

Garlic

**experience its
health-promoting power**

Garlic is a common herb that provides extraordinary health benefits. To the superstitious, garlic is a talisman against vampires. To good cooks, garlic adds flavor to almost any recipe. And to those familiar with natural remedies, garlic's benefits extend to the medicine cabinet, too. This humble bulb has an extensive and varied history of use against bacteria, viruses, fungi, gangrene, blood clots, and even cancerous tumors.

An herb in the *Liliaceae* family, this pungent-tasting and -smelling plant grows beneath the soil. Garlic contains valuable nutrients such as thiamin, calcium, magnesium, iron, potassium, phosphorous, zinc, protein, vitamin C, germanium, and selenium. Researchers continue to discover garlic's wide range of health benefits.

Antibiotic activity

Although garlic has long been a plant of the common people, it belongs to the elite of therapeutic herbs. In Russia, a garlic compound is used as an antibiotic. Garlic is thought to block bacterial growth by undermining the germs' oxygen metabolism.

Dozens of studies support garlic's antibiotic activity. Garlic has been shown to destroy the bacteria that causes tuberculosis, food poisoning, and women's bladder infections, according to *The Healing Herbs* by Michael Castleman.

Not only does garlic appear to neutralize harmful bacteria, it protects "friendly" bacteria. Garlic apparently changes the flora (bacteria) living in the intestine. "Good" bacteria aids digestion, while "bad" bacteria causes putrefaction (decay) and can weaken the immune system. Studies indicate that garlic treatments have been linked to an increase in healthy bacteria and a decrease in harmful bacteria.

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Digestive aid

Those troubled with gas and other digestive mischief can turn to garlic for relief. Besides decreasing the amount of decaying bacteria, garlic stimulates digestion by increasing gastric juices and speeding up bowel movements, according to the *New Encyclopedia of Common Diseases* by the editors of *Prevention* magazine.

In *Honey, Garlic & Vinegar: Home Remedies and Recipes*, author Patrick Quillin, Ph.D., R.D., C.N.S., recommends garlic for diarrhea, gastroenteritis, dysentery, colitis, food poisoning, constipation, indigestion, and hemorrhoids.

Anti-fungal

Garlic is also effective against fungal infections such as vaginal yeast infections and athlete's foot. In addition, Chinese researchers report that garlic, administered intravenously, successfully treated cryptococcal meningitis, an often fatal fungal infection.

In *Total Wellness* author Joseph Pizzorno, N.D., states that garlic has demonstrated a broad range of activity against 17 strains of fungi. In fact, garlic worked better than nystatin—a medication commonly used to treat fungal infections—against disease-causing yeast.

Anti-viral

Garlic helps protect against viruses. The sulphides and disulphides in garlic are said to bond with the virus, preventing it from re-forming. Studies indicate garlic can protect against the influenza virus. It has also been shown to stimulate antibody production when given with an influenza vac-

cine, according to *The Healing Power of Herbs* by Michael T. Murray, N.D. The most significant anti-viral compounds in garlic appear to be allicin, allyl methyl thiosulfinate, and methyl allyl thiosulfinate.

Healthy heart

Increasing evidence indicates that garlic may help the cardiovascular system. In studying the diets of seven countries, scientists observed that populations in Greece and Italy—where garlic is a food staple—had fewer coronary problems than populations in Britain, Finland, Holland, and the United States, where garlic is less commonly used.

Garlic is especially well-known for its cholesterol-lowering properties. It has been shown to lower total cholesterol and raise HDL ("good") cholesterol. One double-blind, randomized study investigated the impact of standardized garlic powder tablets on 42 healthy, middle-aged men and women. After 12 weeks, researchers found a significantly greater drop in LDL ("bad") cholesterol in the garlic-treated group than in the placebo group, according to "Can garlic reduce levels of serum lipids? A controlled clinical study," published in *The American Journal of Natural Medicine* (Vol 94, June 1993).

In *Herbal Prescriptions for Better Health*, author Donald J. Brown, N.D., writes, "Although garlic does not lower serum cholesterol and triglycerides as aggressively as drugs such as Mevacor, it is far safer for long-term use. I highly recommend speaking with your doctor about a four-month trial with garlic before jumping on the drug bandwagon."

The cardiovascular benefits of garlic are also due to its antioxidant effects. In a small, placebo-controlled, randomized, double-blind study, 10 participants took 600 mg per day of garlic. Researchers noted that the garlic supplements exerted an antioxidant effect on certain lipoproteins. (Lipoproteins are lipids encased in proteins. Lipids need to be enveloped in protein because they are not water-soluble. Although lipoproteins are not purely fats, they help distribute fats to the body's tissues through the blood and lymph systems, explains *The Kellogg Report: The Impact of Nutrition, Environment & Lifestyle on the Health of Americans*, by Joseph D. Beasley, M.D., and Jerry J. Swift, M.A.) In this study, the susceptibility to LDL oxidation was reduced by 34 percent in the garlic-treated group. In addition, the researchers observed no side effects. The study results were published in *Lipids* (Vo 28, No 5, 1993).

Garlic makes blood platelets less sticky, so they won't clump together to form harmful blood clots. Garlic also appears to help disintegrate clots that are beginning to form. It increases the blood's ability to dissolve the chemical fibrin. Fibrin is responsible for making blood clots thick and strong. Blood clots are known to trigger strokes and heart attacks.

Finally, garlic demonstrates a mild blood-pressure-lowering effect. This may be attributed to its ability to promote efficient circulation, writes Dr. Brown.

Anti-cancer agent

If its resumé weren't impressive enough, garlic is also believed to have some tumor-fighting abilities. In one study, subjects who ate two to three cloves of garlic a day for three weeks showed significantly more activity in the specific white blood cells that attack tumors. These white blood cells were placed in a laboratory dish with

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cancerous cells. The garlic eaters' white blood cells killed over twice as many tumor cells as did the white blood cells of non-garlic eaters.

Garlic contains germanium and selenium. Germanium intensifies the activity of natural killer (NK) cells, which can stop the spread of cancer cells, explains *An Alternative Medicine Definitive Guide to Cancer*, by W. John Diamond, M.D., and W. Lee Cowden, M.D., with Burton Goldberg. Selenium is a powerful antioxidant, neutralizing free radicals that would otherwise damage cells.

Several population and laboratory studies confirm garlic's anti-cancer clout. One compound, S-allylcysteine (SAC), occurs in very small amounts in garlic. One study focused on SAC's effect after oral and intravenous administration in animals. It was reported to help protect the liver and combat tumors. SAC is rapidly and easily absorbed in the gastrointestinal tract, and is distributed mainly to the plasma, liver, and kidney. "SAC may be one of the most important compounds to quantify in garlic preparations," according to the authors of a report published in *Planta Medica* (Vol 60, 1994).

A recent review of garlic's anti-cancer effects was featured in the *Journal of Nutrition* (Sept 2001). "Experimentally, garlic and its associated sulfur components are reported to suppress tumor incidence in breast, colon, skin, uterine, esophagus, and lung cancers," the authors explained. "Since garlic and its constituents can suppress carcinogen formation, carcinogen bioactivation, and tumor proliferation, it is imperative that biomarkers be established to identify which individuals might benefit most and what intakes can occur with ill consequences."

Herbal expectorant and more

Garlic has been used historically as a natural expectorant. Expectorants help loosen mucus by making bronchial

secretions thinner and easier to cough up. In *A Modern Herbal*, Mrs. M. Grieves recommends "syrup of garlic" for bronchial asthma.

Garlic also has historically been used to treat a host of other common ailments including intestinal parasites, inflammation, diabetes, ear infections, nausea, vomiting, colic, and indigestion. In addition, garlic is believed to increase the body's ability to absorb B1. Because of this effect, garlic is said to help in cases of chronic inflammation of the nerves, mental depression, and liver and gall bladder damage. During World War I, garlic was applied as an antiseptic to wounds to control the formation and discharge of pus. In World War II, garlic was known to reduce the incidence of septic poisoning and gangrene among wounded soldiers.

More recently, an article featured in *Journal of Nutrition* (Vol 131 2001) demonstrated that aged garlic extract, along with vitamins C and E, "have beneficial effects in lessening the incidence and severity of crisis and reducing anemia in sickle cell disease."

The "stinking rose"

Garlic has a colorful past. In ancient Egypt, it has been said that slaves revered garlic and refused to work when it was withheld. In the mid 17th century, garlic was reputed to protect individuals against the Great Plague. Today, new generations are re-discovering the medicinal bounty of this natural substance.

Although garlic offers many health-promoting benefits, it stinks. In fact, "the stinking rose" was the folk name for garlic in ancient Rome, where the population used it as food and med-

icine. Not everyone was as open-minded as the working-class ancient Romans. According to *The Book of Garlic* by Lloyd J. Harris, the upper classes of Egypt, Greece, Rome, Britain, and Colonial America looked down on garlic, presumably because of the way it made one smell. In fact, the poet Percy Shelly wrote from Italy to a friend, "What do you think? Young women of rank eat—you will never guess what—garlick!"

Fortunately, with increased awareness of garlic's many health benefits, that snobbery is dissipating. In fact, today "the stinking rose" is the proud name of a garlic restaurant in San Francisco's North Beach area, which offers items such as "Forty-Clove Chicken" and garlic ice cream.

Traditional herbal breath fresheners can be used to counteract the dreaded "garlic breath:" parsley, fennel, and fenugreek. Milk is also believed to cut the smell of garlic.

Unfortunately, uncooked garlic may lead to stomach upset, warns clinical nutritionist Barbara Levine of the New York Hospital—Cornell University Medical Center in Manhattan. She claims that cooking may alter garlic's organic sulfur compounds in beneficial ways, resulting in a greater health-promoting impact.

Research confirms its value

Garlic is fast becoming one of the most widely studied herbs of our time. According to the American Botanical Council, garlic has been the subject of hundreds of scientific studies and more than several dozen clinical studies.

These studies have shown garlic extracts to lower blood pressure,

improve cholesterol levels, and help reduce colon cancer tumors. Garlic has been shown to be a very potent antioxidant as well.

Garlic has become so important and scientifically interesting, an international symposium was held in Berlin to discuss the far-reaching benefits of this effective medicinal herb. "The symposium on garlic is further documentation of the scientifically validated cardiovascular benefits of this increasingly popular remedy," concluded Mark Blumenthal, executive director of the American Botanical Council.

A key part of the international symposium discussed product quality. With the increase in garlic's popularity, there are countless garlic supplements on the market. How do you know if the product will provide the proper therapeutic benefit? The symposium concluded, "Positive and,

above all, reproducible therapeutic results can only be expected from standardized proprietary medicinal garlic products."

Standardized herbal products will explain what active compounds the product is standardized for and guarantees that each capsule contains that same amount of active ingredient.

The symposium also suggested that the label should clearly state whether the preparation is of garlic powder or garlic oil. "For standardized powder preparations, several reasons make it advisable to state the content of both alliin and allicin."

As for dosage, oftentimes, when dealing with natural substances, more is not necessarily better. In fact, excessive amounts of certain compounds may be toxic. However, garlic is safe even at high doses, although it could lead to stomach upset. You just need

to make sure you are getting the proper garlic product. For more assistance in choosing a garlic product, visit your health food store.

Garlic is a known blood thinner. For this reason, individuals who are scheduled to have surgery or are on blood thinning prescription medications, should discuss the use of garlic with their doctor and most likely will be advised to avoid garlic supplements.

Garlic is considered safe, and scientific research has shown it to be helpful for a number of conditions. And it is as close as your kitchen cupboard or your backyard garden. In addition, an ample selection of garlic supplements and garlic-containing formulations are available over-the-counter at health food stores throughout North America.

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