

Special Issue

Nutrition-Based Strategies for Brain and Eye Aging: Mechanisms, Prevention, and Clinical Implications

Message from the Guest Editors

Nutrition plays a key role in maintaining brain and eye health and influences cognitive and visual function across the lifespan. The brain and retina have high metabolic demands and rely on a constant supply of oxygen and glucose. Their intense activity makes them vulnerable to oxidative stress, metabolic imbalance, and ischemic injury. Impaired oxygen and glucose delivery increases oxidative damage, mitochondrial dysfunction, and inflammation, which accelerates structural and functional decline. Nutrients and bioactive compounds regulate oxidative balance, inflammatory pathways, mitochondrial activity, lipid metabolism, and cell survival. These mechanisms contribute to disorders such as Alzheimer's disease, Parkinson's disease, age related macular degeneration, diabetic retinopathy, glaucoma, and cerebrovascular disease. Growing evidence shows that nutrition based interventions delay disease onset, slow progression, and improve outcomes. This Special Issue focuses on mechanistic insights and preventive and therapeutic strategies that examine the role of nutrition in brain and eye health and degeneration.

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About the Journal

Message from the Editor-in-Chief

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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