

RENUAL

Mitochondrial renewal featuring Mitopure™ Urolithin A to power muscle function, increase cellular energy and promote healthy aging. ‡

INDICATIONS

- Ages 18 and up

BENEFITS

- Enhances mitochondrial renewal to support energy output/energy production[‡]
- Powers healthy muscle function[‡]
- Promotes healthy aging[‡]

SPECIAL FEATURES

- Unique polyphenol metabolite
- Exclusive first to market in Health Care Practitioner channel

VERIFIABLE SCIENCE

Urolithin A is the main metabolite of ellagitannin-rich foods, such as pomegranates, black raspberries, raspberries, strawberries, walnuts and almonds.

These polyphenol components are not absorbed intact into the bloodstream, but are hydrolyzed to ellagic acid in the gut, which is then metabolized by the gut microflora to form urolithin A and B.¹

Research indicates that the ability to synthesize urolithins declines with age and depends on the gut microflora, and there is a small percentage of the population that is unable to perform this conversion at all.² Research indicates that urolithin A enhances autophagy, the natural process of cellular renewal in which the body degrades and recycles cellular components, as well as mitophagy, the clearance and recycling of older and dysfunctional mitochondria. Mitochondria are the “powerhouses of the cell” and their function is fundamental to healthy aging. Efficient rejuvenation of mitochondria supports energy production and the overall health of cells. A randomized, double-blind, placebo-controlled trial involving healthy sedentary elderly subjects indicated that supplementation with urolithin A promoted mitochondrial gene expression in the muscle and fatty acid oxidation efficacy, showing support for mitochondrial biogenesis and function.³ Four weeks of urolithin A supplementation resulted in improved mitochondrial function comparable to a 10-week aerobic exercise regimen, as measured by decreases in plasma acylcarnitine. In animal research, urolithin A enhanced mitophagy to promote mitochondrial biogenesis and function during aging.⁴ It also improved endurance and

exercise capacity in both young and age-related models of muscle decline.^{3,4} Supporting autophagy reduces oxidative stress and promotes healthy cytokine balance within the cells to support healthy aging.⁵ Preliminary research suggests a broad spectrum of support, including energy production, neuronal health and neurogenesis, gut barrier function, and healthy joint collagen.^{3,6-9} Urolithin A also may offer support for glucose and fat metabolism. When mice were fed a high-fat diet for 12 weeks, supplementation with urolithin A promoted healthy insulin function and lipid metabolism, and decreased adipocyte size.⁹ These results are believed to be the result of increased expression of genes targeting fatty acid beta-oxidation, adipose tissue lipolysis and insulin receptor function (Sirt1), and oxidation defenses (SOD1 and SOD2). Sirt1 is also a target of resveratrol thereby offering support for longevity, metabolic health, and mitochondrial function.^{10,11} CoQ₁₀ is a key nutrient used in the energy production pathway.^{12‡}

SUGGESTED USE

As a dietary supplement, take 2 capsules, 1-2 times daily, with or between meals.

STORAGE

Store in a cool dry place.

WARNING

If you are pregnant or lactating, have any health condition or are taking any medication, consult your health professional before use.

SOURCE

- Urolithin A: synthetic
- Resveratrol: Japanese knotweed (*Polygonum cuspidatum*) extract (root)
- CoQ₁₀: fermentation
- Vegetarian capsule: soft wood (mainly pine and spruce) cellulose

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NOTES

Size 0 caps

Bottle count 60

Order code RNL6

Bottle size 120 cc

Vegetarian

Hypoallergenic

Gluten-free

Non-GMO†

REFERENCES

1. Tomás-Barberán FA, et al. *Mol Nutr Food Res*. 2017 Jan;61(1).
2. Cortés-Martín A, et al. *Food Funct*. 2018 Aug 15;9(8):4100-4106.
3. Andreux PA, et al. *Nature Metabolism*. June 2019. 1: 595-603
4. Ryu D, et al. *Nat Med*. 2016 Aug;22(8):879-88.
5. Ahsan A, et al. *CNS Neurosci Ther*. 2019 Apr 11.
6. Gong Z, et al. *J Neuroinflammation*. 2019 Mar 14;16(1):62.
7. Singh R, et al. *Nat Commun*. 2019 Jan 9;10(1):89.
8. Liu H, et al. *Front Pharmacol*. 2018 Sep 18;9:1043.
9. Toney AM, et al. *Obesity (Silver Spring)*. 2019 Apr;27(4):612-620.
10. Timmers S, et al. *Cell Metab*. 2011 Nov 2;14(5):612-22.
11. Goh KP, et al. *Int J Sport Nutr Exerc Metab*. 2014 Feb;24(1):2-13.
12. Zheng A, Moritani T. *J Nutr Sci Vitaminol (Tokyo)*. 2008 Aug;54(4):286-90.

SUPPLEMENT FACTS

2 capsules, 1-2 times daily, with or between meals.

Two (size 0) Caplique® capsule contain:

Mitopure™ Urolithin A	250 mg
Trans-Resveratrol (from Japanese knotweed (Polygonum cuspidatum) extract (root))	150 mg
Coenzyme Q ₁₀	60 mg
Other ingredients: vegetable glycerin, vegetarian capsule (cellulose, water)	

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RENUAL	Quantity	Order Code
	60	RNL6

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