

What is artichoke and why might it be important as a supplement?

Artichoke, or *Cynara cardunculus* Scolymus Group, are large perennials with grey-green leaves, grown for their **large edible flower buds**, where the tender inner bracts and the receptacle, or inner heart, are consumed. The scaly architectural buds open to thistle-like purple flowers in summer and autumn. This is possibly why there is confusion, liking **artichoke with milk-thistle**, but it is important to recognise they are **not the same**.

According to Greek myth, the origins of the artichoke originate from Zeus, who on a beach, whilst visiting his brother Poseidon, fell instantly in love with a beautiful girl named Cynara. He seduced her, made her a goddess, and took her to Mount Olympus. Cynara grew lonely and would slip secretly away to visit her mother and family. Zeus, in a burst of anger, threw Cynara from Mount Olympus and turned her into an artichoke! Hence, the scientific name, *Cynara cardunculus*, derives from this unlucky girl.





Theophrastus, a Greek peripatetic philosopher, writes a description of the plant being grown in Italy and Sicily around 300 B.C. They are believed to have been introduced in Spain around 800 A.D by the African Moors, who brought a plant from Sicily. **Artichokes** were regarded as a vegetable for the elite, an **aphrodisiac**, and subsequently included in the works ‘The Greek Herbal of Dioscorides’, an authority on **medicinal plants**. **Artichoke** was used as a **digestive aid** by the Romans to help with **liver function** after excessive eating and drinking.

Along with other fruits and vegetables, **artichokes** are frequently consumed within the **Mediterranean diet** and research has shown there may be **health benefits** associated with the high levels of **polyphenol compounds** in the plant which exhibit **antioxidant** characteristics. From this perspective, **artichoke** is considered a **functional food** in Europe (FoFuFE). From a **nutraceutical** perspective, the **non-edible leaves** rich in **flavonoids** are of interest, as **extracts** may exert **hepatoprotective** and **hypocholesterolaemic** effects along with **anti-inflammatory vascular** functions.

What does research say?

The pharmacological properties of artichoke leaf extracts are well documented in several in vitro and in vivo studies, and increased choleretic activity; increased bile flow and elimination of cholesterol,

has been reported. In a randomised, cross-over design trial, twenty male participants consumed 320 mg of artichoke extract. There was a significant increase in bile secretion of up to 139.5% following extract consumption. The authors indicated artichoke extract could be recommended for dyspepsia (indigestion), especially when resulting from bile flow issues or a disorder affecting the breakdown of fats.

Doi: [10.1016/s0944-7113\(11\)80027-9](https://doi.org/10.1016/s0944-7113(11)80027-9). Doi: [10.1186/s40064-016-1894-1](https://doi.org/10.1186/s40064-016-1894-1).

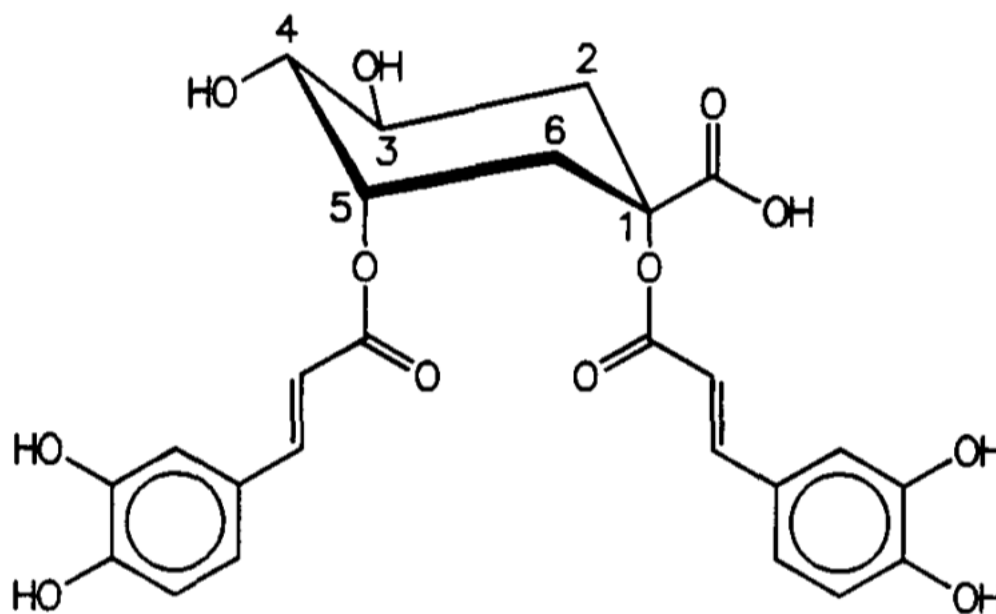


Figure 1. 1,5-dicaffeoyl-D-quinic acid (cynarin).

A study investigated **artichoke leaf extract in the treatment of NAFLD**. 49 participants received 600 mg a day for 2 months. There were significant improvements on **liver ultrasound parameters** and **liver serum measurements** for ALT and **total bilirubin**. **Total cholesterol** was reduced along with **LDL cholesterol** and **triglyceride concentrations**. In summary there was **less liver inflammation** and **less fat deposition** when consuming artichoke extract.

Doi: [10.1002/ptr.6073.Epub2018Mar9](https://doi.org/10.1002/ptr.6073.Epub2018Mar9).

Artichoke leaf extract inhibits the hepatic biosynthesis of cholesterol. In an animal study, Wistar rats were fed a high cholesterol diet. The rats supplemented with artichoke extract saw significant **decreases in total plasma cholesterol** and **triglycerides**, and favourable changes in the ratio of **LDL: HDL cholesterol** were observed. Artichoke leaf extract has also been found to reduce serum lipids in diabetic patients.

A study in 75 hypercholesterolemic adults found artichoke leaf extract moderately and statistically favourably **reduced total cholesterol** following 12 weeks supplementation with 1280 mg a day. **General well-being** was also reported **improved**.

Doi: [10.1016/j.phymed.2008.03.001](https://doi.org/10.1016/j.phymed.2008.03.001).

Artichoke extract may support **cardiovascular health**. In accordance with other works, the study in the Wistar rats found the same. It was reported hypercholesterolemia disturbs the pro-oxidant-antioxidant balance in favour of pro-oxidation subsequently increasing the risk of atherosclerotic plaque, the authors noting the reduction in LDL cholesterol and increase in HDL cholesterol showed **reductions in atherosclerotic plaque**.

Some studies have also suggested **artichoke extract** may **increase nitric oxide production**, having a positive effect on **endothelial function** and **blood pressure**, whilst others have noted **cynarin** and other **flavones** in artichoke extract to have **antioxidant** potential. Free radical scavenging in the Wistar rat study **reduced lipid peroxidation**. A process of oxidative breakdown of the phospholipids in cellular membranes including mitochondria leading to tissue injury.

Doi: [10.1002/ptr.2985](https://doi.org/10.1002/ptr.2985).

The results of several clinical investigations have shown the efficacy of artichoke leaf extract in the treatment of **digestive complaints** such as **sensation of fullness**, **loss of appetite**, **nausea**, and **abdominal pain**. There has also been evidence of **symptomatic relief of irritable bowel syndrome**.

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Doi: [10.1002/1099-1573\(200102\)15:1<58::aid-ptr805>3.0.co;2-r](https://doi.org/10.1002/1099-1573(200102)15:1<58::aid-ptr805>3.0.co;2-r).

Doi: [10.1089/acm.2004.10.667](https://doi.org/10.1089/acm.2004.10.667).



Best use tips

Strom's artichoke extract containing **5% cynarin** is a well dosed formulation. We suggest taking 2 capsules a day to yield the benefit of **1500 mg**.

Artichoke leaf extract has a wide range of additional health benefits associated with the microbiome and gut health.

To learn more about **STROM** or for more information on their products visit their **YOUTUBE** or **STROMUCATION.COM** education site.

If you have any further questions, please do not hesitate to ask!