

# Genistein: A boon for mitigating ischemic stroke

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In last decades, diet and dietary components have been regarded as important strategies to prevent the development or mitigate numerous chronic diseases, including inflammation, cardiovascular pathologies, cancer, etc. One of the most common dietary components of Asian population is soy. A plethora of research shows the promising effect of soy soy-based foodstuffs and genistein, which is one of the predominant isoflavone compounds, in the prevention and mitigation of stroke. Growing evidence shows that genistein, which is a selective estrogen receptor modulator, mitigates ischemic stroke-induced damages through the modification of oxidative stress and molecular pathways. The promising pharmacological role of genistein is attributed to its ability to suppress nuclear factor (NF)-kappa B and Akt signaling pathway, direct antioxidant action, and targeting estrogen and androgen-mediated molecular pathways which help to mitigate stroke damages and prolong cell survival. In this work, we systematically review the current reports on the therapeutic role of genistein against ischemic stroke and its molecular mechanism of actions. © 2015, Bentham Science Publishers.

Genistein

Isoflavone

Oxidative stress

Signal transduction

genistein

isoflavone

genistein

protein kinase inhibitor

Article

atherosclerosis

blood vessel occlusion

brain ischemia

chemical structure

disease severity

drug bioavailability

human

hypertension

oxidative stress

protein phosphorylation

signal transduction

animal

brain ischemia

chemistry

Stroke

structure activity relation

Animals

Brain Ischemia

Genistein

Humans

Molecular Structure

Protein Kinase Inhibitors

Stroke

Structure-Activity Relationship