of their metabolites. Impact of intestinal microbiota composition and metabolic interaction, including interaction with dietary components are the key issue in human health and obesity.

Scope and Approach

Gut microecology could help fulfill the gap between obesity and energy intake throughout altering the processing of nutrients and energy storage in the body, revealing diet-related and age-related changes in the human intestinal microbiome and their consequences. Therefore, it is of critical importance in the prevention of obesity to understand how different types of food can influence gut mucosal integrity.

Key Findings and Conclusions

The association between gut microbiota and host metabolism could help explain promising therapeutic approaches throughout gut microbiota regulation in preventing and treating obesity.