

## QUERCETIN CONTAINING PLANT EXTRACTS AND THEIR EFFECTS ON AGING

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Polyphenols, which include flavonoids, are widely distributed in plants and contribute to our daily diet in numerous ways. Many fruits and vegetables contain quercetin, one of the most prevalent flavonoids. Diets rich in fruits and vegetables have long been considered healthy, increasing longevity, and reducing morbidities. As a result of basic research investigating the potential mechanisms, it has become evident that plant-based foods have beneficial effects due to the high amounts of bioactive phenolic compounds they contain. The supplementation of polyphenols, specifically quercetin, has indeed been shown to have a variety of health-promoting effects, especially among the elderly. An unanswered question in medicine, aging is a multifactorial process resulting in the loss of functionality of organs, tissues, and cells. Slowing down the ageing process is entirely feasible, even if it is impossible to prevent ageing. Different types of natural and synthetic phenolic compounds have been tested in vitro for their anti-aging effects. Our scientific work examines experimental evidence demonstrating the beneficial effects of polyphenols on aging-related diseases through review and analysis of antioxidant capacity and content on *Castanea sativa* and *Aesculus hippocastanum* extracts. This study may provide a framework for the concept of cellular stress-based population stratification for clinical trials. The research may reveal a more consistent and significant impact of flavonoids on health.