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## The Impact of Nutrition on Cognitive Function: Its Role in Aging and Neurodegenerative Diseases

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### Message from the Guest Editor

Dear colleagues,

The relationship between nutrition and cognitive health has been a significant research focus. During adulthood or early developmental stages, nutrition plays a pivotal role in shaping cognitive abilities and resilience. Overnutrition, often manifesting as obesity, has been linked to a heightened risk of developing neurodegenerative disorders such as Alzheimer's. Excess intake of saturated fats and sugars, commonly seen in Western diets, has been associated with poor cognitive performance and faster cognitive decline. Conversely, malnutrition during critical developmental windows can lead to long-lasting cognitive impairments. Prenatal and early postnatal nutrition are particularly vital, as deficiencies or excesses during these periods can influence neural development, synaptic plasticity and brain structure, thereby predisposing individuals to cognitive deficits and an increased risk of neurodegenerative diseases later in life. In summary, nutrition has a profound impact on cognitive health, and imbalances, either as deficiencies or excesses, can expedite cognitive aging and elevate the risk of neurodegenerative conditions.



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