

Special Issue

The Ketogenic Diet: Effects on Human Metabolism and Brain Health

Message from the Guest Editors

The ketogenic diet (KD), originally developed for refractory epilepsy, has gained recognition as a potent metabolic intervention with broad health implications.

This Special Issue examines the growing scientific evidence on KD, focusing on its metabolic and neurological benefits. By shifting the body's primary energy source from glucose to ketones, KD alters energy metabolism, enhances insulin sensitivity, improves lipid regulation, and reduces inflammation. Beyond metabolic effects, KD shows promise in neurological conditions such as epilepsy, Alzheimer's disease, Parkinson's disease, and mood disorders. Key molecular players, including orexin (involved in sleep-wake cycles and energy balance) and adiponectin (linked to insulin sensitivity and anti-inflammatory effects), are central to KD's systemic and neuroprotective actions.

This issue compiles cutting-edge research and clinical insights to explore KD's mechanisms, therapeutic potential, and limitations. By integrating metabolic and neurobiological perspectives, these studies advance our understanding of how dietary strategies can support brain health and overall homeostasis.

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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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