



## Choline: An Essential Nutrient for Human Health

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### Message from the Guest Editor

Choline is an essential nutrient classified within the vitamin B complex, which regulates several functions relevant for maintaining human health from early life to aging. Dietary choline availability regulates choline levels, which are relevant for early brain development and brain plasticity throughout life. Thus, choline dysregulation has been associated with lower cognitive performance; neurodegenerative diseases, such as Alzheimer's, Parkinson's, and Huntington's diseases; mental disorders; and aging cognitive decline. Choline-related functions seem to be also dysregulated in other clinical conditions, such as cancer, obesity, and immune system and cardiovascular diseases. Therefore, nutritional intervention is emerging as a promising treatment, either by regulating choline levels through maternal and adult choline supplementation or by acting on the bacterial metabolism of dietary choline throughout gut microbiota modifications. Being such a wide field, more research is required for understanding the role of choline in human health, action mechanisms, interactions with other micronutrients, and potential value for disease management.





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