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# Impact of the Natural Compound Urolithin A on Health, Disease, and Aging

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## Abstract

Urolithin A (UA) is a natural compound produced by gut bacteria from ingested ellagitannins (ETs) and ellagic acid (EA), complex polyphenols abundant in foods such as pomegranate, berries, and nuts. UA was discovered 40 years ago, but only recently has its impact on aging and disease been explored. UA enhances cellular health by increasing mitophagy and mitochondrial function and reducing detrimental inflammation. Several preclinical studies show how UA protects against aging and age-related conditions affecting muscle, brain, joints, and other organs. In humans, benefits of UA supplementation in the muscle are supported by recent clinical trials in elderly people. Here, we

review the state of the art of UA's biology and its translational potential as a nutritional intervention in humans.

**Keywords:** aging; inflammation; mitochondria; mitophagy; muscle health; urolithin A.

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