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***Allium sativum* and its health benefits: An overview**

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Abstract

Herbs are God and nature's gifts to us. While the use of herbs and remedies has brought excellent results for many people, garlic health benefits include antibacterial and anti-septic properties and it is used extensively in treating conditions such as candida overgrowth. Garlic also functions as an excellent mosquito repellent. It has been established that garlic contains antioxidants that help destroy free radicals. Free radicals when accumulated have the potential to create a lot of damage at the cellular level, which then results in premature aging. Garlic has long been considered a herbal "wonder drug", with a reputation in folklore for preventing everything from the common cold and flu. It has been used extensively in herbal medicine. Garlic does indeed have scientifically-proven medicinal properties. It contains a substance called Allicin, which has anti-bacterial properties that are equivalent to weak penicillin. Raw garlic is used by some to treat the symptoms of acne and there is some evidence that it can assist in managing. Garlic has been used for many years to prevent health problems including colds, flu, menstrual pain, high blood pressure, coughs, gastrointestinal problems, atherosclerosis, and bronchitis. Garlic has been proven to kill various fungal infections, viruses, bacteria, and intestinal parasites. The use of garlic in cultural and traditional settings may differ from concepts accepted by current Western medicine. When considering the use of herbal supplements, consultation with a primary health care professional is advisable. Additionally, consultation with a practitioner trained in the uses of herbal/health supplements may be beneficial, and coordination of treatment among all health care providers involved may be advantageous. Garlic appears to have anti-bacterial and anti-viral properties.

Key words: Lahsun, domestic uses, allicin, traditional use.

Introduction

Garlic is most popular for its effectiveness of cardiovascular wellness. Garlic is effective treating atherosclerosis, high cholesterol, respiratory infections, and triglyceride levels. Alliin is the primary ingredient found in garlic. This chemical is similar chemically to cysteine, an amino acid containing sulfur, and possesses no odor. After garlic is crushed, alliin is converted into allicin, the compound that gives garlic its strong smell and numerous health benefits. Garlic has a very long folk history of use in a wide range of ailments, particularly ailments such as ringworm, Candida and vaginitis where its fungicidal, antiseptic, tonic and parasiticidal properties have proved of benefit. The plant produces inhibitory effects on gram-negative germs of the typhoid-paratyphoid-enteritis group, indeed it possesses outstanding germicidal properties and can keep amoebic dysentery at bay. It is also said to have anticancer activity. It has also been shown that garlic aids detoxification of chronic lead poisoning. Garlic is claimed to help prevent heart disease (including high cholesterol, high blood pressure, and atherosclerosis) and cancer. The list is long when it comes to its uses as a remedy. This list includes wounds, ulcers, skin infections, flu, athlete's foot, some viruses, strep, worms, respiratory ailments, high blood pressure, blood thinning, cancer of the stomach, colic, colds, kidney problems, bladder problems, and ear aches, to name a few. Garlic can be eaten raw in order to reduce nasal congestion and also in helping to reduce the amount of mucous in the nasal cavities. Garlic is also said to aid in the cleansing of the body's blood. And, true or not, it has been said that if you cut several onions in half and place them around your home, you and your family will not get any more colds. Eating garlic on regular basis may provide some protection against gastric cancer. Garlic has a very strong flavour, and it is difficult to eat in raw condition. It needs to be either mixed with other foods or to be added it in food while cooking. Allicin gets distributed throughout the meal, providing you with the benefits of its anti-carcinogenic and antiseptic properties. Garlic is considered as something of a miracle food and uses it as a home remedy for many complaints. The healing properties of garlic as an antiviral and anti bacterial agent are now backed with scientific evidence. Scientists have shown that the compounds in garlic are good for heart. They lower blood pressure, reduce cholesterol production in the liver, suppress harmful cholesterol and raise level of the beneficial high-density lipoproteins in the blood. Garlic is considered one of the most important herbal/Ayurvedic supports for blood pressure and cholesterol reduction. Garlic also has contains germanium which is an anti cancer agent and garlic has more of it than any other herb. In some lab tests, garlic was fed to a group of mice. Those that received the garlic showed no cancer development while those who were not fed garlic showed at least some. In some parts of the world, garlic has also been shown to retard tumor growth in human subjects. Garlic can also help strengthen your body's defenses against allergies as well as helping in loosening plaque from the artery walls. It is also useful in helping regulate your blood sugar levels and is the best choice for killing and expelling parasites such as pin worms from the human body. Garlic is also effective in treating diabetes. As mentioned earlier, garlic contains a certain chemical compound called allicin.

Scientific classification

Kingdom: Plantae

Division: Magnoliophyta

Class: Liliopsida

Order: Asparagales**Family:** Alliaceae**Genus:** *Allium***Species:** *Allium sativum***Properties**

When crushed, *Allium sativum* yields allicin, a powerful antibiotic and antifungal compound (phytoncide). However, due to poor bioavailability, it is of limited use for oral consumption. It also contains alliin, ajoene, enzymes, vitamin B, minerals, and flavonoids. The composition of the bulbs is approximately 84.09% water, 13.38% organic matter, and 1.53% inorganic matter, while the leaves are 87.14% water, 11.27% organic matter, and 1.59% inorganic matter. The phytochemicals responsible for the sharp flavor of garlic are produced when the plant's cells are damaged. When a cell is broken by chopping, chewing, or crushing, enzymes stored in cell vacuoles trigger the breakdown of several sulfur-containing compounds stored in the cell fluids. The resultant compounds are responsible for the sharp or hot taste and strong smell of garlic. Some of the compounds are unstable and continue to evolve over time. Among the members of the onion family, garlic has by far the highest concentrations of initial reaction products, making garlic much more potent than onions, shallots, or leeks.

Food Value of Garlic

An analysis of garlic shows it to contain high percentage of minerals and vitamins. It also contains traces of iodine, sulphur and chlorine.

Food Value	Minerals and Vitamins
Moisture - 62.0%	Calcium - 30 mg
Protein - 6.3%	Phosphorus - 310 mg
Fat - 0.1%	Iron - 1.3 mg
Fibre - 0.8%	Vitamin C - 13 mg
Minerals - 1.0%	Small amount of Vitamin B Complex
Carbohydrates - 29.8%	* Values per 100 gm's edible portion

Medicinal Uses

In herbal Medicine, garlic has been traditionally used for asthma, deafness leprosy, bronchial congestion, arteriosclerosis i.e. hardening of arteries, fevers, worms and liver gall bladder trouble. Garlic is good for the heart, a food for the hair and a stimulant to appetite. In recent times, experiments have confirmed several ancient beliefs about the healing value of this herb. These experiments have in fact proven much greater power of garlic than known previously. The unpleasant odour in garlic is due to its sulphur content. This mineral is content to a greater degree in its volatile oil, which has remarkable medicinal values, some of the medicinal uses are:

Chest diseases: Garlic has proved effective in certain diseases of the chest. It reduces stinking of the breath in pulmonary gangrene. Garlic is also useful in the treatment of tuberculosis. In Ayurveda a decoction of garlic boiled in milk is considered a wonderful drug for tuberculosis. One gram of garlic, 250ml of milk and a liter of water are boiled together till it reduces to one

fourth of the decoction. It should be taken thrice a day. Taken in sufficient quantities, it is marvelous remedy for pneumonia.

Asthma: Three cloves of garlic boiled in milk can be used every night with excellent results in asthma. A pod of garlic is peeled, crushed and boiled in 120ml pure malt vinegar. It is strained after cooling and an equal quantity of honey is mixed and preserve in a clean bottle. One or two teaspoon of this syrup can be taken with fenugreek decoction in the evening and before retiring. This has been found effective in reducing the severity of asthmatic attacks.

Digestive disorders: Garlic is one of the most important herbs for the digestive systems. It stimulates peristalsis or movement of the intestines and the secretion of the digestive juices.

High Blood Pressure: Garlic is one of the most effective remedies for lowering blood pressure. Pressure and tension are reduced because it has the power to ease the spasm of the small arteries. It also modifies the pulse and modifies the heart rhythm.

Rheumatism: In Russia garlic is used extensively in the treatment of rheumatism and associated diseases. Even in Britain, garlic is recommended for Rheumatic afflictions.

Heart attack: Garlic helps to break up cholesterol in the blood vessels, thereby preventing any hardening of arteries which leads to high blood pressure and heart attack. If a patient takes garlic after a heart attack, the cholesterol level comes down. Though the earlier damage may not be repaired, the chances of new attacks are reduced.

Blood Disorders: The herb is regarded as a rejuvenator. It has been found to help remove toxins, revitalize the blood, stimulate circulation and promote intestinal flora, or colony of bacteria that prevent infection by harmful bacteria.

Skin Disorder: Garlic has been used successfully for a variety of skin disorders. Pimples disappear without a scar when rubbed with raw garlic several times a day. Even very persistence forms of acne in some adults, have been healed with garlic. Garlic rubbed over ringworm, gives quick relief. The area is burnt by the strong garlic and later the skin peels off and the ring worm is cured.

Other uses: Garlic has a pronounced aphrodisiac effect. It is a tonic for the loss of sexual power from any causes. It also treats sexual debility and impotency caused by overindulgence in sex and nervous exhaustion from dissipating habit. It is said to be especially useful to old men with nervous tension and falling libido.

Uses and Benefits:

Garlic is one of the oldest herbal remedies; it was a favored food in the Old Testament and has been accorded almost magical properties in various cultures. It was considered a cure all and aphrodisiac. Garlic has been employed to treat infections, wounds, respiratory conditions, diarrhea, rheumatism, heart disease, diabetes, and many other disorders. Currently, it is most often used as an antithrombotic and antioxidant herb to help prevent heart disease, atherosclerosis, and cancer. It is widely promoted to reduce abnormal cholesterol and blood pressure levels.

Pharmacology

There is an enormous body of literature on garlic, and the following is a simplification of the controversial reports on its constituents and properties. Garlic contains pharmacologically active, organic sulfur compounds; the main ones are S-alkylcysteine sulfoxides and their precursors, derivatives of the amino acid cysteine such as alliin (S-allyl-L-cysteine sulfoxide). The active constituent is thought to be allicin (diallyldisulfideS-oxide) or a variety of allicin byproducts,

which are formed only when the garlic bulb is cut, chewed, or crushed. This releases the enzyme alliinase from cells, which converts alliin into the unstable allicin. Allicin and related diallyl sulfide dimerization products provide the characteristic garlic odor, and are considered to be the most important pharmacologic and medicinal compounds-many commercial products are standardized to their allicin yield.

HEALTH BENEFITS OF GARLIC

Garlic the broad-spectrum natural antibiotic

As these enzymes are found in a large variety of different infectious organisms, including bacteria, viruses and fungi, it becomes clear why allicin is such a broad-spectrum microbial agent which is capable of treating so many kinds of infections. Harmful and infectious organisms do not become resistant or immune to garlic. The study also found that allicin blocks the two groups of enzymes by reacting with sulfhydryl (SH) groups, or thiols, which is an important component of these enzymes. And, because the organisms are unlikely to change or modify the enzymes which play a critical part in their activity, it is thus very unlikely that they would become resistant to allicin; this is totally in contrast to pharmaceutical drugs and antibiotics. Increasingly, there is a big problem with harmful and infectious organisms adapting and mutating to become drug-resistant, dangerous strains which do even more damage to us and animals.

Healing Properties

Garlic has many healing properties, but the most research has been done on its potential to help reduce heart disease. Garlic has been intensively studied, and numerous large studies have shown that taking supplements that mimic fresh garlic can significantly lower LDL cholesterol levels without hurting beneficial HDL cholesterol levels. Garlic appears to act by blocking the liver from making too much LDL cholesterol. There is also some evidence that garlic supplements can mildly lower blood pressure by dilating or expanding blood vessels. And garlic helps prevent blood clots -- and therefore reduces the risk of heart attack and stroke -- by decreasing the stickiness of platelets, which are tiny disk-shaped bodies in the blood that are necessary for blood clotting. When platelets are too sticky, they form clumps that can adhere to artery walls and contribute to clogged arteries. Garlic has also been shown to reduce pain and other symptoms in people with rheumatoid arthritis. And it reduces the size of some cancerous tumors and helps prevent some cancers, particularly those in the intestines. However, the research on this is not nearly as far advanced as that for garlic and heart disease, so do not use garlic supplements without consulting with a natural health care professional. One of the oldest uses of garlic, however, is as an antibiotic. Garlic kills a range of microbes, including viruses, bacteria, fungi, and parasites, and can be effective against such conditions as athlete's foot, thrush (a fungal infection of the mouth), viral diarrhea, and the ulcer-causing bacteria *Helicobacter pylori*. Only fresh garlic or supplements that mimic it have these effects.

Garlic for Health

Today, we know garlic is an excellent herb for creating and maintaining overall health, but it also has many lesser known, but powerful qualities. For example, many people don't know that it's a naturally powerful antibiotic. This natural antibiotic is effective against toxic bacteria, viruses, and fungus. Available in pills, capsules, liquid and actual raw cloves, garlic is one of the most popular healthy herbs around today. Garlic helps platelet stickiness or aggregation to help reduce

blood coagulation, and promote heart health. The antioxidant properties of garlic help scavenge harmful free radicals, which can damage LDL (bad) cholesterol in the blood stream. Garlic also promotes increased bile production to help reduce levels of fat in the liver. Garlic pills also help ward off coughs and colds.

Garlic and Heart.

The positive effect of garlic on your circulatory system is extremely well documented and it has been proved to: lower blood pressure decrease platelet aggregation lower serum triglycerides and LDL-cholesterol (the bad type) levels increase serum HDL-cholesterol (the good type) and fibrinolysis (the process through which the body breaks up blood clots.) Plus it stimulates the production of nitric oxide in the lining of blood vessel walls, a substance that helps them to relax. As a result of these beneficial actions garlic helps to prevent arteriosclerosis and thereby reduces the risk of heart attack or stroke. Two or three cloves a day have cut the risk of subsequent heart attacks in half in heart patients. One reason for these beneficial effects may be garlic's ability to reduce the amount of free radicals in the bloodstream. According to a study published in Life Sciences, a daily dose of 1 ml/kg body weight of garlic extract for a period of 6 months resulted in a significant reduction in oxidant (free radical) stress in the blood of arteriosclerosis patients. It's positive effect on the circulatory system improves blood flow throughout the body so has even been hailed as a cure for impotence.

Garlic and Cancer

Current research has shown that a number of readily available foods such as garlic and onions that make up a healthy diet, actually have a major impact on cancer prevention. The protective effect of garlic seems to be greater than that of onions, even though onion consumption has been shown to reduce the risk of stomach cancer. These cancer fighting foods seem to have the ability to interfere with the development of cancerous tumors. The October 2000 issue of the American Journal of Nutrition had a summary of a number epidemiologic studies which showed that people who consumed cooked or raw garlic on a regular basis compared to those that ate little or none had about half the risk of stomach cancer and one-third less risk of colorectal cancer. This remarkable little bulb now tops the American National Cancer Institute's list of potential cancer-preventative foods. It contains multiple anticancer compounds and antioxidants, more than 30 at the last count, which such powerful compounds as quercetin, diallyl sulphide, allin and ajoene. These have the ability to block cancer causing agents such as nitrosamine and Aflatoxins which have been specifically linked to stomach, lung and liver cancer. Garlic's ajoene and allicin have also been shown to retard cancer cells as a type of natural chemotherapy.

The Iowa Women's Health Study discovered that women who included garlic in their daily diet had lower risks for colon cancer. Meat cooked at high temperatures (well done to burnt) can produce carcinogenic (cancer producing) chemicals and research has recently discovered that when meat is cooked with garlic this effect is limited. The ten best groups of anti-cancer foods include: berries and citrus fruits, cruciferous vegetables, garlic and onions, green tea, omega 3 essential fatty acids, olive oil, tomatoes, soy products, red wine and dark chocolate.

Garlic and the Brain

Studies conducted on animals have shown improvement in brain function after eating garlic. It is possible that antioxidants in garlic neutralize and destroy the free radicals which have

accumulated in the body. If so, this will make garlic useful in treating persons who suffer from Alzheimer's disease which is caused by free radical accumulation. Researchers in China have also shown that the sulfur compound sallylcystein found in garlic prevents the degeneration of the brain's frontal lobes. Thus, eating garlic may even make one more intelligent.

Garlic and Improvement of Blood Circulation

The health medicinal benefits of garlic include improving blood circulation. Garlic contains a certain chemical compound called allicin which gets converted to another compound called ajoene. Ajoene works as an effective suppressant on thrombi or blood cholesterol in the human body, thereby working as a blood thinner. It is thus extremely useful in treating conditions like atherosclerosis and thrombosis, which are caused by thickening of blood.

Garlic and Blood Clots

Another of the health medicinal benefits of garlic is its effects on blood clots. Ajoene, a compound which is produced after garlic is crushed or minced, is said to be an anti-clotting substance, reducing the formation of blood clots. Studies at Saarland University in Germany have also shown that compounds present in garlic help blood clots to dissolve more quickly; they improve the fluidity of blood, too. In India, it is said that 50 persons who ate 3 cloves of raw garlic a day experienced improvements in blood clotting time and clot dissolving activity of about 20%.

Garlic and the Immune System

Not surprisingly the presence of all these antioxidants in garlic have a very positive effect on the immune system in general and can therefore protect the body against all types of bacterial and viral attacks. Research has recently even shown it to have an inhibiting effect on MSRA which is currently reeking such havoc in U.K. hospitals. Garlic also acts as a good cold medication, decongestant and expectorant. It is a surprisingly good source of vitamins C, B6 and the minerals selenium and manganese all of which have long been associated with immune system boosting as well as other benefits.

Garlic Promotes Weight Control

Allicin is the most potent substance found in garlic and this has been shown to not only lower blood pressure, insulin and triglyceride levels in laboratory animals fed a sugar rich diet, but also to prevent weight gain. A study published in the American Journal of Hypertension reported that animals who developed high insulin levels, high blood pressure, and high triglycerides were given either allicin or served as a control. Although all of the animals consumed the same amount of food, weight rose only in the control group whereas the animals who were being supplemented with allicin maintained stable weight or a slight decrease was actually noticed. The researchers concluded that allicin may be of practical value for weight control.

Home Remedies

Garlic is an invaluable medicine for asthma, hoarseness, coughs, difficulty of breathing, and most other disorders of the lungs, being of particular virtue in chronic bronchitis, on account of its powers of promoting expectoration. An older remedy for asthma, that was most popular, is a syrup of Garlic, made by boiling the garlic bulbs till soft and adding an equal quantity of vinegar to the water in which they have been boiled, and then sugared and boiled down to a syrup. The

syrup is then poured over the boiled garlic bulbs, which have been allowed to dry meanwhile, and kept in a jar. Each morning a bulb or two should be taken, with a spoonful of the syrup.

For ear infections: Wrap a small piece of garlic in some tissue, and insert it into the ear. Leave it there overnight if possible. Pain is almost immediately removed and the infection tends to start clearing up overnight.

For scratchy throats: Put a small slice of garlic in your mouth and suck on it for 10-15 minutes. You can put it between your teeth and cheek, then scratch it with your teeth a little to help stimulate juice from the garlic slice. This juice slides down your throat and removes the pain. Garlic can heal the pain caused by insect bites like those of scorpions and centipedes. The juice of fresh garlic mixed with salt can be applied to bruises, sprains and ringworms. At the first sign of a cold, chop up 4 cloves of raw garlic and eat or use it as a garnish in soups etc. Cut raw garlic and rub the cut edge on the tooth and gums a couple of times a day to stop toothache. Take fresh garlic cloves and crush them, apply to warts until they disappear. Crush a clove or two onto a dessert spoon then add olive oil and down the hatch. you get the benefits of raw garlic with none of the breath issues.

Garlic to clear sinuses: Melt some butter and add minced garlic cloves, spread on toast and eat. Garlic for herpes. Take a garlic clove and cut in half. Eat one half and take the other half and rub into the affected areas. Use raw garlic juice on rashes and bug bites, it stops the itching immediately. 8 to 10 of garlic juice mixed with 2 TBLS of honey four times a day cures a persistent cough.

Garlic for tonsillitis: Peel a clove of garlic and cut them in half lengthwise. Boil for a couple of minutes in about 1.5 cup water and add a pinch of salt, teaspoon of butter, a pinch of pepper and sprinkle with nutmeg. Cut a garlic clove into small pieces. Swallow them all in one go with a little water to cure bloating, stomach cramps and constipation. 10 drops of garlic juice with 2 teaspoon of honey cures asthma.

Recommended Daily Intake of Garlic

There is no set Recommended Daily Allowance of garlic. As with any herb or supplement, too much may not be beneficial and garlic is no exception. Eating too much garlic can irritate the digestive tract. An amount that is both beneficial and safe for those who enjoy fresh garlic is eating 1 to 2 cloves daily. To avoid dreaded garlic breath, you may want to choose your garlic in capsule form. If you prefer garlic capsules, the commonly suggested amount is 600 to 900 mg (providing about 5,000-6,000 mcg of allicin) divided into 2 or 3 equal amounts. When using aged garlic extracts, a suggested supplement is 3 to 7 grams daily.

Side Effects

Although uncommon, allergic reactions to garlic have been reported. Stop taking garlic and seek emergency medical attention if you experience symptoms of a serious allergic reaction including difficulty breathing; closing of your throat; swelling of your lips, tongue, or face; or hives.

Other less serious side effects have also been reported. Talk to your doctor or pharmacist if you experience

- burning of the mouth, throat, and stomach;
- nausea or vomiting;
- diarrhea;
- sweating;

- lightheadedness; and
- eczema or a rash.

Drugs affect with garlic

Do not take garlic without first talking to your doctor if you are taking any of the following medicines:

- 1) a medicine to control blood sugar levels such as insulin, glipizide (Glucotrol), glyburide (Glynase, Diabeta, Micronase), chlorpropamide (Diabinese), tolbutamide (Orinase), tolazamide (Tolinase), pioglitazone (Actos), rosiglitazone (Avandia), repaglinide (Prandin), metformin (Glucophage), and others;
- 2) a nonsteroidal anti-inflammatory drug (NSAID) including ibuprofen (Advil, Motrin, Nuprin, others), naproxen (Aleve, Naprosyn, Naprelan, Anaprox, others), ketoprofen (Orudis KT, Orudis), indomethacin (Indocin), etodolac (Lodine), nabumetone (Relafen), oxaprozin (Daypro), piroxicam (Feldene), sulindac (Clinoril), tolmetin (Tolectin), and others;
- 3) a protease inhibitor such as amprenavir (Agenerase), indinavir (Crixivan), saquinavir (Invirase, Fortovase), lopinavir-ritonavir (Kaletra), ritonavir (Norvir), or nelfinavir (Viracept);
- 4) ardeparin (Normiflo), dalteparin (Fragmin), danaparoid (Orgaran), enoxaparin (Lovenox), tinzaparin (Innohep);
- 5) warfarin (Coumadin);
- 6) aspirin; or
- 7) heparin.

Recent studies on garlic and its medicinal importance

In herbal medicine, garlic has been traditionally used for such ailments as asthma, deafness, leprosy, bronchial congestion, arteriosclerosis, fevers, worms and liver and gall bladder troubles. Babhet, an eminent Ayurvedic authority, is of the opinion that garlic is good for the heart, a food for the hair, a stimulant to appetite, a strengthening food, useful in leucoderma, leprosy, piles, worms, Catarrhal disorders, asthma and cough. Clinical experiments in recently. Times have confirmed several ancient ideas about healing' value of this vegetable. These experiments have in fact shown much greater power of garlic than known previously the unpleasant odour in garlic, which constitutes its unpleasant feature and a serious social handicap, has been traced to its sulphur content. This mineral is contained to a greater degree in its volatile oil, which has marvelous therapeutic value. According to Dr. M.W. McDuffie of the Metropolitan Hospital, New York, "Garlic contains a volatile oil, called allyl sulphade, and its medical properties depend on this oil, strongly antiseptic, it seems to have a remarkable power of inhibiting the growth of the Koch's bacillus, eliminated by the lungs, skin, kidneys and Liver, and oxidizes into sulphuric acid in the system. Applied locally, it is freely absorbed by the skin and penetrates the deeper tissues. Garlic gave us our best results, and would seem equally efficacious, no matter what part of the body affected, whether skin, bones, glands, lungs or special parts". Thus, garlic is regarded as a rejuvenator. It has been found to help remove toxins, revitalize the blood, stimulate blood circulation and normalize intestinal flora. Garlic juice has a most beneficial effect on the entire system. The ethers in garlic juice are so potent and penetrating that they help to dissolve accumulation of mucus in the sinus cavities, in the. bronchial tubes and in the lungs. They help the exudation of toxins from the body through the pores of the skin.

Chest Diseases :- Garlic has proved to be highly effective in certain diseases of the chest. It has been found to reduce fetidity of the breath in pulmonary gangrene. Dr. McDuffie advocated the use of garlic in tuberculosis of the lungs, Dr. F. W. Crosman once said that if garlic were given in sufficient quantities, it was a marvelous remedy in the treatment of pneumonia. This physician used garlic for many years in pneumonia, and said that in no instance did it fail to bring down the temperature, as well as the pulse and respiration, within 48 hours. Garlic can also be applied externally to the chest with beneficial results as it is an irritant and rubefacient. In Ayurveda, a decoction of garlic boiled in milk is considered a wonderful drug for tuberculosis. One gram of garlic, 240 ml of milk and 1 litre of water are boiled together till only one .fourth of the decoction remains. It should be taken thrice in the day.

Asthma :- Three cloves of garlic boiled in milk, can be used every night with excellent results in asthma. A pod of garlic is peeled and macerated and boiled in 120ml. of pure malt-vinegar. After cooling it is strained and equal quantity of honey is mixed and preserved in a clean bottle. One or two teaspoons of this syrup taken with fenugreek decoction once in the evening and before retiring, has been found effective in reducing the severity of asthmatic attacks.

Digestive System Disorders :- Garlic is one of the most beneficial foods for the digestive system. It exercises a beneficial effect on the lymph, aids in elimination of noxious waste matter in the body. It stimulates peristaltic action and the secretion of the digestive juices. Crushed cloves of garlic may be infused in water or milk and taken for all types of disorders of the digestion. It has an antiseptic effect and is an excellent remedy for infectious diseases and inflammations of the stomach and intestine. The oil of garlic is absorbed into the alimentary tract and is eliminated partly through the urine. Garlic produces a very marked effects on the intestine. It is an excellent agent as a worm expeller. It has also a soothing effect on the various forms of diarrhea. Problems such as colitis, dysentery and many other intestinal upsets can be successfully treated with fresh garlic or garlic capsules One garlic capsule taken three times a day is usually sufficient to correct mild cases of diarrhea or dysentery. For more persistent cases, up to six capsules a day can be taken. Garlic has the ability to destroy harmful bacteria in the intestines without affecting the beneficial organisms which aid digestion.

High Blood Pressure :- Garlic is regarded as one of the most effective remedies to lower blood pressure. The pressure and tension are reduced because it has the power to ease the spasm of the small arteries. It also slows the pulse and modifies the heart rhythm, besides relieving the symptoms of dizziness, shortness of breath and the formation of gas within the digestive track As these days garlic capsules are available with the chemist shops, the average dosage of two to three capsules a day to be given to make a dent in the blood pressure. Dr. F.G Piotrowski, working at the University of Geneva, used garlic on 100 patients suffering from abnormally high blood pressure. In about 40 per cent of the cases treated, there was a significant reduction in blood pressure within one week of the treatment. Dr. Piotrowski claimed that garlic had a dilatory effect on the blood vessels, that is, it had the effect of making the blood vessels wider, thereby reducing the pressure.

Rheumatic Affliction:- In Russia garlic is used extensively in the treatment of rheumatism and associated diseases. In Britain also garlic is recommended to rheumatic sufferers. Recent experiments in Japan tested a garlic extract on patients with lumbago and arthritis and a large number of them were benefited without any undesirable side-effects Garlic has been shown to exhibit an anti-inflammatory property which could account for its effectiveness in the treatment of arthritis and rheumatism. The most popular method is to take the garlic cloves orally, although some reports indicate that pain can also be relieved by locally rubbing the affected parts with

cloves of cut garlic. Garlic oil is rapidly absorbed through the skin and into the blood stream and quickly reaches the affected areas.

Heart Attacks :- In a recent study, a West German doctor claims that garlic may prevent heart attacks. Professor Hams Reuter of Cologne University says that there is proof that garlic helps break up cholesterol in the blood vessels, thus helping in the prevention of hardening of arthritis which leads to high blood pressure and heart attacks. If a patient takes garlic after a heart attack, the cholesterol level will come down. The earlier damage may not be repaired but its consumption will minimize the chances of new attacks.

Cancer :- Garlic preparations, including extracts and juices, have been used successfully against cancer in both animal and human. studies, says Dr. Paavo Airola, a 'naturopathic physician and nutritionist A study report tells of mice being infected with cancer cells, some of which were then treated with garlic extract and some were not The mice not given garlic died within 6 days the other mice lived for six months. And recent studies done in Russia have found garlic preparations to retard tumor growth not only in animals, but also in human beings.

Skin Disorders :- Garlic has also been used successfully for a variety of skin disorders Pimples disappear without scar when rubbed with raw garlic several times a day. Even very persistent form of acne, suffered by some adults, has also been healed with garlic. The external use of garlic helps to clear the skin of spots and pimple! and boils. The process is further helped by taking the garlic orally also, to purify the blood-steam so as to secure a long term clearance of the skin. A regular course of three garlic capsules per day should help to clear minor skin infections quickly.

Wounds and Ulcers :- Garlic has been used as an antiseptic in wounds and ulcerations with beneficial results. Garlic juice with three parts of distilled water has been employed as a lotion for cleansing infected wounds. Definite improvement is noticed within 24 hours and substantial improvement within 48 hours.6 Application of dressing containing]5 per cent garlic juice once a day over an ulcer removes pus in a few days. It also relieves pain within a short time. Russian physicians are making extensive use of garlic in the healing of wounds.

Diphtheria :- Garlic is considered an excellent remedy for diphtheria. Its constant application by chewing a clove of garlic removes the membranes, reduces temperature and relieves the patient. About 30 or 60 gm's. of garlic can be used in this way in three or four hours for a week After the membrane disappears. the same quantity of garlic should be chewed daily. The diphtheria patient has no taste or smell and merely finds the garlic hot.

Whooping Cough :- Garlic is an excellent remedy for whooping cough. Syrup of garlic should be given in doses of five drops to a teaspoonful two or three times a day in this condition. It should be given more often if the coughing spells are frequent and violent.

Sexual Debility :- Garlic is a natural and harmless aphrodisiac. Even Dr. Robinson, an eminent sexologist of America considers it so. It is a tonic ,for loss of sexual power from any cause, sexual debility. impotency from over indulgence in sex and nervous exhaustion from dissipating habit. It is said to be especially useful to old men of high nervous tension and diminishing sexual power.

Conclusion

Garlic is a natural form of an antibiotic in a general way as opposed to zeroing in on any particular area of the body. Pain relief especially when it comes to the circulatory system such as angina pain for example has been found to be reduced in those who consume garlic on a regular

basis. Garlic is a true super food when it comes to heart disease. Numerous studies have shown that regular consumption of garlic can lower our blood pressure. Preliminary evidence is showing that the allicin in garlic may help to prevent weight gain. Garlic oil may be able to help protect diabetics from developing several major side effects of this disease, including kidney disease, nervous system damage and eye damage. Garlic extract may be able to help prevent heart disease in diabetics. Garlic contains compounds that will help to reduce inflammation. This with the vitamin C that is also found in garlic, may help reduce the pain and inflammation associated with both osteoarthritis and rheumatoid arthritis. Allicin in garlic has been found to be a powerful antibacterial and antiviral. Working with the vitamin C in garlic, allicin has been shown to be helpful in fighting against common infections like stomach viruses, colds, flu and Candida yeast.

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