

Garlic

Latin Name: *Allium sativum*

Also known as: Clove Garlic, Stinking Rose, Poor-Man's-Treacle (treacle is a middle English term for a medicinal syrup used for poisons, snakebite and various ailments)

Scientific Classification

There are many varieties of garlic, each differing in size, pungency and color, but the most well known are the white-skinned American, Creole (the pink or purple Mexican or Italian garlic), and the larger Tahitian garlic. Elephant garlic is a variety of garlic with a large bulb which has a relatively mild flavor and lacks many of the healing qualities.

- Family:* Liliaceae – lily family
Genus: Allium – onion
Species: *A. sativum* – cultivated garlic
Sister plants: onion, leek, chives

Influence on the Body	(PRINCIPLE ACTIONS are listed in CAPITAL LETTERS)
<i>Blood and Circulatory System</i>	HEART • heart palpitation • ALTERATIVE (cleanses and stimulates efficient removal of waste products) • BLOOD CLEANSER • BLOOD PURIFIER • POOR CIRCULATION • HIGH BLOOD PRESSURE • ARTERIOSCLEROSIS • BLOOD POISONING • dropsy • anemia
<i>Blood Sugar</i>	diabetes • hypoglycemia
<i>Body System</i>	TONIC (increases energy and strength throughout the body) • stimulant (increases internal heat and strengthens metabolism and circulation) • physical endurance • anticatarrhal (eliminates mucous conditions) • insomnia • restlessness • antispasmodic • ANTI-OXIDANT • aging • diaphoretic (promotes perspiration)
<i>Cancer</i>	CANCER prevention • CANCERS (particularly gastro-intestinal) • TUMORS
<i>Digestive Tract</i>	aromatic (contains volatile essential oils which aid digestion and relieve gas) • improves appetite • heartburn • DIGESTIVE DISORDERS • cramps • stomach ulcers • ulcers • diverticulitis • FLATULENCE (gas) • CARMINATIVE (relieves intestinal gas discomfort, promotes peristalsis) • colic • diarrhea • INTESTINAL INFECTIONS • COLITIS • parasiticide (kills and expels parasites and worms)

<i>Ears</i>	EAR INFECTIONS
<i>Endocrine System</i>	helps regulate glands
<i>Eyes</i>	inflamed eyes • eye catarrh (mucous membrane inflammation with discharge)
<i>First Aid</i>	WOUNDS • VULNERARY (promotes healing of wounds by protecting against infection and stimulating cellular growth) • leg ulcers • insect bites • bee stings • poisonous bites and stings • lead poisoning • metal poisoning • nicotine poisoning
<i>Infections and Immune System</i>	INFECTIONS • abscesses • COLDS • COUGHS • FEVER • chills • swollen glands • FLU • allergies • ANTIBIOTIC • ANTI-STAPH • ANTI-STREP • ANTI-VIRAL • YEAST INFECTIONS • CANDIDA ALBICANS • ANTI-FUNGUS • athlete's foot • ringworm • ANTISEPTIC (fights pathogenic bacteria and helps prevents infection) • IMMUNO-STIMULANT • childhood diseases • INFECTIOUS DISEASES • CONTAGIOUS DISEASES • small pox • CHOLERA • SPINAL MENINGITIS • rabies • typhoid fever • WHOOPING COUGH • PLAGUE • leprosy
<i>Inflammation</i>	ARTHRITIS • osteoarthritis • rheumatism
<i>Liver</i>	gallbladder • cholagogue (promotes the flow of bile) • detoxifies LIVER
<i>Lungs and Respiratory System</i>	EXPECTORANT (loosens and removes phlegm in the respiratory tract) • ANTI-CATARRHAL (eliminates mucous conditions) • mucus • RESPIRATORY CONGESTION • CHRONIC BRONCHITIS • LUNGS • ASTHMA • pneumonia • emphysema • TUBERCULOSIS
<i>Mouth, Nose & Throat</i>	TOOTHACHE • rhinitis (clogged and running nose) • sinus problems • sinus congestion • sore throat • pharyngitis
<i>Muscles</i>	lumbago • muscle cramps
<i>Nervous System</i>	nervine (improves nerve function) • neuralgia pains • migraine headaches • dizziness • epilepsy • paralysis
<i>Reproductive System</i>	<i>Male:</i> • PROSTATE GLAND problems <i>Female:</i> • emmenagogue (promotes menstrual flow)
<i>Skin, Tissues & Hair</i>	acne • chapped and chafed hands • necrosis (death of cells or tissues) • eczema • psoriasis • WARTS • carbuncles
<i>Urinary Tract</i>	promotes kidney function • diuretic (increases urine flow)

Other Uses

- bladder weakness
- NATURAL INSECTICIDE

Key Properties:

- ANTI-MICROBIAL – kills or limits the growth of bacteria, virus, fungus, and counteracts poisons
- IMMUNO-STIMULANT – stimulates the body's defense system
- EXPECTORANT – loosens and removes phlegm from the respiratory tract
- ANTI-CATARRHAL – diminishes excessive mucous conditions
- CLEANSING and ELIMINATION – cleanses blood, lymph, skin (through perspiration), digestion, increases urine output
- HEART and CIRCULATION – reduces blood platelet adhesion, thins blood, lowers elevated blood pressure, improves circulation, protects blood vessels, lowers cholesterol, removes plaque
- DIGESTIVE AID – improves appetite, relieves gas, promotes intestinal elimination, and expels parasites and worms
- ANTI-OXIDANT - protects blood vessels and other tissues from degradation and aging
- TONIC – reduces muscular spasms, convulsions and cramps, and stimulates and nourishes nerves

Primarily affecting: IMMUNE SYSTEM • LUNGS • MUCOUS MEMBRANES • HEART
• BLOOD • BLOOD VESSELS • NERVES

History

According to a 3,500 year-old Egyptian scroll, healers believed garlic could help a person fight cancer. Garlic was thought to be bestowed with sacred qualities and was placed in the tombs of pharaohs. It was given to slaves that built the pyramids to enhance their endurance and strength.

This strength-enhancing quality was also honored by the ancient Greek and Roman civilizations, whose athletes ate garlic before sporting events and soldiers before going off to war.

The Roman naturalist Pliny the Elder (ca. 23-79 AD) declared, "Garlic has powerful properties, and is of great benefit against changes of water and of residence." He recommended it to treat asthma, suppress coughs, expel

intestinal parasites, and as an antidote for snake bites and certain poisons.

Dioscorides (ca. 40-90 AD) was a surgeon and physician for the Roman army. He described garlic with regard to the Doctrine of Signatures (the belief that medicinal properties are revealed symbolically by the plant's outward appearance). Thus, a plant such as garlic, with a long hollow stalk, would be good for diseases of the windpipe. He also wrote of garlic's ability to "clear the arteries."

Garlic was first noted in Chinese literature in the *Collection of Commentaries on the Classic of the Materia Medica* (500 AD). It was traditionally used in China for fevers, cold, tuberculosis, dysentery, intestinal parasites, and beneficial effects on circulation and the heart.

When the plagues ravaged Europe, it was discovered that garlic was an effective preventive and treatment. The Black Death is estimated to have killed 30-60 percent of all Europeans in the 1400s, reducing the world's population from an estimated 450 million to between 350-375 million.

Garlic formed the principal ingredient in the 'Four Thieve's Vinegar', used successfully at Marseilles for protection against the plague when it prevailed there in 1722. This formula originated, it is said, with four thieves who confessed that while taking the aromatic vinegar liberally, they were protected as they plundered the dead bodies of victims of the plague.

During an outbreak of infectious fever in certain poor quarters of London, the French priests (who constantly used garlic in their meals), visited the worst cases without harm, while the English clergy caught the infection, and in many instances fell victim to the disease.

In an 1858 study, Louis Pasteur, the French microbiologist, demonstrated garlic's antiseptic activity. Albert Schweitzer (ca. 1875-1965) used the herb to treat amoebic dysentery in Africa.

Garlic oil was so popular in Russian medicine that it was referred to as 'Russian penicillin.' Their hospitals and clinics have used volatile garlic extract treatments in the form of vapors and inhalants.

During World War I, garlic was used as an antiseptic for

wound care. In 1916, the British government issued a general plea for the public to supply it with garlic in order to meet wartime needs.

Throughout the millennia, garlic has been a beloved plant in many cultures for both its culinary and medicinal properties. Over the last few years, it has gained popularity as researchers have scientifically validated many of its numerous health benefits.

When I first discovered the virtues of garlic, I used it for everything. In the beginning, I didn't understand the importance of using fresh garlic. Needless to say, I fed my family the cheapest garlic oil capsules I could find. When my husband would come home from work, he would open the door to the stale smell of rancid garlic. He was not a fan! My five year old son would chew up the capsules straight. He called them "footballs". I am sure it did him some good, but fortunately, a short time later, I realized fresh garlic was infinitely more potent and effective.

The problem was how to get my family to eat it raw? Over time I found some simple ways to get raw garlic into my family. One way was to give them a garlic shooter (see GARLIC preparations). You see, garlic is best when used fresh. Garlic shooters help get the garlic down without it being so hot or pungent to the taste.

I remember one time when I had a bunch of scouts and their leaders over for a cooking class. I introduced them to garlic shooters. They loved 'em! However, one of the leaders ate so many, that his wife made him sleep on the couch that night. You can get away with one garlic shooter and still be okay in public, but more than that, you definitely smell of the stinkin' rose. The solution to this problem is simple... we all eat it together!

I can't talk with you about the virtues of garlic without mentioning garlic enemas (see GARLIC preparations). We have used this method when nothing else seemed to work. We used it for severe allergic reactions, appendicitis, severe strep infections, high fevers, and yes, we even saved a dog dying of parvo. I always tell my kids they need to take their herbs by mouth or they will have to take them another way.

I for one am grateful for this incredible herb that has surely saved many a life. I highly recommend the book '*Garlic*:

Nature's Super Healer by Joan and Lydia Wilen. Every home library should have this great book on hand.

Attributes

Key Components: (including, but not limited to)

Vitamins A • Lutein (yellow carotenoid pigment) • B1 (thiamine) B2 (riboflavin) • B3 (niacin) • B5 (pantothenic acid) • B6 (pyridoxine) • Folate • Choline • C • E • K

Organic Aluminum (needed by the brain and protects the body from inorganic aluminum) • Calcium • Chlorine • Copper • Germanium • Iron • Magnesium • Manganese • Phosphorous • Potassium • Selenium • Sodium • Sulfur • Zinc

Protein • Enzymes • Allicin • Allicetoin I and II • Sallylcystein

Garlic has measurable amounts (more than any other herb) of germanium, a mineral which strengthens the immune system.

Allicin is a sulfur-containing amino acid formed when alliin comes into contact with the enzyme allinase. This happens when a garlic clove is crushed, bruised, chopped or heated.

Allicin is responsible for the strong, characteristic aroma of garlic. The odor lingers because the aromatic compounds are exhaled from the lungs (and sometimes excreted through the skin) throughout digestion. Chewing parsley, basil, mint, or thyme helps counteract the intense odor.

Garlic preparations in which allicin has been removed (as in the 'odorless' garlic preparations), lose most of the antimicrobial effects.

General

Garlic is warming to the digestive and respiratory tracts, has stimulating and rejuvenating effects on the body, helps to regulate menstrual flow, and is an important antibiotic, anti-viral, and antiseptic remedy for colds, flu, bronchitis, pneumonia, and other infections. Garlic is famous for killing and clearing intestinal parasites. Garlic's ability to protect the blood and cardiovascular system and its anti-cancer activity have been researched extensively. With regular use, the herb can help lower high blood pressure, reduce high cholesterol, and help prevent and reverse atherosclerosis.

Anti-Microbial

Raw garlic kills a wide variety of microorganisms by direct contact, including fungi, bacteria, viruses, and protozoa. It is excellent for wound healing and infectious diseases. The

juice, oil or powder may be used on open wounds for this purpose. It protects wounds from infection and stimulates cell growth. In India, garlic is used to wash wounds and ulcers.

In research studies, allicin has been shown to be effective against common infections like staphylococcus and E. coli bacteria, colds, flu, stomach viruses, and Candida yeast. It also impedes powerful pathogenic microbes such as tuberculosis and botulism. Studies have found garlic to be a potent antibiotic, even against drug-resistant bacteria.

It stimulates the immune system, rejuvenates the spleen, and strengthens the body's defenses against allergens and infections.

One source reports that a garlic necklace or small bag containing garlic may be worn around a child's neck to make body parasites disappear. Garlic is that powerful.

Respiratory Tract

Garlic nourishes and disinfects the lungs, loosens mucus, and is a superior expectorant. It is effective in treating asthma, bronchitis and other respiratory conditions, and it has been used in cough remedies for centuries. The odor is so readily diffusible that when a fresh garlic preparation is applied to the soles of the feet, in seconds it is exhaled by the lungs and detected on the breath.

Successful treatments of tubercular consumption by garlic have been recorded. The sufferer inhales the freshly expressed juice, diluted with an equal amount of water. Bruised and mixed with oil (like extra virgin olive oil), then rubbed on the chest and between the shoulder-blades, it has relieved whooping-cough.

Cleansing and Detoxification

Garlic has a powerful detoxifying effect on all the body systems and provides protection against pollutants and heavy metals. Garlic purifies the blood by promoting eliminative functions, thus cleansing and efficiently removing waste products. It stimulates the lymphatic system to move waste materials and promotes perspiration, allowing for toxin elimination through the skin. Garlic increases the secretion and flow of urine, protects the liver, and promotes digestive evacuation.

Anti-inflammation

Garlic, like onion, contains compounds that inhibit enzymes that activate the inflammatory response, thus markedly reducing inflammation. These anti-inflammatory compounds

protect against severe asthma attacks and help reduce the pain and inflammation of osteoarthritis and rheumatoid arthritis.

Digestion

Garlic improves the appetite, stimulates gastric secretions and bile flow (helping digest fats), increases the mobility of stomach walls, promotes peristalsis (contractions that propel contents onward) of the intestines, and relieves gas and painful distension. It destroys infectious bacteria without destroying the natural flora (beneficial bacteria) and rids the bowels of harmful parasites and worms.

Inserting one clove of garlic in the rectum can relieve the discomfort of hemorrhoids by helping to shrink hemorrhoidal tissue.

Heart and Blood Vessels

Garlic helps to control disorders of the blood and strengthen the heart, blood vessels and circulation in several interrelated ways. Extensive research with garlic in this area of health has shown that allicin, Vitamin C, Vitamin B6, Vitamin E, selenium and manganese all play an integral part in cardiovascular health.

Blood Thinner - Stickiness

Garlic contains an anti-coagulant which normalizes blood platelet adhesion by reducing the 'stickiness' of the blood and its tendency to clot. This increases fluidity and thins the blood. Eating one garlic clove a day for several months will significantly thin the blood.

Relaxes and Enlarges Blood Vessels

Allicin activates sensory nerve endings which induce the relaxation and enlargement of blood vessels, lowering blood pressure, improving blood circulation, and reducing the formation of atherosclerotic plaque. Garlic is excellent for both high and low blood pressure, though it is especially useful in lowering hypertension.

Protects Blood Vessel Walls

Allicin inhibits coronary artery calcification laid down by the body in areas that have been damaged. In a year-long study, patients given daily, aged-garlic extract showed an average calcium level score of 7.5 percent, versus 22.2 percent in the placebo group.

Reduces Plaque Formation – by Lowering Cholesterol

Atherosclerotic plaque develops when blood cholesterol is damaged by oxidation. Garlic's antioxidant properties (with Vitamin C, Vitamin E, selenium, and allicin) limit the amount

of free radicals in the bloodstream, protect blood vessels from the deleterious effects of free radical damage, and reduce the oxidative damage of serum low-density lipoproteins (LDLs – ‘bad cholesterol’). Vitamin E defends the fat-soluble areas, and Vitamin C protects the water-soluble areas, from oxidation.

Clinical studies have shown that garlic lowers total serum cholesterol by about 9-12 percent, principally by inhibiting cholesterol absorption from food. It lowers levels of LDLs in the blood, and triglycerides, in comparison to high-density lipoproteins (HDLs – so called ‘good cholesterol’). This shift helps the liver metabolize fat substances in the blood, rather than allow them to be deposited in tissues.

A German study indicates that the allicin in garlic greatly reduces plaque deposition and size by up to 40 percent by preventing the formation of the initial complex that develops into an atherosclerotic plaque. It hinders the docking of LDL cholesterol to its receptor sites in blood vessels and existing plaques. Researchers suggest that garlic can help prevent and potentially reverse atherosclerotic plaque formation.

Breaks Down Existing Plaque

Garlic has soft oils that help emulsify plaque, loosen it from arterial walls, and help dissolve calcifications such as uric acid crystals found in arteriosclerosis. In a double-blind placebo-controlled study that followed 152 individuals for 4 years, standardized garlic powder at a dosage of 900 mg daily, significantly slowed the development of atherosclerosis as measured by ultrasound. They also showed less evidence of damaged arteries.

Purifies the Blood

Garlic purifies the blood and enhances a physiological process called fibrinolysis, which works to remove plaque and clots from blood vessels.

Heart Attack Reduction

Garlic oil given to 432 individuals over a period of 3 years, who had suffered an initial heart attack, resulted in a significant reduction of second heart attacks and an average 50 percent reduction in death rate among those taking garlic regularly.

Blood Sugar

Garlic lowers high blood sugar levels and assists the body to normalize glucose tolerance in cases of both hypoglycemia

and hyperglycemia (diabetes).

Studies have shown that allicin in garlic combines with Vitamin B1 (thiamine) and in the process, stimulates the pancreas to begin releasing insulin.

Rejuvenating Effects

Garlic is a stimulating tonic. It builds endurance, enhances energy, and strengthens all systems. As an antioxidant, the herb protects blood cell walls, nerves and tissues of the body from degradation and aging.

Brain and Nervous System

Research in China has shown that sallylcystein (a sulfur compound present in garlic), prevents degeneration of the frontal lobes of the brain.

Garlic nourishes the nerves and is a valuable nervine tonic and anti-spasmodic. An infusion of bruised cloves, given before and after every meal, has been effective in epilepsy. Garlic acts as an anti-stress agent. When sniffed into the nostrils, it will revive sensibility to someone suffering with hysteria. It is excellent for relieving nervous headaches.

Cancer

Substances found in garlic, such as allicin, germanium (an anti-cancer agent), selenium, and Vitamin C have been shown to protect colon cells from the toxic effects of cancer-causing chemicals and to stop the growth of cancer cells once they develop. Studies show that garlic helps white blood cells in the body to protect and fight against cancer cells.

Researchers at Loma Linda University have found substances in garlic that activate enzymes in the liver which destroy alfa-toxin, a potent carcinogen. Alfa-toxins are claimed to be a leading cause of liver cancer.

In Russia, garlic was found to retard tumor growth. Several large studies strongly suggest that a diet high in garlic can prevent cancer. 41,837 women were followed for 4 years. Results of the study showed that women whose diets included significant quantities of garlic were approximately 30 percent less likely to develop colon cancer.

A large data set of case-control studies of Southern European populations were reported by Galeone C, Pelucchi C, et al, in the *American Journal of Clinical Nutrition*. When compared to those eating the least amount of garlic, study participants consuming the most garlic had a reduced risk for cancer of the oral cavity and pharynx of 39 percent;

<p><i>Insect Repellent</i></p>	<p>esophageal cancer, 57 percent; colorectal cancer, 26 percent; laryngeal cancer, 44 percent; breast cancer, 10 percent; ovarian cancer, 22 percent; prostate cancer, 19 percent; and renal cell cancer, 31 percent.</p> <p>Garlic is an effective insect repellent, primarily due to its thiamine (Vitamin B1) content. It helps repel mosquitoes and relieves the discomfort of insect bites. Take garlic internally with liquid capsules of Vitaimins B1 and B12 one hour before going outside and/or apply garlic oil to the skin. In the garden, garlic discourages insects that might prey on plants.</p>
<p>Herb Parts Used</p>	<p>The whole plant</p>
<p>Preparations and Remedies</p>	<p>Garlic is highly digestible and elements enter the blood stream rapidly. Grated garlic placed near the most virulent bacteria will kill them in five minutes.</p>
<p><i>Selection and Storage</i></p>	<p>Garlic is freshest in summer when the bulbs are firm and the cloves harder to peel. Soft, shriveled, moldy or sprouting garlic are all indications of decay that will cause a rancid flavor and inferior quality. Buy garlic that is plump, firm, compact, solid, and heavy for its size. The papery, outer skin should be taunt and unbroken.</p> <p>Store fresh garlic in either an uncovered or a loosely covered container in a cool, dark place away from exposure to heat and sunlight. This will help maintain its maximum freshness and help prevent sprouting (which reduces its flavor and causes excess waste). It is not necessary to refrigerate garlic. Some people freeze peeled garlic, but it reduces its flavor and changes its texture. Depending upon its age and variety, whole garlic bulbs will keep fresh for two weeks to two months. Inspect the bulb frequently and remove any cloves that appear to be dried out or moldy.</p>
<p><i>Types of Preparations</i></p>	<p>To store peeled cloves, place them in a jar and cover with olive oil. Close the jar and refrigerate for up to two weeks. The garlic flavored oil may be used for cooking.</p> <p><i>Raw Garlic and Fresh Juice:</i></p> <p>Fresh garlic is thought to be the most effective form of garlic for antibiotic and antifungal activity. Garlic is nature's antibiotic. It can heal almost any infection including the plague. Those who eat fresh garlic regularly rarely get sick.</p>

Garlic Oil – There are two types of garlic oil:

1. *Garlic Infused Oil*: Extra virgin olive oil infused with the healing properties of garlic cloves.
2. *Garlic Essential Oil*: Isolated by distilling raw garlic. Essential oils are highly concentrated and may irritate unprotected skin. Garlic essential oil can be particularly harsh on unprotected skin. First apply a carrier oil (like extra virgin olive oil) on the skin, or dilute the essential oil within a carrier oil.

Cooked Garlic:

Enzymes are denatured and activity reduced significantly when garlic is heated. Cooked garlic adds flavor to food, but reduces its antibiotic properties.

Dehydrated Garlic Powders:

Prepared by dehydrating garlic cloves, then grinding them into powder. A large portion of the allicin content is lost, losing some of the antibiotic and antifungal action of garlic (though not all of it). Dried garlic can still have therapeutic properties and benefits.

Aged Garlic Extract:

A cold-aging process where garlic is sliced, placed in an alcohol based extracting solution, and naturally cold-aged for up to twenty months without heat. Allicin decomposes, producing an odorless garlic that does not agitate the stomach of sensitive individuals and is readily digested. Many health benefits are retained, but it loses its antibiotic and antiviral activity.

Fresh Clove

When a sliced clove of garlic is rubbed over a cut, it will clean and sterilize a wound. For rheumatism, take a clove or two of crushed garlic with honey, two or three nights in a row. Garlic may also be used as an arthritic rub with one part chopped garlic mixed with two parts camphor oil.

For hemorrhoids, insert a clove of garlic into the rectum before bed (be sure to first protect the skin with a layer of extra virgin olive oil).

Hold a piece of garlic on each side of the mouth (between the teeth and cheek) at the onset of a cold. Colds will disappear within a few hours or a day. This is also good for coughs and sore throats.

Take up to twelve or more raw cloves per day for acute cases such as pneumonia, strep throat, or other serious diseases.

When taken internally, garlic effectiveness for lowering blood pressure is increased by adding cayenne.

Garlic Shooter:
from the Gilroy Garlic Festival Cook Book

Freshly squeezed juice of ½ Lemon (1-2 Tablespoons)
1-2 Tablespoons Water (optional)
1 clove Garlic, crushed

Put lemon juice and water into a cup. Add freshly crushed garlic clove. Immediately swirl cup to achieve a circling motion and drink in one gulp. The 'shooter' experience may be followed by an immediate feeling of rejuvenation called the 'shooter rush'.

Note:
Once the garlic is crushed, it should be used within ten minutes for best potency. Upon contact with the liquid, the garlic begins to 'heat'. If swallowed fast enough, the shooter can be taken without tasting garlic (it will still produce lung-healthy 'garlic breath' and great healing benefits).

Pickled Garlic:
There are lots of wonderful pickled garlic recipes out there, but most of them use heat in the cooking process. Heated garlic still has some of its medicinal properties, but they are greatly diminished.

One recipe my mom came up with was to take the leftover brine or juice from her favorite pickles and pour it over whole cloves and let it sit for two to four weeks. This gave it enough time for the brine to get into the clove, sweeten it up and lessen the amount of heat of the straight raw garlic. The best thing about it, is that all the benefits of raw garlic are retained, plus it tastes great! When my mom opens a jar around my kids it's gone in no time, they love it!

Decoction *Mullein Decoction:* (see MULLEIN preparations)

Syrup *Sore Throat and Coughs:*
Take the freshly expressed garlic juice mixed with honey (optional: add a small amount of cayenne, to tolerance) for

coughs and sore throats.

Tea

Garlic Water (Tea):

Crush one to four cloves of garlic and put in a cup of hot water. Leave to steep (covered) overnight. In the morning, filter and discard the pulp and drink the garlic-infused water for colds, fevers, tuberculosis, and blood diseases. Use the tea as an enema for worms and bowel infections.

Infused Oil

Garlic Oil:

Crush approximately 20 cloves of fresh garlic and put in a glass jar. Cover with 4 ounces extra virgin olive oil and stir. Top with a lid. The oil may be used within 3 hours, however, for best potency, solar macerate (soak in a liquid to soften and release constituents, with some time in the sun) for 2 weeks by shaking daily and putting the jar in the sun for a few hours each day for the first 3 days.

Water and garlic juice will sink to the bottom of the jar. Separate carefully by pouring the oil off without retaining any of the watery pulp. The finished oil must not contain water droplets. Filter the infused oil through several layers of clean, dry cheesecloth. Left-over pulp is great for garlic bread, soups, etc.

Properly label and store oil in tightly closed amber bottles, in a cool, dark place. Store in the refrigerator for six months to a year in this manner. Throw away if mold begins to form.

On Food:

Use the oil on fresh salads. It may also be used for cooking, but it will lose most of its medicinal properties when heated.

Ear Aches:

Put two to three warmed drops (to body temperature) in the ear, one to three times daily. Keep the ear up for a few minutes to let the oil absorb. Use a clean cotton ball in the ear if needed.

Infections:

The oil may also be taken internally to kill infection. Take one teaspoon every hour in a little lemon juice or water for fevers, intestinal infections, mucus of the stomach, colds and flu.

Take two teaspoons, three to four times daily for chronic colitis or ulcerated stomach conditions.

Rashes, Aches, Sore Muscles:

For skin problems, rub the oil directly onto the skin. It is also good for aches, sprains, rheumatic pains, sore muscles, and chapped or chafed hands.

Acne:

Rub pimples several times daily with garlic oil. Eruptions will disappear without leaving a scar, but this does not remove the cause. Purify the skin by cleansing the blood and colon internally.

Athlete's Foot:

Wash infected areas in hot, soapy water. Rinse and dry well. Massage in the garlic oil two or three times daily. Continue to apply once a week to prevent recurrence.

Poultices

Raw garlic may irritate or even burn skin if left on it for a length of time. To prevent this, rub extra virgin olive oil on the skin prior to applying garlic preparations.

Garlic Poultice:

Crush fresh garlic and add warm water and flour. Good for aches, pus and infections. After covering the area with olive oil, use on the chest for chronic bronchitis. Apply a poultice of freshly-grated garlic to ringworm.

Yeast Infection:

Blend one clove of garlic in one pint water. Strain, add one or more pints of water, and use as a douche.

Garlic Enema:

Blend 10 cloves garlic with one cup hot water. Cool, strain and use as an enema. Hold in as long as possible (usually a very short amount of time). Garlic kills germs and parasites, improves peristaltic action (intestinal contractions that propel bowel contents onward) and pulls mucus.

Optional:

Add catnip tea, chamomile or organic coffee. These help pull mucus, soothe colon cramping, and alleviate a lot of the burning sensation.

My family lovingly calls garlic enemas "the ring of fire". It is not comfortable, but it is extremely effective. When nothing else works at our house, we use garlic enemas. This technique has never failed us.

	<i>Catnip and Garlic Enema: (see CATNIP preparations)</i>
<i>Insecticide</i>	<p>Garlic Spray for the Garden: 12-15 chopped Garlic cloves 2 tablespoons, Mineral Oil 1/4 ounce Soap 9 cups Water</p> <p>Soak chopped garlic in mineral oil for 24 hours. Dissolve soap in water and slowly add it to the garlic mixture. Strain mixture through fine gauze before storing in a glass container. When using, dilute 1 part garlic mixture to 50 parts water. Use garlic spray for aphids, mites and small caterpillars. It provides plants some fungicide protection.</p>
Safety	<p>Direct topical application of garlic may cause skin irritation and even blistering. It is recommended to put on a layer of extra virgin olive oil before applying garlic preparations directly to skin.</p> <p>Garlic thins the blood. This should be taken into account prior to surgery and when taking blood thinning medications. Garlic is on the Federal Drug Administration's generally regarded as safe (GRAS) list, including during pregnancy, lactation and childhood.</p> <p>Common side effects include garlic breath and possible body odor. Initial stomach discomfort has also been reported. When garlic is not well-tolerated by the stomach, it is often due to having inflamed or ulcerated mucous membranes of the digestive tract. It is possible to ease discomfort by thoroughly chewing garlic or use garlic water as a substitute until the stomach is healed.</p>
Plant Profile	<p><i>Natural Habitat:</i> A native of central Asia, garlic is cultivated worldwide (although it does not flourish in cold climates).</p>
<i>Description</i>	<p>Garlic is a perennial herb (the plant grows back from a persistent rootstock in the spring) with a tall central stalk (2-3 feet) and long, narrow, flat, grass-like leaves that extend from the ground to the middle of the stem. The most utilized part of the plant is the segmented bulb, which breaks apart into 10-16 cloves. Mature bulbs are 2-3 inches in diameter. Garlic tastes somewhat like an onion but stronger, with its own distinctive flavor. Once the cloves are crushed or cut,</p>

the odor is intensely pungent.

In early summer, white to light purple flowers bloom in a cluster at the end of the plant's stalk, contained within a sheath. The sheath also contains the bulb. Small black seeds are later produced in wild garlic. Seeds do not mature in cultivated varieties (cloves are used to replant).

Growing Garlic

Planting:

Garlic grows well in sunny locations where the soil is rich, sandy and kept relatively moist. Separate individual cloves from the bulb just prior to planting in October or early spring, for harvesting the following summer. Space cloves (base side down, pointy side up) six to eight inches apart and one to two inches deep. For largest bulbs at harvest time, prune away flowering stems that shoot up in early summer; add compost in early spring to fertilize (avoid planting after heavy applications of fresh manure).

To minimize bulb diseases, do not over-water. Newly planted garlic needs moisture for its developing roots, but does not do well in sodden conditions. If rain does not fall, water deeply once a week. Gradually reduce watering as the weather warms up in the spring. Garlic needs a hot, dry summer to mature the bulbs.

*Harvesting
and Storage*

Dig bulbs after the tops have died down. Place in a single layer in a shaded spot to dry, then either cut away the tops (leaving about a two-inch stem), or plait the tops of the plants together. Hang plaits or loose bulbs in nets from the ceiling in a cool, dark place.
