

Echinacea

Latin Name: *Echinacea angustifolia*, *E. purpurea*, *E. pallida*

Also known as: Purple Coneflower, Coneflower, Black Sampson, Rudbeckie, Sampson Root, Snake Root

Scientific Classification

Three of the nine echinacea species are used medicinally:
E. angustifolia, *E. purpurea*, and *E. pallida*

Family: Asteraceae – aster, daisy and sunflower family
 Compositae – in earlier classifications

Genus: Echinacea – purple coneflower

Species: *E. angustifolia* – narrow-leaf coneflower,
 Black Sampson Echinacea

Species: *E. purpurea* – eastern purple coneflower

Species: *E. pallida* – pale purple coneflower

Influence on the Body	(PRINCIPAL ACTIONS are listed in CAPITAL LETTERS)
<i>Blood and Circulatory System</i>	BLOOD PURIFIER • BLOOD BUILDER • BLOOD CLEANSER • DEPURATIVE (cleanses blood by promoting eliminative functions) • BLOOD DISEASES • BLOOD POISONING • circulation • hemorrhage
<i>Body System</i>	stimulant (strengthens metabolism and circulation)
<i>Cancer</i>	cancer • tumors
<i>Digestive Tract</i>	sialagogue (promotes an increase flow of saliva) • digestion • carminative (brings warmth, circulation, relieves intestinal gas discomfort, and promotes peristalsis) • peritonitis (inflammation of abdominal cavity) • parasiticide (kills parasites and worms)
<i>First Aid</i>	WOUNDS • BITES • STINGS • POISONOUS BITES • ANTISEPTIC
<i>Infections and Immune System</i>	INFECTIONS • IMMUNE DEFICIENCY • IMMUNE REGULATOR • ANTIBIOTIC • INFECTION prevention • EAR INFECTION • FEVERS • COLDS • flu • GLANDS • LYMPHATIC SYSTEM • LYMPHATIC CONGESTION • CONTAGIOUS DISEASES • DIPHTHERIA • typhoid fever • GANGRENOUS CONDITIONS • peritonitis (inflammation of abdominal cavity)

<i>Lungs and Respiratory System</i>	MUCUS • catarrhal conditions (mucous drainage and discharge) • bronchitis • EMPHYSEMA
<i>Mouth, Nose & Throat</i>	SORE GUMS • pyorrhea (gum disease) • gingivitis • MOUTH SORES • bad breath • sore throat • GARGLE • TONSILLITIS • laryngitis
<i>Reproductive System</i>	syphilis • gonorrhea <i>Male:</i> • PROSTATE GLAND
<i>Skin, Tissues & Hair</i>	SKIN ERUPTIONS • ACNE • abscesses • septic sores • BOILS • carbuncles • ECZEMA • diaphoretic (promotes perspiration, increasing elimination through the skin)
<i>Urinary Tract</i>	bladder infection • edema

Key Properties:

- IMMUNE REGULATOR – increases resistance to infection
- ANTI-MICROBIAL – specifically bacterial, viral and fungal; it is also considered to be a prebiotic (helps good bacteria grow and flourish in the intestines, keeping pathogenic bacteria from proliferating)
- ALTERATIVE – cleanses toxins from blood, lymph and eliminative organs
- ANTI-INFLAMMATORY – protects mucous membranes and relieves inflammation

Primarily affecting: IMMUNE SYSTEM • BLOOD • LYMPH • mucous membranes

History	<p>Relatively new to most of the world, echinacea was first used by Native Americans. The Sioux used the fresh, scraped root for snake bites and septicemia (a serious bacterial infection of the blood).</p> <p>Before antibiotics were discovered, American physicians widely used echinacea for difficult infectious conditions such as gangrene, tuberculosis, and diphtheria. Its use dwindled for a time, when sulfa drugs appeared in the 1920's and penicillin became popular in the early 1940's, only to experience a dramatic resurgence of interest in recent years.</p> <p>Germany began reporting their scientific-based 'phytomedicine' (plant based) studies regarding echinacea in the 1930's and the plant has become widely used by German physicians from that time. It has been reported that</p>
----------------	--

German physicians prescribed echinacea over 2.5 million times in the year 1994 alone.

Today Echinacea *angustifolia* is traded at a higher price than the other two plant species, as it is mostly wild-crafted (harvested from the wild) and populations are declining. Because Echinacea *angustifolia* brings a higher price on the market, many growers are jumping on board and it is becoming much more readily available at a better price. The challenge to medicinal herb growers is finding a reliable source of seed true to the particular species, since echinacea cross-pollinates easily. I recommend 'Horizon Herbs' out of Oregon as a reliable source of quality certified organic plants and seeds.

E. angustifolia tolerates hot and dry conditions and can adapt to desert conditions like Nevada's Las Vegas Valley when artificial stratification methods (pre-chilling for seed germination) are used. See *Growing Echinacea* section.

Echinacea is the first real herb that I was exposed to after I left home and started raising a family of my own. A 'crazy herb lady' that I met, gave me a tincture of Echinacea that she made from plants growing in her back yard. I started to use it and I felt better. I was suffering from immune symptoms associated with lupus. I had sun sensitivity, butterfly rashes on my face, pain and low energy. I was only twenty-five years old and I felt horrible. Within days of taking this Echinacea tincture I felt better, much better. Subsequently, all of my symptoms disappeared. This makes me wonder why the medical establishment in the United States tells people with Lupus not to take Echinacea. I, for one, have found out for myself the majesty of this life-saving herb.

*Regarding
Media Reports*

Most of the supportive scientific studies on echinacea were done several years ago in Germany with *E. purpurea*. Recently, there have been conflicting accounts in the media about studies regarding echinacea having good, little or no effect on healing colds or flus.

Given the vast, positive, out-of-the-country information on echinacea, along with personal experiences with the herb, I'm left to wonder, 'What is wrong with the study?' Which species of the plant did they use? What part of the plant was used? Was it dried or fresh? Was it properly prepared? Were active components extracted, or was the herb left in its

whole state? Did they use enough of the herb to be effective? What chemical fillers were added?

What we do know, is that many of these studies used only 120 mg of Echinacea purpurea (the weakest of the Echinaceas) per day. An average capsule holds 500 mg. These studies were set up to fail. The recommended dose of Echinacea is at least 5000 mg per day. We must also ask who is doing the study and what are their motives?

Without fully understanding the nature of herbs, 'studies' may come up with misleading conclusions. I encourage the research of herbs. There is much that still can be learned. It would be the ideal circumstance to combine the disciplines of science and herbalism in this endeavor. Until that occurs, I recommend further investigation when contrary information about healing herbs is reported in the media.

Attributes

Key Components: (including, but not limited to)

Nutrients

Vitamins A • C • E • Copper • Iron • Potassium • Sulfur • Mucilage

While echinacea is popularly known for its ability to limit and prevent infectious diseases, it has other healing qualities which include cleansing the blood and lymph system, protecting mucous membranes, and soothing inflammations in the body.

Immune System

Echinacea has been approved by the German Federal Health Agency as supportive therapy for upper respiratory tract infections, urogenital infections, and wounds.

The immune system comprises multiple processes that recognize and neutralize pathogens in the body. Extensive research on echinacea has revealed it supports and enhances the actions of the immune system in several ways:

- It increases killer T-cell production. T-cell lymphocytes are types of white blood cells that recognize foreign substances and initiate the immune response. Without recognition, pathogens are free to invade and destroy tissues unhindered.
- It enhances production of alpha-1 and alpha-2 gamma globulins which contain the anti-bodies used by the body to identify and neutralize foreign matter

(such as bacteria and viruses).

- It is a natural antibiotic. Echinacea is said to work like penicillin without adverse side effects. It is one of the best remedies for septicemia (blood poisoning). It has been shown to inhibit staphylococcus bacteria and is helpful in typhoid and other fevers.
- It is a natural prebiotic, keeping beneficial bacteria healthy and crowding out pathogenic bacteria. Echinacea does not kill the good bacteria.
- It is an antiseptic; combating and neutralizing pathogenic bacteria and preventing infection. Echinacea assists in healing wounds by fighting infection and stimulating cell growth. It helps with skin infections like impetigo, boils and carbuncles. Studies show that echinacea has been used successfully to treat psoriasis and eczema. It has also been used as a mouthwash for gum problems.
- It has anti-fungal properties and has been used successfully to treat candida (a persistent yeast-like fungal infection). In one study, patients treated with an anti-fungal cream and echinacea extract were less likely to suffer a recurrence than those treated with the anti-fungal cream alone.
- It enhances the properdin/complement system, a system of proenzymes that participate in phagocytosis (engulfing and destroying bacterial and viral invaders) and helps to neutralize some viruses. Echinacea speeds resolution of colds, flu, bronchitis, and all kinds of upper respiratory infections.
- It inhibits hyaluronidase enzyme activity. Microbes (especially viruses) produce hyaluronidase to penetrate tissues and spread infection.
- It increases interferon levels. Interferons are proteins that prevent the reproduction of viruses. In 1978, a study in *Planta Medica* showed that a root extract of echinacea destroyed both herpes and influenza viruses.
- It inhibits tumor growth. In vitro, echinacea stimulates the production of cytokines (immune proteins). Based

on these findings, echinacea is currently being investigated as a possible antineoplastic (anti-tumor) agent.

Echinacea is one of the most potent herbs that support and strengthen immune system function. Because of this, it has been theorized that echinacea should be avoided in cases of autoimmune disorders (illnesses that occur when tissues of the body are attacked by elements of its own out-of-control immune system). There has not been any scientific evidence to support this supposition. It has been our experience that echinacea modulates and regulates activities of the immune system in cases of auto-immunity.

Cleansing

Echinacea is useful in all diseases which involve impurities in the blood, such as boils, carbuncles, gangrene, persistent sores, cellular abscesses, snake bites, spider bites, and more. It is called the 'King of Blood Purifiers' for its ability to stimulate the efficient removal of waste and toxins from the body.

Echinacea improves lymphatic filtration and drainage, and it accelerates healing of lymph gland infections like strep throat and other lymph gland ailments. It has benefited headaches accompanied by vertigo (dizziness characterized by a spinning sensation) and a confused mental state, when caused by toxemia (an accumulation of toxins throughout the system).

Once the blood is cleansed, the body proceeds to purge toxins from its cells, tissues and organs, gradually detoxifying the lymphatic system, spleen, liver, kidneys, bowels, and skin. Echinacea promotes peristalsis (intestinal contractions), cleanses morbid matter from the stomach, and expels poisons and toxins. Echinacea can increase elimination through the skin by inducing perspiration. Over time, digestion and nutrient assimilation is improved, energy increases, and organ systems (including the skin) can become cleansed and healthy.

Anti-inflammatory

Echinacea assists in the healing of synovial membranes (connective tissues that line joint cavities) by enhancing the production of hyaluronic acid (a viscous slippery substance that lubricates the joints, maintains the shape of the eyeballs, and is a key component of connective tissue).

As a mucilage (complex sugar molecules that are soft and slippery), it soothes and protects mucous membranes and

<p><i>Reproductive Health</i></p>	<p>inflamed tissues. Science confirms its cortisone-like activity eases the pain of inflammation. It is invaluable as an external lotion for swellings.</p> <p>Some have found it to be helpful for an enlarged and weakened prostate gland, and historically it has been used for syphilis and gonorrhea.</p>
<p>Herb Parts Used</p>	<p>The medicinal parts of echinacea are typically the roots and leaves. The whole plant may also be used in various stages of development (usually fresh). Echinacea <i>angustifolia</i> root has the highest potency (fresh or dried) of the echinaceas.</p>
<p>Preparations and Remedies</p> <p><i>Fresh</i></p> <p><i>Powdered</i></p> <p><i>Tinctures / Extracts</i></p>	<p>A small piece of the fresh or recently dried root may be held in the mouth and slowly chewed. This is very effective. Fresh leaves and flowers are as potent as the root but lose some of their vitality in the drying process.</p> <p>Leaves may be dried and powdered, but they are not as potent in this state as the dried root. Leaves are used as a general tonic to the system, rather than for a specific action. Once the root has been thoroughly dried, it may be powdered and added to herbal preparations or put into capsules.</p> <p><i>Infection Formula:</i> (see GOLDENSEAL preparations)</p> <p>Tincturing is the process of extracting, concentrating and infusing the active constituents of an herb into a liquid.</p> <p>The basic recipe calls for four parts liquid to one part powdered herb, or four parts liquid to two parts cut or whole herb. (To use fresh herbs, fill the jar with the newly harvested herb, then cover with liquid).</p> <p><i>Echinacea Tincture:</i> 1 part powdered Echinacea <i>angustifolia</i> root (or 2 parts cut or whole herb) 2 parts Vegetable Glycerin 2 parts Distilled Water</p> <p><i>Optional:</i> Replace half the herb with goldenseal root. Echinacea and goldenseal work synergistically together, multiplying (not just adding) the quality of the end product.</p>

First sterilize containers and utensils that will be used by rinsing them with hydrogen peroxide. Mix the measured ingredients together in a clean, glass bottle. With the lid on, shake well. Label the bottle, then store it on the counter. Shake two times a day for ten to fourteen days.

After two weeks, finish the tincture by separating the infused liquid from the herb powder residue. Sterilize all of the containers and utensils that will be used by rinsing them with hydrogen peroxide. Strain the extract mixture through a clean, unbleached muslin cloth. Return the used herb powder to the earth or throw it away, as the medicinal qualities have been infused into the liquid. Keep the infused tincture in a closed, light-proof (preferably amber) bottle. It is important to label the tincture bottle with both the name of the tincture and the date. Tinctures will store with good potency for about three years if kept from light and heat. Keeping the tincture in the refrigerator will increase its longevity.

General use: Three squirts (about a half teaspoon), two to three times a day, or more as needed.

Poultices

Poultice for boils and abscesses:

4 parts Comfrey
1 part Lobelia
1 part Slippery Elm powder
1/8 part Cayenne
Echinacea tea (as needed)

Make a tea of echinacea leaves and add to the herb mixture until a peanut butter consistency is achieved. Apply the poultice fresh two times daily for four days.

Alternative 1: Use ground flaxseed, lobelia, slippery elm powder, and a small amount of cayenne with echinacea tea.

Alternative 2: Add comfrey and plantain to these for additional benefit and healing.

Slippery Elm Poultice: (see SLIPPERY ELM preparations)

Enema/ Douche

Red Raspberry Enema/ Douche:
(see RED RASPBERRY preparations)

Safety

No health hazards or side effects are known. No serious side effects have been reported in the prescribed use by millions of individuals in Germany and more than a century of use in

the United States.

If needed, echinacea is beneficial during pregnancy.

German guidelines discourage use of echinacea for more than eight weeks, as it is thought that prolonged, habitual use may suppress immunity. Although reasonable as a precaution, there has been no convincing empirical evidence to support or refute this contraindication.

Plant Profile

Natural Habitat:

Echinacea is native to North America. It was introduced to European countries in the early 1900s. *E. angustifolia* grows naturally in the western United States; *E. purpurea* and *E. pallida* originated in the middle and eastern United States. All three species are now cultivated in Europe as well.

Description

E. angustifolia root (fresh or dried) has the most potent medicinal qualities of all the echinacea species. Fresh leaves and flowers are as powerful as the dried roots, but more difficult to come by year-round. *E. purpurea*'s effects have been most widely studied and the plant is a viable choice for health care. *E. pallida* has not been as well studied and seems to be the least potent of the three.

Echinacea *angustifolia* (or narrow-leafed purple coneflower) is a North American perennial (after tops die down in the winter, the plant grows back from a persistent rootstock in the spring) that is indigenous to the central plains. It grows on road banks, prairies, fields, and in dry, open woods. It is also called snake root because it grows from a thick black root that Native Americans traditionally used to treat snake bites.

The plant grows two to three feet high, with single, stout, bristly stems and leaves that are rough, hairy, and three to eight inches long with narrowing tips.

The single, large flower head appears from July through October and has a prominent cone-shaped center surrounded by pale to deep purple ray petals. The genus name is taken from the Greek 'echino', meaning spiny or hedgehog due to the flower's prickly center. The taste of the flower and leaves is slightly sweet, then bitter, leaving a tingling sensation on the tongue. The plant is faintly aromatic.

Growing Echinacea

Echinacea prefers well-drained limey soil in a sunny location.

<i>Planting</i>	Raised beds are highly recommended. The plant may be grown from seeds or transplants. Echinacea requires light and cold stratification (pre-chilling for seed germination). In climates that do not have cold enough winters to accomplish this, stratification may be done artificially with refrigeration in the following manner.
<i>Stratification</i>	Using containers deep enough to allow for good root development, fill with prepared soil mix and plant seeds by barely covering them with soil. Space seeds 2 inches apart. Moisten, cover, and put in the refrigerator at 40-50° F for 30 days. After stratifying, expose the plants (still in their containers) to warmer temperatures to allow for the emergence of seedlings. Germination generally occurs 10-20 days after the stratification process. When plants are several inches tall (usually 2-3 months after germination), transplant them into well-prepared, permanent, planting beds in the spring. Space plants 8-15 inches apart, making rows 18-30 inches apart. Weed control is very important, as echinacea does not compete well with weeds. The plants benefit from the use of mulch.
<i>Harvesting</i>	<p><i>Echinacea Root:</i> The root is harvested in the fall after the plant has gone dormant, usually the second to fourth growing season. After the plant has died back, the energy of the plant will be in the root. A spading fork or other digging tool may be used. Be careful not to damage or break the tap-root, as roots are pulled out of the planting beds.</p> <p>Harvesting is best done in the early morning just after the dew has evaporated or in the late evening (after the heat of the day has passed, but before the night air has a chance to deposit moisture on the plants). Picking in the heat of the afternoon sun results in a wilted plant that is depleted of its natural oils, making it a less effective product. Shake the roots free of dirt and put in the shade until the harvesting is complete. The root takes seven years to completely mature, but it may be taken earlier with good effect.</p> <p><i>Leaves and Flowers:</i> The leaves and flowers are best harvested at the time of peak flowering with leaves in good condition. Once picked, wash plants and gently shake out excess moisture. The fresh flower and leaves are highly valued as they have the rich oils that harbor the greatest strength.</p>

Seeds:

Seeds may be harvested when the plant is dying. Cut the flowering tops off, tie the stems together and place upside-down in a brown paper bag. Tightly tie or tape the bag closed and allow it to dry in a warm place. Collect the seeds by shaking the bag or rubbing the flower heads between the palms of the hands to release the seeds.

Drying Herbs

Screen Drying:

You may dry whole leaves, chopped roots, or sectioned flower heads. Carefully wash and brush the roots. Process soon after washing to minimize oxidation and deterioration. Place onto non-aluminum screens over a shallow collecting pan to catch scattered pieces and leaves of the herb as it dries.

Whole Plant Drying:

Before drying, first wash and air dry the plant. Gather five to eight stems of the plant together and tie them into a bundle. Place them in a brown paper bag with the stems extending out of the open end. Hang the bag with the plant upside-down in a dark, warm place (70-80° F). It will take two to four weeks for the herbs to become completely dry, depending on plant size, temperature and moisture.

Drying Time:

The length of time for herbs to dry varies depending on the plant part being dried. Flowers should be light and dry, but not so dry that they crumble into powder with handling. Leaves should be brittle enough to break between the fingers, but not crumble. Stems and stalks should be breakable, but not bendable. Bark and roots should be dry enough to snap if they are thin, or chip easily with the blow of a hammer if they are thick.

Storage

Heat, light, air, and infestation will dissipate the healing properties of herbs, as will exposure to some types of plastics and metals. It is recommended that herbs are stored in light-proof containers, preferably amber bottles (or otherwise out of the light). Stored correctly, dried herbs will last for 10 years, retaining up to 90 percent potency.