

# Quercetin in Food: Possible Mechanisms of Its Effect on Memory

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**Abstract:** Quercetin (3,3',4',5,7-pentahydroxyflavone) is found in vegetables and fruits. It is one of the major flavonoids that is part of human diets. Quercetin has several pharmacological effects in the nervous system as a neuroprotective agent. In this review, we summarize the research on quercetin and its role in memory in both animals and humans. Articles were chosen from the Scopus, PubMed, and Web of Science databases. In this review, we describe and summarize the importance of quercetin's presence in the body, particularly in the brain; its kinetics, including its absorption, metabolism, distribution, and excretion; its behavioral effects; and some of the possible mechanisms of action of quercetin on memory in different animal models. Several important pathways that may be involved in the processes of learning and memory, long-term potentiation, and cognition may be impaired during neurological diseases or other medical conditions. As dietary quercetin is important, provision of its best formulation for delivery to the brain as a nutraceutical and in clinical translational research for the prevention or treatment of Alzheimer's disease and other types of dementia is necessary.

**Keywords:** Alzheimer's disease, flavonoids, food, memory, quercetin

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