

## GARLIC – THE WONDER HERB



### OVERVIEW:

Garlic is an herb. It is best known as a flavoring for food. But over the years, garlic has been used as a medicine to prevent or treat a wide range of diseases and conditions. The fresh clove or [supplements](#) made from the clove are used for medicine.

Garlic is used for many conditions related to the heart and blood system. These conditions include [high blood pressure](#), [high cholesterol](#), coronary [heart disease](#), [heart attack](#), and “hardening of the arteries” ([atherosclerosis](#)). Some of these uses are supported by science. Garlic actually may be effective in slowing the development of atherosclerosis and seems to be able to modestly reduce [blood pressure](#).

Some people use garlic to prevent [colon cancer](#), [rectal cancer](#), [stomach cancer](#), [breast cancer](#), [prostate cancer](#), and [lung cancer](#). It is also used to treat prostate cancer and [bladder cancer](#).

Garlic has been tried for treating an [enlarged prostate](#) ([benign prostatic hyperplasia](#); BPH), diabetes, [osteoarthritis](#), hayfever (allergic rhinitis), traveler's diarrhea, high blood pressure late in [pregnancy](#) (pre-eclampsia), [cold and flu](#). It is also used for building the immune system, preventing [tick bites](#), and preventing and treating bacterial and fungal infections.

Other uses include treatment of fever, coughs, headache, stomach ache, sinus congestion, gout, rheumatism, [hemorrhoids](#), asthma, [bronchitis](#), shortness of breath, [low blood pressure](#), [low blood sugar](#), high blood sugar, and snakebites. It is also used for fighting stress and fatigue, and maintaining healthy [liver function](#).

Some people apply garlic oil to their skin to treat fungal infections, warts, and corns. There is some evidence supporting the topical use of garlic for fungal infections like [ringworm](#), [jock itch](#), and athlete's foot; but the effectiveness of garlic against warts and corns is still uncertain.

There is a lot of variation among garlic products sold for medicinal purposes. The amount of allicin, the active ingredient and the source of garlic's distinctive odor, depends on the method of preparation. Allicin

is unstable, and changes into a different chemical rather quickly. Some manufacturers take advantage of this by aging garlic to make it odorless. Unfortunately, this also reduces the amount of allicin and compromises the effectiveness of the product. Some odorless garlic preparations and products may contain very little, if any, allicin. Methods that involve crushing the fresh clove release more allicin. Some products have a coating (enteric coating) to protect them against attack by stomach acids.

While garlic is a common flavoring in food, some scientists have suggested that it might have a role as a food additive to prevent [food poisoning](#). There is some evidence that fresh garlic, but not aged garlic, can kill certain bacteria such as E. coli, antibiotic-resistant Staphylococcus aureus, and [Salmonella](#) enteritidis in the laboratory.

How does it work?

Garlic produces a chemical called allicin. This is what seems to make garlic work for certain conditions. Allicin also makes garlic smell. Some products are made “odorless” by aging the garlic, but this process can also make the garlic less effective. It’s a good idea to look for supplements that are coated (enteric coating) so they will dissolve in the intestine and not in the stomach.

USES:

High blood pressure. Some research shows that garlic can reduce blood pressure in people with high blood pressure by as much as 7% or 8%. It also seems to lower blood pressure in people with normal blood pressure. Most studies have used a specific garlic powder product (Kwai, from Lichtwer Pharma).

“Hardening of the arteries” (atherosclerosis). As people age, their arteries tend to lose their ability to stretch and flex with age. Garlic seems to reduce this effect.

Colon cancer, rectal cancer, and stomach cancer. Eating garlic seems to reduce the risk of developing these cancers. However, garlic supplements don’t seem to offer the same benefit.

Tick bites. Scientists have compared the number of tick bites in people who take high doses of garlic compared to people who do not take garlic. High doses of dietary garlic, over about a five-month period, seem to reduce the number of tick bites.

Fungal infections of the skin (including ringworm, jock itch and athlete’s foot). Ringworm and jock itch respond to treatment with a garlic gel containing 0.6% ajoene (a chemical in garlic) that is applied to the skin. A garlic gel with a higher concentration of ajoene (1%) is needed to be effective against athlete’s foot. In fact, garlic gel with 1% ajoene seems to be about as effective against athlete’s foot as the medicine [Lamisil](#).

[Possibly Ineffective](#) for:

Diabetes. Taking garlic doesn’t seem to have any effect on blood sugar, either in people with diabetes or those without it.

Treating bacteria called helicobacter pylori (H. pylori) that can cause ulcers. Taking garlic by mouth for H. pylori infection used to look promising due to laboratory evidence showing potential activity against H. pylori. However, when garlic cloves, powder, or oil is used in humans, it doesn't seem to have any beneficial effect for treating people infected with H. pylori.

High cholesterol. Lots of studies — some better than others — have been done to measure the effectiveness of garlic in lowering cholesterol and another type of fat called triglycerides. The results have been conflicting. However, if only the high quality studies are considered, reviewers conclude that garlic does not significantly lower cholesterol or triglyceride levels.

Breast cancer. Taking garlic does not seem to reduce the risk of getting breast cancer.

Lung cancer. Taking garlic does not seem to reduce the risk of getting lung cancer.

Leg pain when walking due to poor blood circulation in the legs (peripheral arterial disease or PAD). Taking garlic, even for 12 weeks, does not seem to help people with this condition.

[Insufficient Evidence](#) for:

Benign prostatic hyperplasia (BPH). There is some preliminary evidence that taking garlic by mouth might be helpful for improving urinary flow, decreasing urinary frequency, and other symptoms associated with BPH.

Common cold. Preliminary research suggests garlic might reduce the frequency and number of colds when taken for prevention.

Corns. Early studies suggest that applying certain garlic extracts to corns on the feet twice daily improves corns. One particular garlic extract that dissolves in fat has an effect after 10-20 days of treatment, but a water soluble extract can take up to two months to show improvement.

High blood pressure in pregnancy (pre-eclampsia). Some preliminary clinical evidence suggests that taking a specific garlic extract (Garlet) 800 mg/day during the third trimester of pregnancy does not reduce the risk of developing pre-eclampsia in high-risk women.

Prostate cancer. Men in China who eat about a clove of garlic daily seem to have a 50% lower risk of developing prostate cancer. Whether this benefit applies to men in Western countries is not known.

Warts. Preliminary evidence suggests that applying a specific fat soluble garlic to warts on the hands twice daily removes warts within 1-2 weeks. A water-soluble garlic extract also seems to provide modest improvement, but only after 30-40 days of treatment.

More evidence is needed to rate garlic for these uses.

#### SIDE EFFECTS & SAFETY:

Garlic is **LIKELY SAFE** for most people when taken by mouth. Garlic can cause bad breath, a burning sensation in the mouth or stomach, heartburn, gas, nausea, vomiting, body odor, and diarrhea. These side

effects are often worse with raw garlic. Garlic may also increase the risk of bleeding. There have been reports of bleeding after surgery in people who have taken garlic. Asthma has been reported in people working with garlic, and other allergic reactions are possible.

When used on the skin, garlic is POSSIBLY UNSAFE. Using as a thick paste (poultice), garlic can cause damage to the skin that is similar to a burn.

#### Special Precautions & Warnings:

Pregnancy and breast-feeding: Garlic is LIKELY SAFE in pregnancy when taken in the amounts normally found in food. Garlic is POSSIBLY UNSAFE when used in medicinal amounts in pregnancy and breast-feeding. There isn't enough reliable information about the safety of using garlic on the skin if you are pregnant or breast-feeding. Stay on the safe side, and avoid use.

Children: Garlic is POSSIBLY SAFE when taken by mouth and appropriately for a short-term in children. But garlic is POSSIBLY UNSAFE when taken by mouth in large doses. Some sources suggest that high doses of garlic could be dangerous or even fatal to children; however, the reason for this warning is not known. There are no case reports available of significant adverse events or mortality in children associated with taking garlic by mouth.

Bleeding disorder: Garlic, especially fresh garlic, might increase bleeding.

Stomach or digestion problems: Garlic can irritate the gastrointestinal (GI) tract. Use with caution if you have stomach or digestion problems.

Surgery: Garlic might prolong bleeding. Stop taking garlic at least two weeks before a scheduled surgery.

#### INTERACTIONS:

Isoniazid (Nydrazid, INH) interacts with GARLIC

Garlic might reduce how much isoniazid (Nydrazid, INH) the body absorbs. This might decrease how well isoniazid (Nydrazid, INH) works. Don't take garlic if you take isoniazid (Nydrazid, INH).

Medications used for HIV/AIDS (Non-Nucleoside Reverse Transcriptase Inhibitors (NNRTIs)) interacts with GARLIC

The body breaks down medications used for HIV/AIDS to get rid of them. Garlic can increase how fast the body breaks down some medication for HIV/AIDS. Taking garlic along with some medications used for HIV/AIDS might decrease the effectiveness of some medications used for HIV/AIDS.

Some of these medications used for HIV/AIDS include nevirapine (Viramune), delavirdine (Rescriptor), and efavirenz (Sustiva).

Saquinavir (Fortovase, Invirase) interacts with GARLIC

The body breaks down saquinavir (Fortovase, Invirase) to get rid of it. Garlic might increase how quickly the body breaks down saquinavir. Taking garlic along with saquinavir (Fortovase, Invirase) might decrease the effectiveness of saquinavir (Fortovase, Invirase).

 [Moderate Interaction](#) Be cautious with this combination

Birth control pills (Contraceptive drugs) interacts with GARLIC

Some birth control pills contain estrogen. The body breaks down the estrogen in birth control pills to get rid of it. Garlic might increase the breakdown of estrogen. Taking garlic along with birth control pills might decrease the effectiveness of birth control pills. If you take birth control pills along with garlic, use an additional form of birth control such as a condom.

Some birth control pills include ethinyl estradiol and levonorgestrel (Triphasil), ethinyl estradiol and norethindrone (Ortho-Novum 1/35, Ortho-Novum 7/7/7), and others.

Cyclosporine (Neoral, Sandimmune) interacts with GARLIC

The body breaks down cyclosporine (Neoral, Sandimmune) to get rid of it. Garlic might increase how quickly the body breaks down cyclosporine (Neoral, Sandimmune). Taking garlic along with cyclosporine (Neoral, Sandimmune) might decrease the effectiveness of cyclosporine (Neoral, Sandimmune). Do not take garlic if you are taking cyclosporine (Neoral, Sandimmune).

Medications changed by the liver (Cytochrome P450 2E1 (CYP2E1) substrates) interacts with GARLIC

Some medications are changed and broken down by the liver.

Garlic oil might decrease how quickly the liver breaks down some medications. Taking garlic oil along with some medications that are changed by the liver can increase the effects and side effects of your medication. Before taking garlic oil talk to your healthcare provider if you take any medications that are changed by the liver.

Some medications that are changed by the liver include acetaminophen, chlorzoxazone (Parafon Forte), ethanol, theophylline, and drugs used for anesthesia during surgery such as enflurane (Ethrane), halothane (Fluothane), isoflurane (Forane), and methoxyflurane (Penthrane).

Medications changed by the liver (Cytochrome P450 3A4 (CYP3A4) substrates) interacts with GARLIC

Some medications are changed and broken down by the liver.

Garlic might increase how quickly the liver breaks down some medications. Taking garlic along with some medications that are broken down by the liver can decrease the effectiveness of some medications. Before taking garlic talk to your healthcare provider if you are taking any medications that are changed by the liver.

Some medications changed by this liver include lovastatin (Mevacor), ketoconazole (Nizoral), itraconazole (Sporanox), fexofenadine (Allegra), triazolam (Halcion), and many others.

Medications that slow blood clotting (Anticoagulant / Antiplatelet drugs) interacts with GARLIC

Garlic might slow blood clotting. Taking garlic along with medications that also slow clotting might increase the chances of bruising and bleeding.

Some medications that slow blood clotting include aspirin, clopidogrel (Plavix), diclofenac (Voltaren,

Cataflam, others), ibuprofen (Advil, Motrin, others), naproxen (Anaprox, Naprosyn, others), dalteparin (Fragmin), enoxaparin (Lovenox), heparin, warfarin (Coumadin), and others.

Warfarin (Coumadin) interacts with GARLIC

Warfarin (Coumadin) is used to slow blood clotting. Garlic might increase the effectiveness of warfarin (Coumadin). Taking garlic along with warfarin (Coumadin) might increase the chances of bruising and bleeding. Be sure to have your blood checked regularly. The dose of your warfarin (Coumadin) might need to be changed.

**GARLIC DOSING:**

The following doses have been studied in scientific research:

**BY MOUTH:**

For high blood pressure:

Garlic extract 600-1200 mg divided and given three times daily.

Standardized garlic powder extract containing 1.3% alliin content has been studied for this use.

Aged garlic extract 600 mg to 7.2 grams per day has also been used. Aged garlic typically contains only 0.03% alliin.

Fresh garlic 4 grams (approximately one clove) once daily has also been used. Fresh garlic typically contains 1% alliin.

For prevention of colon, rectal, and stomach cancer: fresh or cooked garlic 3.5-29 grams weekly.

**APPLIED TO THE SKIN:**

For fungal skin infections (ringworm, jock itch, athlete's foot): garlic ingredient ajoene as a 0.4% cream, 0.6% gel, and 1% gel applied twice daily for one week.