Inflammation-mediated obesity and insulin resistance as targets for nutraceuticals.

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Abstract
Obesity-induced inflammation plays an important role in the development of insulin resistance, type 2 diabetes (T2D), and metabolic dysfunctions. Chronic activation of proinflammatory pathways within insulin target cells can lead to obesity-related insulin resistance. The inflammatory mediators consist of immune cells, cytokines, adipokines, and inflammatory signaling molecules. Targeting obesity-associated inflammation has been shown to protect experimental animals and human subjects from obesity-induced insulin resistance. Modulation of the inflammatory responses associated with obesity may help prevent or improve obesity-induced metabolic dysfunctions. In this review, we introduce the beneficial effects of nutraceuticals for targeting inflammation in the treatment of obesity-induced insulin resistance and metabolic dysfunctions.


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