

Special Issue

Dietary Nitrate and Metabolic Health

Message from the Guest Editor

Nitric oxide (NO) is endogenously generated from L-arginine and oxygen by NO synthases. In addition, inorganic nitrate from dietary sources generates NO and nitrosating agents, such as the S-nitroso compound, in the acidic stomach, thus providing local and systemic NO bioactivities. Recent evidence suggests that local and systemic NO bioavailability is associated with health maintenance through the nitrate–nitrite–NO pathway, and it is affected by many habitual and physiological factors, including dietary habits, oral commensal bacteria, gastric acidity, intestinal bacterial flora, and thiol-containing food and drugs. Therefore, it is important to discuss the association between diet, including dietary nitrate, and metabolic health from biological and physiological standpoints. Although dietary nitrate provides beneficial effects, it is a source of carcinogenic N-nitroso compounds under certain physiological conditions. Thus, this Special Issue also welcomes studies dealing with controversial findings. I look forward to fruitful discussions regarding dietary nitrate and metabolic health in this Special Issue.

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