

# An acebuchin-oil-enriched diet helps to reduce hypertension

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An acebuchin-oil-enriched diet helps to reduce arterial blood pressure, as shown by a study carried out by the Cardiovascular Physiopathology research group at the Physiology Department of the University of

Seville. Furthermore, their work shows that acebuche oil has a greater impact in reducing hypertension than extra virgin olive oil.

This research group from the US Faculty of Pharmacy, led by Professor Carmen María Vázquez Cueto together with Professor Alfonso Mate Barrero, has been investigating the physiopathological mechanisms involved in the development of arterial hypertension (AHT) for over 20 years, with special interest in finding [natural products](#) that help to alleviate the [organ damage](#) caused by this disorder. The acebuche, also known as the wild olive tree, is a variety of tree widely found throughout Spain and covering almost nine million hectares in Andalusia. However, little data is available on the composition and therapeutic potential of acebuchin oil. The studies mainly focus on the composition and pharmacological effects of olive tree leaves and extra virgin olive oil.

Following their research, in which they gave mice a [diet](#) enriched with acebuchin oil or extra virgin olive oil, the researchers detected that the acebuchin-oil-enriched diet significantly reduced blood pressure in hypertensive animals. However, a lesser antihypertensive effect was found in animals fed a diet enriched with extra virgin olive oil.

At the same time, the study showed that the diet enriched in acebuchin oil reduces ocular oxidative stress produced by AHT to a greater degree than the diet enriched in extra virgin olive oil. Furthermore, the former also has a greater impact in regulating the systems related with this oxidative stress.

In particular, the researchers studied variations in the morphology of the hypertensive retina, which are prevented by the acebuched-oil-enriched diet. AHT causes a change in the retina's morphology (showing "thinned" layers in the retina). This outcome can be counteracted with an acebuchin-oil-enriched diet, obtaining better results than with a diet enriched in extra virgin [olive oil](#).

AHT is a high-prevalence disease on a global scale (30-45% of the general population) where systolic blood pressure values rise above 139 mmHg and/or diastolic [blood pressure](#) is above 89 mmHg. AHT damage manifests itself in different organs and is a major risk factor in cardiovascular, kidney, brain and eye diseases. In particular, AHT constitutes an important risk factor for the development of retinal vascular diseases, such as hypertensive retinopathy and retinal arterial and venous obstructions, which are associated with high-prevalence ocular pathologies such as cataracts, glaucoma, age-related macular degeneration and choroidopathies.

The Cardiovascular Physiopathology research group has applied to the Spanish Patent and Trademark Office (OEPM), through the University of Seville, for a patent on the "Use of acebuchin oil in retinal damage associated with arterial hypertension and associated retinal pathologies."

**More information:** Álvaro Santana-Garrido et al. Retinoprotective Effect of Wild Olive (Acebucho) Oil-Enriched Diet against Ocular Oxidative Stress Induced by Arterial Hypertension, *Antioxidants* (2020). [DOI: 10.3390/antiox9090885](https://doi.org/10.3390/antiox9090885)

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