

# Echinacea

*Echinacea purpurea*

*E. pallida*

*E. angustifolia*

## Description

“The flowers are a rich purple and the florets are seated round a high cone; seeds, four-sided achenes. Root tapering, cylindrical, entire, slightly spiral, longitudinally furrowed; fracture short, fibrous; bark thin; wood, thick, in alternate porous, yellowish and black transverse wedges, and the rhizome has a circular pith. It has a faint aromatic smell, with a sweetish taste, leaving a tingling sensation in the mouth.” (1) *Echinacea* is a perennial herbs native to Midwestern North America, from Saskatchewan to Texas. The genus derives its name from the Greek *echinos*, meaning sea urchin.



## Practicals

“*Echinacea* grows 30-100 cm (1-3') tall from a tap root. It has bristly hairs on the stem and leaves. The leaves are mostly basal and broadly lanceolate, 7-20 cm (2¾- 8") long. The solitary flower head on stout terminal peduncle, consisting of spreading ray florets and long conical erect disc florets in the centre; appears from July to October and varies in color from rose to purple.” (2) The three aforementioned species are most commonly used. With root lengths up to 4 feet. Medicinally the aerial portion as well as the stalk, and root are used. Species produce white to yellow pollen. The different species contain largely different proportions of their chemical derivatives especially in the caffeic acid family. It also contains some interesting alkaloids. (3)

*Echinacea* was heavily relied on by Native Americans, with its use outmatching all others. Their primary uses were: externally-healing of wounds, burns, abscesses, and insect bites; internally- infections, toothache, joint pain and snakebites. (3)(4)

Pharmacologically *Echinacea* has many activities. It can inhibit the enzyme hyaluronidase, a constituent of snake venom and bacterial enzymes, causing their spread through tissue to wane. It is purported to stimulate ground substance production as well. It may stimulate a mild-cortisone affect and cause secretion of cortical adrenal hormones. Most research has been directed to effects on ‘non-specific’ T-cell activity. These cells can release interferon and other chemical mediators to gather neutrophils, mactophages,

and NK cells. It is to note that most of these studies were based on the fresh juice of the aerial portion of the plant, though the root portion is said to claim a larger concentration of active ingredients. Also note that small amounts of alcohol destroy many active chemicals of Echinacea; therefore there must be attention to extracting both aqueous and fat-soluble components. (3)

### Constituents

---

Alpha-pinene, apigenin, arabinogalactan, beta-carotene, beta-sitosterol, betaine, borneol, caffeic acid, caryophyllene, chlorogenic acid, cichoric acid, cyanarin, echinacoside, ferulic acid, kaempferol, luteolin, quercetin, rutin, stigmasterol, vanillin, verbascoside. (3,4)

### Usages

---

Dried root tea: 1-2 g

Freeze dried plant: 325-650 mg

Juice of aerial portion: 2-3mL

Tincture(1:5): 3-4mL

Fluid extract(1:1): 1-2mL

Dry powder: 300mg

### Cautions

---

Not to be taken by those with ragweed allergies

Not to be taken for more than short periods by those with auto-immune diseases

Intravenous administration of aerial juice may cause mild fever due to chemical mediators' release.

### Personal Experiences

---

D. Pollack notes:

After a recent recommendation to a sick acquaintance, of 2 immediate 300mg doses followed by 2 later that day and four over the next, concurrently with 1x 200mcg Selenium twice a day, drastic improvement was noted by the next day.

### Sources

---

(1) <http://www.botanical.com/botanical/mgmh/e/echina01.html>

(2) [http://www.dominionherbal.com/Herb\\_of\\_the\\_Month/echinacea2.html](http://www.dominionherbal.com/Herb_of_the_Month/echinacea2.html)

(3) Murray, Michael T. The Healing Power of Herbs. Gramercy Books, NY

(4) Balch, Phyllis, James. Prescription for Nutritional Healing 3<sup>rd</sup>. Avery Books NY