

Special Issue

Dietary Regulation of Glucose and Lipid Metabolism in Diabetes

Message from the Guest Editors

Diabetes mellitus is a growing global health concern characterized by impaired glucose and lipid homeostasis. Diet plays a central role in both the development and management of diabetes, influencing insulin sensitivity, hepatic glucose production, lipid storage, and systemic inflammation. This Special Issue focuses on the intricate relationship between dietary components and the regulation of glucose and lipid metabolism in the context of diabetes. It highlights recent advances in understanding how macronutrient composition, micronutrient availability, phytochemicals, and dietary patterns affect metabolic health. Articles in this issue explore the molecular mechanisms by which diet modulates insulin signaling pathways, hepatic lipid synthesis, gut microbiota, and adipose tissue function. Special attention is given to emerging dietary strategies, including intermittent fasting, ketogenic diets, and plant-based interventions, and their potential to restore metabolic balance and improve diabetic outcomes. By integrating findings from basic, translational, and clinical studies, we aim to provide new insights into personalized nutrition approaches for diabetes prevention and therapy.

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About the Journal

Message from the Editorial Board

Nutrients is an on-line open access journal that was first published in 2009. *Nutrients* adheres to rigorous peer-review and editorial processes and publishes only high quality manuscripts that address important issues related to the impacts of nutrients on human health. The Impact Factor of *Nutrients* has risen rapidly since its establishment and it is now ranked in the first quartile of journals publishing in the field of nutrition and dietetics research.

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