



Artichoke • Cynara spp.

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VCIH
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Asteraceae family - related to Thistles

Botanical Nomenclature:

Cynara scolymus or *cardunculus*
- subspecies - *flavescens*

Common Name:

Artichoke
Garden Artichoke
Globe Artichoke

Part Used/Definition:

Leaf - first year basal rosette
Root - traditional use



Identification:

Perennial in hardy zones
Thistle like leaves & purple flowers
Can grow to be quite large - up to 5 feet tall

Tuberous root ²

Flower heads appear in August or September

Ecological & Ethnobotanical Information:



Artichoke is native to Mediterranean, regions of southern Europe and coastal areas of northern Africa. “It is one of the world's oldest cultivated vegetables, grown by the Greeks and the Romans in the heyday of their power. It was introduced into this country in the early sixteenth century both as a vegetable and an ornamental plant in monastery gardens.” ²

Commercial Sources & Handling:

Widely available

Predominantly sourced out of the US - due to growing conditions

Whole or cut dried leaves

Cultivated throughout the world

- Regions with consistent moisture and moderate temperatures
- Loves coastal mediterranean climate

Growing & Harvesting Information:

Hardy to zone 6

- Will not overwinter in northern climates
- Does not tolerate temperatures below 20 degrees

For fruit in colder climates

- Vernalization (chilling) of “Imperial Star” seeds will produce best crop in short growing season
- First year plants can be dug up and stored properly to be replanted in spring

Moist soil block

Difficult to dry - will easily absorb moisture

Taste/Odor:

Bitter

Energetics:

Cooling

Moistening to the digestion (increasing the fluidity of the bile), drying to the constitution ⁷

Physiological Actions:

Hepatic

Cholagogue

Choleretic

Hepatoprotective

Antihepatotoxic ³

Antioxidant ³

Hypocholesterolemic ⁴

Antispasmodic ³

Antiatherosclerotic ³

Antithrombotic ³

Hypolipidemic ³

Alterative

Digestive tonic ⁴

Orexigenic

Blood lipid modulator

Blood Sugar modulating

Anti-inflammatory

Renal Protective ⁹

Hepato Regenerative

Diuretic ⁹

Traditional Uses:

- Liver support
- Kidney stimulant ⁹ - renal insufficiency ⁵
- Snakebites ⁵
- Anemia ⁵
- Edema ⁵
- Arthritis ⁵

Specific Indications/Patterns:

- Stagnant liver energy
- Easily frustrated/irritated
- Pharmaceutical use/history of

- Chemical exposure/detox
- No viral harm to hepatocytes
- Wrings out liver and kidneys
- Vague sense of indigestion with mild nausea, trouble digesting fats, liver-ish person

“The signature is obvious: it turns the cooking water gall green” - Julia Graves ⁷

Clinical Uses:

Digestion:

- Hepatoprotective - improves regeneration of hepatic cells ⁵
- Poor fat digestion
- Lack of bile secretions
- Liver and gallbladder congestion ⁷
- Release dryness and heat from the gallbladder ⁷
- Slow/stagnant metabolism
- Indigestion ³
- Prevention of gallstones ³ & kidney stones
- Irritable bowel ³ - reactive and inconsistent
- Crohn's disease ³
- Decreases numbers in elevated cholesterol
- Nausea related to undigested foods
- Gas, bloating, pain
- Overeating
- Inflammatory bowel disease
- Elevated blood sugar
- Pre- or type 2 diabetes
- Dyslipidemia (elevated LDL, low HDL, bad ratio of LDL to total)
- Elevated triglycerides
- Jaundice
- Viral hepatitis
- Reduces appetite ⁷

“[Artichoke] does what we call *windtreibend* in Germany: it pushes flatulence down along the guts, forcing it to leave the body. It also increases the amount we pee.” - Julia Graves ⁷

“The root fresh gathered, sliced, and boiled in water, six ounces to a quart of the water, makes a decoction, which works by urine, and I have known it alone cure a jaundice.” - John Hill ¹²

Cardiovascular:

- Support endothelial integrity via increasing endothelial nitric oxide production ³
- lipid-lowering actions useful against atherosclerosis ¹¹
- Lowers blood pressure ⁷

Endocrine:

- Skin condition related to Liver and Kidney function
- Stressed hormonal conditions
- Calms the thyroid ¹²

Misc. Uses:

- Clears calcium and uric acid through the kidneys ¹²
- Removes nitrogen waste
- Rheumatism & arthritis - toxin induced
- Gout



Spiritual:

- Flower essence:
 - Helps us trust the natural order of things with wisdom that neither pushes us towards a false forgiveness nor supports us to stay closed off because of old wounds. ¹⁴
 - When appropriate, reveals a way towards genuine reconciliation without coercion or false emotion. ¹³
- Old, smouldering resentment ⁷
- Suppressed anger ⁸
- Gallbladder is for courage ⁷

"I felt almost sick after the first [arti]choke, as if something was sweeping out my gallbladder whether I liked it or not, and (I had had it for dinner) making me very alert and awake, unable to sleep. I found myself at the computer, writing a very long letter I had put off to write for about four years, when my goddaughter had asked me to write down for her 'how the story with my ex-boyfriend ended.' I had had great aversion to writing this, still feeling resentful and unable to let go since unable to resolve. It just all poured out of me, an artichoke was washing out my gallbladder, and I found myself able to write everything clearly, objectively (not cold and distant), and in doing so, letting it all go for once and for all." - Julia Graves ⁷

Combinations/Similar Herbs:

- Milk Thistle as a hepatoprotective
- Often found in bitter formulas

Key Constituents & Pharmacology:

Caffeic acid derivatives, including **cynarin** and **chlorogenic acid**

- antioxidant, anticarcinogenic, hepatoprotective; hypocholesterolemic
- may modulate vascular endothelial dysfunction
- chlorogenic acid modulates sugar release into blood stream after meal

Sesquiterpene lactones, e.g. **cynaropicrin**

- “bitter” activities, such as cholagogue/choleretic, appetite stimulant, depurative
- possibly immune stimulant and cytotoxic (to various cancer cell lines)

Phenols, including the flavone **luteolin**

- luteolin might reduce cholesterol synthesis
- improves carbohydrate metabolism
- modulates immune function, anti-inflammatory, antioxidant

Also: Flavonoids, tannins, enzymes - inulin, mineral salts (zinc, nickel, cobalt, manganese, selenium)

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Potential Uses Extrapolated from Pharmacology:

- Weight loss
- Immune system support
- Cancer therapy
- Cardiovascular Disease

Clinical Trials:

- Indigestion - 20 men with acute or chronic metabolic disorders were separated at random into two groups. The test group was given a standardized artichoke extract of 320 mg in a capsule dissolved in 50 ml water, taken directly into the duodenum. Results were assessed by measuring duodenal bile secretions, which increased 127.3% after 30 minutes, 151.5% after 60 minutes, and 94.3% after 90 minutes. The relative differences for the placebo were significant. The researchers concluded that artichoke extract can be used for the treatment of digestive disorders characterized by poor assimilation of fat due to insufficient bile secretion ⁸

- Lead toxicity - artichoke extract in lead-poisoned rats has suitable chelating properties for the reduction of blood lead levels ¹⁰
- Liver protection - Artichokes multidirectional treatment is a documented fact and it is associated with treatment of dyspepsia, influence of active substances contained in artichoke on plasma lipid levels and with a strong antioxidant effect. Due to these properties, artichoke compounds have a protective effect on Liver cells. ¹³

Safety Issues:

- Hypersensitivity to the active substance or to plants of the Asteraceae family (Compositae).
- Obstructions of bile ducts, cholangitis, gallstones and any other biliary diseases and hepatitis.
- Fresh leaf may cause contact dermatitis in some individuals ³

Preparation & Dosage:

Unless otherwise prescribed: 6 g per day of dried cut leaves, pressed juice of fresh plant, and other equivalent galenical preparations for internal use ⁶

- Capsule: 2 g, 3x/daily
- Standard decoction: 2-4 oz 3x day
- Tincture: 1-4 ml 3x/day
 - Fresh leaf: 1:2 95%
 - Dried leaf: 1:5 40%
- Glycerite: 1-5 ml 3x/day
 - Dried leaf: 1:8

Miscellaneous:

- The flowers are said to curdle milk
- Yields a good yellow dye

Sources Cited

1. Iwu, M.M. *Handbook of African Medicinal Plants*. Boca Raton: CRC Press. 167-168. 1993.
2. Grieve, M. *A Modern Herbal*. New York: Dover Publications, Inc. 60. 1971.
3. Tilgner, S. *Herbal Medicine from the Heart of the Earth*. Wise Acres. 43. 2009
4. Easley, T. and Horne, S. *The modern herbal dispensatory: a medicine-making guide*. North Atlantic. 177. 2016.
5. Maria-Teresa, M. *Artichoke Monograph*. University of Colorado, Denver. 2003.

6. "Artichoke". Herbal Medicine: Expanded Commission E Monographs. *American Botanical Council*. Integrative Medicine Communications. 2000.
7. Wood, Matthew. *The Earthwise Herbal: a Complete Guide to Old World Medicinal Plants*. Berkeley, CA, North Atlantic Books, 2008.
8. Kirchhoff, R. et al. Accessed May 14, 2017. Increase in choleresis by means of artichoke extract. *Phytomedicine* 1:107115, 1994.
9. Bianchini, F. and F. Corbetta. *Health Plants of the WorldAtlas of Medicinal Plants*. New York: Newsweek Books, 1977.
10. Engy M. El Morsy, Rehab Kamel. Accessed May 14, 2017. Protective effect of artichoke leaf extract against paracetamol-induced hepatotoxicity in rats. *Pharmaceutical Biology* 53:2, pages 167-173.
11. Bruneton, J. *Pharmacognosy, Phytochemistry, Medicinal Plants*. Paris: Lavoisier Publishing, 1995.
12. Remington, J. and Woods, H. *The Dispensatory of the United States of America Twentieth Edition*, 1918.
13. Horoszkiewicz, M. et al. Artichoke: untapped potential of herbal medicine in the treatment of atherosclerosis and liver diseases. *Przegl Lek* 69:10, pages 1129-1131. 2012.
14. Sheehan, M. Artichoke. *The Green Hope Farm Collection*. 2014.