

Keywords: *Diabetes mellitus, Gut microbiota, Metabolic health, Composition and diversity*

Introduction

The gut microbiota is a complex community of microorganisms that reside in the human gut. It plays a crucial role in maintaining metabolic health and is associated with various metabolic disorders, including diabetes mellitus. The composition and diversity of the gut microbiota are influenced by factors such as diet, lifestyle, and genetics. This study aims to explore the relationship between gut microbiota composition and metabolic health in individuals with diabetes mellitus.

Methodology

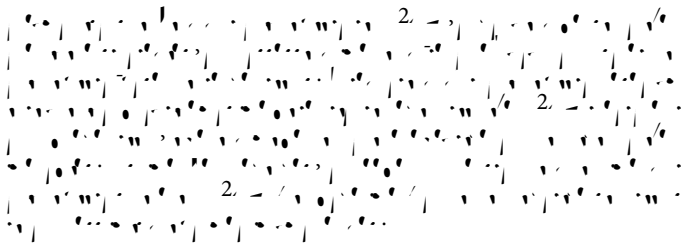
Gut microbiota and metabolic health

1. Composition and diversity

The composition and diversity of the gut microbiota were analyzed using 16S rDNA sequencing. The samples were collected from the stool of individuals with diabetes mellitus and compared to a control group. The data were analyzed using bioinformatics tools to identify the relative abundance of different bacterial species and the overall diversity of the microbiota.

2. Gut microbiota composition and metabolic health

The relationship between gut microbiota composition and metabolic health was investigated by comparing the metabolic profiles of individuals with different gut microbiota compositions. The metabolic profiles were determined using various biochemical assays, including measurements of glucose, insulin, and lipid levels.



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