

Flavonoids: Essential Players in Nutrition

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Abstract : Polyphenols, particularly flavonoids like quercetin, fisetin, and kaempferol, have gained significant attention in nutrition due to their antioxidant, senolytic, and anti-inflammatory properties. These compounds are commonly found in various plant-based foods and are represented by diverse subclasses, each with unique health benefits. Understanding their absorption, metabolism, and bioactivity within the human body is crucial for unlocking their full potential. Quercetin, for instance, exists in multiple forms, impacting its solubility and absorption in the intestine. Its intake, often derived from sources like apples, is affected by cooking methods, with medium heat retaining its potency. Fisetin, also present in fruits and vegetables, demonstrates neuroprotective qualities and stability under varied conditions compared to quercetin. Similarly, kaempferol, found in fruits and vegetables, displays antioxidative effects but is influenced by cooking techniques, with specific methods preserving its polyphenolic content better. Overall, these polyphenols offer promising health benefits, yet their optimal dosage and specific dietary recommendations warrant further research to harness their full nutritional potential.

Keywords : polyphenols, flavonoids, absorption, quercetin, kaempferol, fisetin, senolytics, absorption, cooking method

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