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'You are what you eat': exploring relationships between nutrients and gut function

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Title: 'You are what you eat': exploring relationships between nutrients and gut function

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We consume a variety of nutrients each day, providing our bodies with the energy required to survive. But how does our body respond to different nutrients? That is where my research lies. Bacterial inhabitants of the gut contribute to gastrointestinal function by affecting the way in which nutrients are digested and utilized. For instance, following consumption of complex carbohydrates such as barley, oats, and beans, our resident gut bacteria produce short-chain fatty acids (SCFAs). Interestingly, a higher intake of fermentable fibers can alleviate symptoms of metabolic diseases, such as, type 2 diabetes and obesity, with a potential mechanism being attributed to the increased production of SCFAs. I will investigate the signaling pathways that SCFAs activate in the gut to better understand how gut bacteria can influence gastrointestinal function. Our research will be important in developing novel therapeutic strategies for the prevention and management of metabolic diseases.