Garlic: A Great Anti-Cancer Agent

By Dr. Adem Gunes



# WHO SHOULD READ THIS EBOOK?

This eBook provides valuable, science-based facts about cancer and its treatments, as well as natural substances that can kill cancer cells or increase the effects of conventional therapies.



Doctor Adem is the co-founder of the first Austrian Hyperthermia Center. Another focus of his work was the systematic investigation of the applicability of natural

of the applicability of natural substances in oncology. Over the years, he built the world's largest database of natural substances in the field of cancer medicine.

> In 2009, at only 33 years, he was appointed as the Chief Physician in the Pro Life Clinic, a well-renowned Hospital for complementary oncology in Innsbruck, Austria. He was at that time one of the youngest doctors to have occupied such a position in a cancer hospital in Europe.

## ABOUT DR. ADEM

#### BIOGRAPHY

Dr. Adem is a German doctor with integrative Oncology as his field of research. For many years he has dedicated his time and resources to researching complementary and alternative cancer treatments. In 2001 Dr. Adem published his doctoral dissertation about local hyperthermia.

He became a specialist physician for general and family medicine at the age of 28. After he practiced independently in Hamburg for several years, he decided to continue his research in complementary oncology.

His scientific work in the field of hyperthermia, its applicability in combination with other anticancer drugs, found great interest among integrative cancer doctors. In particular, he was able to demonstrate that, through synergy effects, the dose of chemotherapy could be reduced without decreasing its effectiveness.

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#### PRACTICAL EXPERIENCE WITH CANCER TREATMENTS

At the Pro Life Clinic in Austria Dr. Adem continued his research activities in the field of hyperthermia and established a research laboratory where he worked with his team on the detection of circulating cancer cells in the blood.

He has trained a lot of doctors and is still educating doctors from all over the world. Most of them are using his protocols in the treatment of their cancer patients. His hyperthermia protocols have become a standard in some German clinics.

He promotes the idea of integrative medicine and, due to the success in the treatment of difficult cancer patients, he does not believe in hopeless cases.

His constant desire to explore and make breakthroughs in the field of cancer treatment has made Dr. Adem one of the world renowned physicians in complementary cancer therapy.

DR ADEM'S PUBLICATIONS AND MEDIA APPEARANCES



Now, Dr. Adem works closely with cancer patients from around the world (including Germany, Thailand, Dubai) to recommend them a complementary cancer clinic or to create a personalised care plan for patients to follow at home.





## TESTMONIALS

My experience has been that Professor Adem Günes offers non-Europeans several invaluable services that simply have no counterpart. Dr. Gunes' reply was extremely prompt, personal and direct. This gave me very good direction, focused my research, certainly saved me a great deal of time, and cost.

••••••••••••• John Upton

Dr. Gunes studied with great care and attention to detail all the medical records which I had forwarded by email. He advised regarding effective treatments for advanced prostate cancer and also suggested suitable supplements.



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#### Majella Vallely, N. Ireland



In my research of German clinics, I ran across doctor Gunes' name, associated with his knowledge of various German cancer protocols. When I received my listing of protocols, I realized that Dr. Gunes is on the leading edge of cancer treatments, utilizing advanced protocols as GcMAF, which is a recent breakthrough in the treatment of cancer.

Guy Girouard, United States



#### INTRODUCTION

Garlic, or Allium sativum, is a herb commonly used in the kitchen to add flavor and aroma to the food. It belongs to the species of the onion genus called Allium.



This herb has a history of human use for more than 7,000 years. This wonderful spice is a native to central Asia and has been a common staple in the Mediterranean region. It is frequently used for seasoning in Asia, Europe, and Africa. It was also known to the Ancient Egyptians, where it was used for culinary as well as for medicinal purposes.

#### DESCRIPTION

Despite the small size of the vegetable, garlic surely has a well-deserved reputation. The cloves of Garlic are held together or arranged in a head called a "bulb," the size of which averages to about one and a half to two inches in height and diameter. The cloves and thebulb are encased in sheaths that are off-white in color, with a pink-purple hue.

Though the texture of the garlic cloves is firm, they can be crushed or cut easily. The taste of raw garlic can be described as it hits the palate with a spicy and hot pungency shadowed by a subtle sweetness in the background. The fresh, powdered and dried garlic are available in the market for the entire year. However, the fresh varieties from California are available only in the season from June until December.

#### HISTORY

Garlic, which is a native to the Central Asia, is one of the oldest cultivated plants that have been grown for more than 5000 years. Ancient Egyptians are believed to be the first to cultivate this plant. It has played a major role in their culture. Garlic has been bestowed with sacred qualities and is also placed in the tomb of Pharaohs.



Garlic ensured ancient Roman and Greek athletes were in the best shape and never gave up a fight.

However, the fact is that it was given to the slaves who built the Pyramids for enhancing their strength and endurance. [1] This strength-enhancing quality was honored by the ancient Romans and Greeks also, the civilizations whose athletes consumed garlic before any sporting event and whose soldiers ate it before going off to war.

Later, Garlic was introduced in the other regions across the globe and migrated into several cultural tribes. By the 6th century BC, this herb was known in the Asian countries, China and India, when the latter country started using it for the therapeutic purposes. Over the last few decades, it has gained unprecedented popularity with researchers all over the world validating its numerous health benefits through scientific studies.

#### GARLIC AS A HEALTH SUPPLEMENT

Though the medicinal properties of garlic were known to the ancient humanity, it is only recently that it has been accepted widely as a great anti-cancer agent. For centuries, this herb was used for improving the functions of the heart and for boosting the immune power. Over the last few decades, the scope of the medicinal use of this herb was widened as an effective cholesterol-lowering agent.

Its widespread use for reducing cholesterol level began only a few decades ago, possibly because people in the ancient times didn't suffer from cholesterol problems as much as today's generation. The rising incidence of the disorders related to high cholesterol such as heart attacks, stroke and peripheral vascular disease can be largely attributed to a faulty diet that is comprised of junk food, lack of physical activities and an unhealthy lifestyle.

Garlic has been found to be as effective as some commonly used anti-cholesterol medications like the statins, but without the side effects. The effects of garlic in the management of high cholesterol-induced disorders lead to more research to unearth its other medicinal properties. The scientific research done within the past few decades have discovered that this herb also possesses strong properties that can help in the management of cancer. [2]

## GARLIC FOR THE MANAGEMENT OF CANCER

Cancer is a serious disorder that occurs due to an uninhibited multiplication and

**growth of some cells in the body.** It originates in any particular organ or tissues and often spreads to the surrounding or distant structures. It can spread to the neighboring organs by direct extension of the cancer cells to the tissues of the surrounding organs. The spread of cancer to the distant organs occurs via the passage of the cells through the blood and lymphatic system. The abnormal cell growth and multiplication can erode the tissues of the organ resulting in destruction that severely affects the normal functioning of the organ. Hence, it is very important to stop this division of cells and the spread of cancer to the other organs. However, as in most cases, the immunity of the person is involved in the process; it becomes difficult to control the growth of cancer.



Your doctor can advise you on the correct use of garlic when diagnosed with cancer.

- This is where herbs like garlic can help by correcting the response of the immune system to the abnormal cancer cells.
- It helps in the eradication of the abnormal cells and prevents them from multiplying in an uninhibited manner.
- The use of garlic can frozen with the conventional modes of treatment for cancer such as chemotherapy, radiation therapy, and surgery, when appropriate, for better and faster results.

The exact action of garlic in the management of cancer is discussed in detail in the coming chapters.

Besides this, garlic also offers other health benefits like

- Improving the metabolism of the body, protecting the heart from illnesses like heart attacks, reducing leucorrhea and preventing prostatic diseases.
- It works in managing these illnesses with its strong anti-inflammatory, antioxidant and antibacterial actions.
- Recent research has shown that garlic can improve the metabolism of iron and helps to keep a higher amount of iron in circulation thereby enhancing the efficiency of the blood to transport oxygen to the major organs of the body. [3]

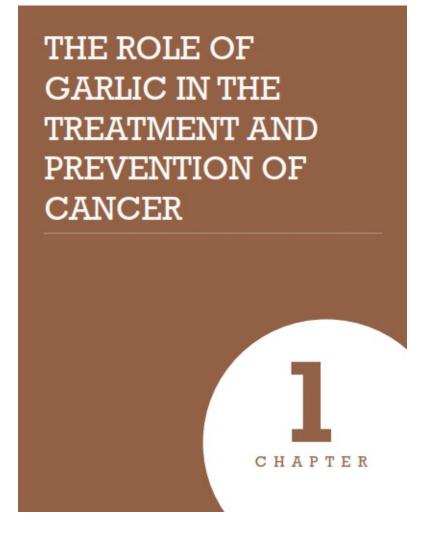
Though we know today that garlic can not bring in good luck, ward off vampires or protect us against evil, the characteristics assigned to it in the traditional folk tales; it is guaranteed to be much beyond that in reality. It can transform a meal into a healthy and aromatic, culinary

experience.

This book is meant to provide information about the uses of garlic in the prevention and treatment of cancer. Readers can also learn about what is cancer and the different types or stages of the disease. It will focus on providing information about the different cancers that can be managed well by using Garlic. It also includes chapters on the other health benefits of garlic and the different ways to consume it for availing its medicinal benefits. Hopefully, this book will help the cancer patients all over the world to manage their illness in a more effective and harmless way and help them survive cancer and lead a healthy and long life.

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The cancer-controlling properties of garlic have become well known today. An increasing number of patients all around the world have started using this herb for the management of cancer along with chemotherapy and radiation therapy for improving their chances of recovery and survival.

The different ways by which garlic works to control the growth and multiplication of the cancer cells are described below:

#### WORKS AS AN ANTIOXIDANT

Alliin and Alliinase are the two enzymes that are released when the garlic cloves are cut or crushed. Of these, Alliin works as a powerful antioxidant, which improves the potential of garlic as an anti-cancer medication. An antioxidant is termed as a substance that can destroy the free radicals in the body.

It should be noted that the damage caused to the normal tissues due to the free radical is a common cause of cancer. These free radicals can damage the DNA structure, which can result in some cells mutating into cancerous cells. [1] It is possible to get rid of the damage caused by these free radicals by using antioxidants like garlic.

Garlic acts directly on the free radicals and destroys them completely thereby minimizing the harm to the healthy tissues. It also prevents the change in the structure of the DNA due to the

free radicals and inhibits the ensuing abnormal multiplication of the cells that can lead to cancer.

#### **DESTROYS THE TUMOR CELLS**

The natural toxic chemical reaction between the two compound of garlic, Alliinase, and Alliin, at the tumor site can help in causing the destruction of the cancer cells. This action can be brought about artificially by using an antibody that is programmed to identify the tumor cells.

The antibody is bound to Alliinase and then injected into the bloodstream to find the cancer cells. This is followed by an Alliin injection, which then reacts with Alliinase to form Allicin that penetrates the tumor cells and kills them. [2] Garlic can also cause the cancer cells to die off by reducing the rate at which they proliferate, thereby slowing down the progression of cancer. It has been shown to kill the cancer cells in the lungs, esophagus, breasts, stomach and colon. [3]

#### **PREVENTS ANGIOGENESIS**

The anti-cancer benefits of garlic can be attributed to its action in preventing angiogenesis. Angiogenesis is a process by which new blood vessels are formed at the cancer site so that the affected tissues receive an increased supply of blood that can aid in the faster growth of cancer. This process hastens the spread of cancer by feeding the abnormal cells with a higher amount of nutrients. Garlic can help prevent this by inhibiting angiogenesis.

It prevents the formation of new blood vessels within the tumor. As a result, the cells could not get enough nutrients to survive or continue their growth and multiplication and eventually die. This helps in limiting the growth of cancer.

#### **OFFERS PROTECTION FROM HARMFUL TOXINS**

Garlic is known to protect the body cells from the harmful effect of environmental toxins. Environmental toxins like some metals and cigarette smoke can cause serious damage to the healthy tissues of the lungs, in particular, and the body, in general, is thereby stimulating the occurrence or progress of cancer. **Use of garlic in its natural or supplemental form can help in preventing this by boosting the resistance of the body tissues to the damage caused by them.** 

#### SUPPLIES MELATONIN

Garlic contains high levels of **tryptophan**, a precursor to the naturally secreted hormone in the body called **serotonin**. Serotonin is essential for the production of a substance called **Melatonin** that is an anti-cancer agent produced naturally in the brain by the pineal gland. The high production of Melatonin is associated with lower risk of cancer. Melatonin also helps in preventing the spread of cancer with its anti-oxidant and anti-inflammatory actions. However, the production of Melatonin slows down as the age advances making the people in the older

age group prone to develop cancer. The use of garlic can help restore the levels of body's anti-cancer agent, Melatonin, by supplying its precursor, tryptophan. [4]

#### **ANTI-BACTERIAL ACTION**

Researchers have found that Allicin, a compound present in garlic from which it derives its flavor, can help in fighting cancer with its antibacterial action. Allicin can fight infections caused by a wide range of bacteria and viruses. Repeated infection in the lungs is a common cause of lung cancer. Patients with low immunity often develop recurrent attacks of pneumonia or bronchitis (inflammation of the bronchi) due to which the normal architecture of the lungs is affected triggering the development of cancer. However, it is to be kept in mind that Allicin from which garlic derives this benefit is not present in the unbroken garlic cloves but is released only when the cloves are crushed or broken. Hence, patients are advised to crush or cut the garlic cloves before consuming it or use the supplements that contain the compound.



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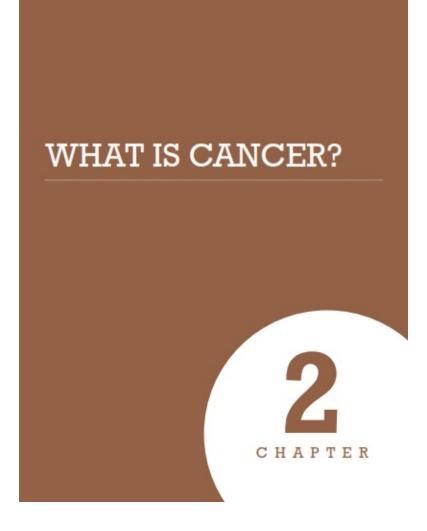
Garlic produces an anti-cancer action that is protective in several cancers including those affecting the stomach and colon. The anti-oxidant, anti-inflammatory and antiangiogenesis actions of this herb are just some of the few that help in the cancer prevention and treatment. Patients suffering from cancer are advised to start consuming garlic in its raw form or include it in their cooking to prevent cancer from spreading. It can also help them in improving the results achieved through radiation and chemotherapy. People prone to develop cancer can also use this herb for preventing the illness. Garlic is available in the form of supplements. Patients who do not like the strong, pungent taste of the herb can use the supplements to avail the benefits. They are advised to consult a cancer specialist to learn more about the uses and the recommended dose of garlic supplements for the prevention and treatment of cancer.

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For a patient who has been diagnosed with cancer, the word cancer just means a disease that can have an adverse impact on his life expectancy. Most cancer patients do not know what exactly does it mean and why does it occur. They are also not aware of what they can do to prevent cancer or which of their lifestyle habits could have lead to it. They understand it as a condition that has come up from nowhere during their body lifestyle. They think they were perfectly healthy and had no disease condition when the cancer was detected.

However, they fail to understand that cancer is a slowly progressing condition that begins in a healthy organ when it is subjected to some damage recurrently over a period. So, their feeling that they were healthy before cancer was detected is just their perception. This chapter is focused on providing basic information about what cancer is, its causes and how it spreads so that people have a more clear understanding of the disease.

#### WHAT IS CANCER?

Cancer is the term used to refer to a collection of related diseases that occur when some cells in the body start multiplying without any control and spread to the surrounding tissues and cells.

Cancer can begin from almost any organ or tissue in the human body that is made up of about trillions of microscopic cells. In normal individuals, the cells are designed to grow and multiply

continuously to produce new cells that can replace the old, dead cells. And when these new cells grow and become old or get damaged, they die and are replaced by the new cells. This is how the cycle continues. This process of cell division is controlled by the body's different mechanisms so that each cell is allowed to grow fully into a mature cell. [1]

#### WHAT ARE THE CAUSES OF CANCER?

Cancer can arise due to the genetic makeup of a person. In fact, it is often the single largest contributing factor to the occurrence of cancer. It occurs due to the changes in the genes that control the way the cells function, particularly how they grow and divide. The genetic factor that can cause cancer is inherited from the parents. It can also arise during the lifetime of a person when the body is exposed to the environmental toxins resulting in errors in the process of cell division causing damage to the DNA structure. The cancer-causing environmental toxins include the chemicals inhaled while smoking, active as well as passive, and radiation arising from the sun in the form of ultraviolet rays.

#### HOW DOES CANCER SPREAD?

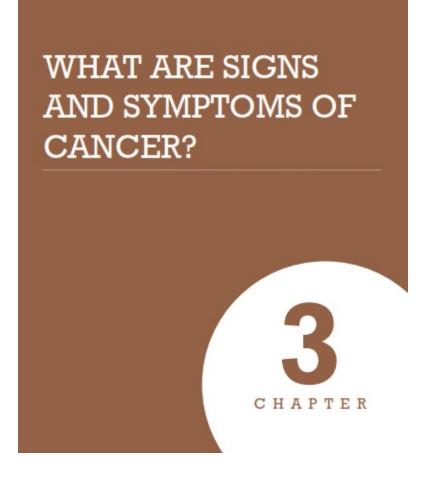
The mass of cancer that originates in an organ is called a **primary tumor.** The cancer cells from the primary tumor can break away and travel through the blood or lymph to form new tumors in other parts of the body. This is called **secondary cancer or metastatic tumor.** The metastatic tumor is usually of the same type as the cancer of the primary tumor. The process of the spread of cancer cells from the primary site to any other part of the body is called metastasis. [2]

# Treatment of cancer by using garlic together with radiation therapy and chemotherapy can help prolong the lives of patients with primary cancer as well as metastatic cancer.

In general, the primary goal of the treatment is to control the abnormal growth of the cells or to relieve the symptoms caused by it. The treatment is also aimed at preventing further damage to the tissues and restoring the functions of the affected organs. Garlic can assist in this with its multitude of benefits targeted at improving the functions of the vital organs. It can also help in regularizing the functions of the immune system and thereby control the division of the cancer cells. Regular use of garlic during the conventional cancer treatment can help patients in achieving better results in less time. It can also prolong the life expectancy of patients and improve the quality of overall life.

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A person knows that he is suffering from a common cold when he develops recurrent sneezing or running nose. People know that they are having an infection when their body becomes warm, and they develop a fever. They also know that the infection could be in the lungs when they experience a cough with sputum. However, it is very difficult to know when the person develops cancer. The main reason for why cancer is detected very late is its symptoms are evident only when the cancer cells have evaded a large part of the organ. Due to this, the patients can not approach a doctor or receive any treatment until cancer has grown considerably and has spread to the nearby or distant organs.

The wider spread of cancer makes the treatment more difficult. This reduces the chances of complete recovery of the patient. That is why; it is very important that the condition is detected at an early stage.

Following are a few common symptoms that should warn a person about a slowly developing cancer in the body. This chapter is also focused on providing information about why these symptoms develop.

#### HOW DOES CANCER CAUSE THE SIGNS AND SYMPTOMS?

The signs and symptoms of cancer depend on the organs or tissues affected and the size of the cancer mass. The symptoms may also change depending upon the organs to which cancer has spread. [1] Here's how the symptoms develop:

- As cancer grows, it starts pushing on the nearby structures including the organs, nerves, and the blood vessels. This pressure can cause some symptoms of pain and discomfort. The pressure exerted on the neighboring organs from the cancerous mass can also occlude the hollow structures like the esophagus or the urethra resulting in symptoms such as difficulty in swallowing and an inability to pass urine, respectively. If the cancer mass is in a vital part of the body, such as the brain, the symptoms can be more severe.
- Sometimes cancer begins from a place where it does not cause any symptom until the mass has grown considerably. For example; the cancer of pancreas usually does not cause any symptom until it has grown large enough to compress the nearby nerves or organs.
- Cancer may also cause symptoms of fever, fatigue, tiredness or weight loss. These symptoms occur because the growing mass of cancer cells use up a lot of body's energy, resulting in exhaustion.
- Sometimes, the symptoms of cancer are developed due to the release of substances into the blood by the cancer-affected tissue. These symptoms are not directly linked to cancer. For example, the cancerous cells in the pancreas can stimulate the release of chemicals, which cause an increase the clotting of the blood within the veins of the legs. Similarly, a lung cancer can result in the release of some hormone-like substances, which can raise the levels of calcium in the blood. This can affect the nerves and muscles resulting in symptoms like weakness and pain.

#### WHAT ARE THE GENERAL SYMPTOMS OF CANCER?

• Unexplained weight loss

Patients with cancer often lose weight gradually without any apparent reason. Such an unexplained weight loss is, in fact, often the first sign of cancer. This symptom is more evident in the cancers of the stomach, pancreas, esophagus and the lungs. Counseling regarding diet and the use of nutritional supplements can help in stabilizing the nutritional status of cancer patients and improve their chances of recovery. [2]

• Fever

Fever is a very common symptom of cancer. This symptom is experienced even in the initial stage of the disease. It is more common in cancer affecting the blood and the immune system. Fever occurs on and off and lasts for a few days each time only to recur again after a few days or weeks. Patients who are experiencing recurrent fevers for no apparent reason should approach a doctor so that the cause of the symptom can be detected.

• Fatigue

Fatigue that remains for the whole day and doesn't get better with rest can be an early sign of cancer. Patients complain of drowsiness and not feel refreshed even after a good sleep. This can be attributed to the increased consumption of energy by the growing mass of tumor or due to the loss of appetite that patients experience.

• Pain

Pain is a common symptom of cancer that occurs due to the pressure exerted by the growing mass on the surrounding structures. It is an early symptom in the cancers of bone and testes. A headache is often a symptom of brain tumor and back pain can occur due to the cancer of

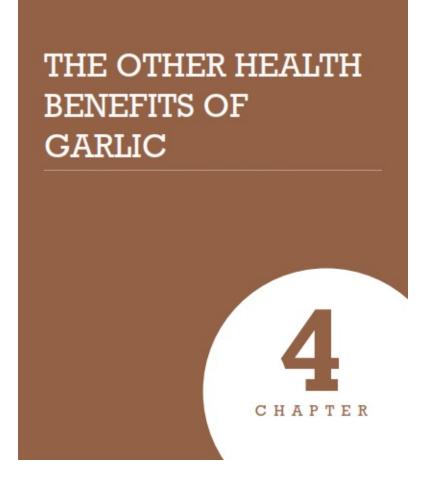
the rectum, colon or ovaries.

These are just some of the most common symptoms that patients may develop due to cancer. However, it should be noted that experiencing any of these can not be only due to cancer. There are a lot of other disorders that can cause similar symptoms depending on the organs involved. Hence, if patients develop any of these symptoms and if they persist for long or get worse, they should see a doctor for further advice.

An early detection of cancer can help patients in receiving treatment at an initial stage and ensures a faster and complete recovery from the illness. Also, the use of garlic right from the initial stage of the disease along with the conventional cancer treatments can improve the treatment outcome.

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"Let food be your medicine and the medicine be your food." These were the words of Hippocrates, a Greek physician who is considered the father of medicine. He stressed on prescribing herbs and simple food items used in the kitchen as a medicine for curing several ailments ranging from common cold to depression. He used garlic for the treatment of a broad range of medical conditions affecting several systems and organs in the body. Here is the list of disorders that respond well to garlic and the health benefits provided by this herb:

• Provides the nutrition

Garlic is a highly nutritious herb that is also very low in calories. A one ounce serving of garlic can provide almost 23% of the daily requirement of Manganese and 17% of the daily requirement of vitamin B6. [1] It also contains 15% of the daily requirement of vitamin C and 6% of the daily requirement of Selenium. Besides these, it also contains some other nutrients like Calcium, Potassium, Copper, Phosphorus, Vitamin B1and Iron in decent amounts. And **this amazing nutritional content comes with just 42 calories!** So, the bottom line is **it is the best food for those who want to lose weight.** Garlic can help a person to lose weight steadily without compromising on the nutritional status of the body. The high nutritional content also makes it a valuable addition to the medicine kit of a household as a daily supplement for children and aged people.

Combats Common Cold

Garlic in its raw, crushed form and as a supplementation can relieve the symptoms of common cold and flu by boosting the functions of the immune system. [2] It enhances the

response of the fighter cells in the immune system to the infection-causing germs and allergens like dirt. This, in turn, reduces the symptoms of inflammation such as redness and watering of the nose, congestion in the nose and headache. It is found that **people who use garlic supplements daily for 12 weeks have 63% less chance of getting common cold that those who do not.** 

Even the average duration of the cold symptoms reduces from 5 days to just one and a half days when garlic supplements are regularly used. Hence, patients who develop recurrent attacks of cold due to allergies or any other reason are advised to consume garlic regularly.



egular use of garlic can help prevent attacks of infections through its antibacterial action and thereby ais prevent the development of cancer.

#### Reduces Blood Pressure

Cardiac diseases like heart attacks and heart failure are the most common causes of sudden death. High blood pressure is an important driver for these diseases. Some studies have concluded that garlic supplementation can have a significant effect on the blood pressure of patients with hypertension. It keeps the blood pressure within normal limits and reduces the risk of life-threatening diseases like a heart attack. Garlic is found to be as effective as Atenolol, a commonly prescribed drug for hypertension. However, garlic has an advantage over atenolol and other antihypertensive drugs in that it causes no side effects.

#### • Controls Cholesterol Levels

High level of cholesterol is another common precursor of heart diseases like heart attack and even hypertension. Garlic can lower the risk of these diseases by reducing bad cholesterol in the blood. Garlic supplementations appear to reduce the cholesterol by almost 10-15%. Hence, patients suffering from high cholesterol and those at a risk of developing hypertension and heart attack due to factors like obesity and family history are advised to eat raw garlic daily or use its supplements.

#### • Prevents Dementia and Alzheimer's disease

Alzheimer's disease is an age-related disorder that causes loss of memory, also called dementia. Though dementia can also occur due to some other illnesses, it is predominantly considered a symptom of Alzheimer's disease. Though this disease usually occurs in the older people, it may affect younger people due to the oxidative damage caused by free radicals. Garlic can help in controlling this process or even reverse the progression of the disease by destroying the free radicals. It contains antioxidants, which support the protective mechanisms

of the immune system against the oxidative damage caused by free radicals. **High doses of garlic supplements may be needed for people who have a family history of Alzheimer's disease as this disease is known to run in families.** It can help them in preventing this condition.

#### • Improves the Athletic Performance

Garlic is an effective "**performance enhancing**" substance. In fact, it is among one of the earliest substances that were proved to possess this quality. It was used in ancient cultures for reducing fatigue and enhancing the stamina and work capacity of laborers. It was also administered to the Olympic athletes in the ancient Greece. Garlic improves the ability of a person to exercise for a longer duration by increasing his or her endurance and strength. It can also allow the patients with heart diseases to exercise safely. It had been found that such patients, when given garlic supplements, had a lower peak heart rate and a better exercise capacity. The lower heart rate during exercise is a significant factor in preventing the complications caused by the extra strain on the heart due to the strenuous activities.

#### • Detoxifies Heavy Metals

When used in high doses, garlic can protect the organs from the damage caused by heavy metal toxicity. This benefit of garlic can be attributed to the Sulphur compounds present in this herb. A four-week study conducted in the people exposed to high levels of lead has concluded that **garlic can help reduce the levels of lead in the blood by almost 19%.** It can also reduce the clinical signs of toxicity, such as high blood pressure and headache.

## • Improves Bone Health and Prevents Osteoporosis

Osteoporosis is a disorder caused by low bone density, which makes the bones weak, brittle and prone to fractures. This condition is commonly seen in menopausal women. Garlic can minimize the loss of bone by increasing estrogen in women. It has been found that **eating about 2 grams of raw garlic every day or using dry garlic extract can reduce the marker for estrogen deficiency** significantly thereby minimizing the loss of bone tissues. This suggests the importance of garlic supplements for the menopausal women. Garlic is also useful for relieving the pain and discomfort in the bones caused due to osteoarthritis.

#### Treats skin diseases

Given the strong taste and smell of garlic, many people find it hard to believe that it can be used for treating skin disorders as skin is a very delicate organ of the body. However, this herb has been found to work effectively in treating blemishes. Allicin, the compound in garlic, has an ability to minimize the harmful effects of free radicals and bacteria on the skin. Allicin, when in its decomposed form called **sulfenic acid**, also produces a strong action on the free radicals, making garlic **a valuable herb for reducing acne, scars and skin allergies. [3]** 

#### • Reduces Hair Loss

Garlic has a very high content of sulfur, which helps in the production of keratin. Keratin is a protein that makes up the hair. A high level of keratin stimulates the fortification and growth of hair. It has been found that the use of garlic gel can add to the therapeutic efficacy of the commonly used topical agents like betamethasone valerate for inducing hair regrowth. [3]

#### • Prevents infections

Garlic is a powerful natural antibiotic. It contains **Diallyl sulfide**, a compound that is much more powerful than the commonly used antibiotics. It is specifically effective against Campylobacter bacterium, which is a very common cause of infections in the intestine.

### • Improves the longevity

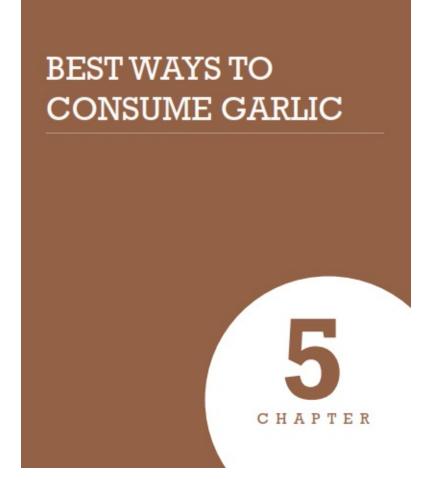
The effect of any substance on the longevity of human life is impossible to prove. However, given the immense medicinal effects of garlic on the important risk factors for heart attack, stroke, and cancer, it makes sense that this herb does help a person to live healthier and longer. The fact that garlic can also fight the infectious diseases is also a factor in prolonging life, especially in the children, elderly people and the patients with dysfunctional immune systems.

So, it is clear that Garlic is more than just a magical substance that can ward off vampires; it's also a superfood that works as a great health aid. Hippocrates was very right in advising people to use this food as a medicine. He knew that the nature has hidden a treasure of medicines in different parts of the plants; sometime in their leaves, sometimes in the flowers, sometimes in the roots, sometimes in the stem and even in the bulb as in garlic. It is up to us to find out this hidden treasure and make use of them to our advantage to get rid of diseases like cancer, high cholesterol, heart problems and depression for which the modern science is yet to find a cure that is free from side effects.

There is no medicine in the conventional treatment that is devoid of any side effects. And this is the greatest advantage of using herbs. The herbs like garlic are not only as effective as the allopathic drugs for relieving the ailments but are also completely safe to use. Patients suffering from the disorders mentioned above are advised to give garlic a try so that they can free themselves from the disturbing symptoms.

## **REFERENCES:**

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- 2. Joe Leech. 11 Proven Health Benefits of Garlic. Authority Nutrition.
- 3. <u>Lizette Borreli. Is Garlic Good For You? 7 Surprising Benefits Of Garlic For</u> <u>Optimal Health. Medical Daily. Published on Mar 3, 2015.</u>



**Garlic has earned a reputation for being a great health supplement for the numerous benefits it offers.** Though this herb is effective in all the forms, whether cooked, raw or crushed, patients can derive maximum benefits from it by consuming it in the most appropriate form. Here are the best ways to consume garlic for optimum anti-cancer benefits: [1]

#### WHY IS IT IMPORTANT TO CHOP OR CRUSH GARLIC?

The latest scientific research has proved that chopping, slicing, pressing or mincing garlic before cooking can increase its health-promoting action. Allicin, a sulfur-based compound, and an enzyme, Alliinase, are present in the cell structure of whole garlic separated from each other. When the garlic cloves are cut, sliced or crushed, the cells are ruptured causing release of these compounds, allowing them to come in contact with each other and react to form a powerful new compound that is called Allicin. It should be noted that it is Allicin that adds to the health-promoting benefits of garlic.

Hence, chopping or crushing the garlic cloves finely can help in obtaining more of Allicin. Pressing or mincing garlic into a smooth paste can also give a very strong flavor and also result in an increased release of Allicin. Hence, experts advise people to consume garlic after crushing, slicing, mincing or pressing them.

A point to remember: "the stronger the pungent smell after crushing, the better are the

#### anti-cancer benefits of garlic."

# WHY SHOULD YOU WAIT FOR 5-10 MINUTES BEFORE CONSUMING CRUSHED GARLIC?

To obtain the maximum health benefits from garlic, it's important to allow it to sit for at least 5 to 10 minutes, after cutting and before cooking and eating. This waiting period of 5-10 minutes gives enough time for the health-promoting Allicin to be released. If the cloves are consumed immediately after crushing, the level of Allicin formed is nil or too low, and so are the benefits. Hence, it is worth the wait.

#### WHY IS COOKING NOT THE BEST WAY TO CONSUME GARLIC?

Heating garlic can deactivate the enzymes responsible for the formation and release of Allicin.

However, the Allicin content can be increased and preserved if Garlic is allowed to sit for 5-10 minutes before cooking and later, the cooking is done on a low to medium flame for less than 15 minutes.



Knowing how to cook ganic can help you get the best benefits out of this ingenious plant

Cooking on a short flame will prevent the destruction of Allicin and also make it more resistant to destruction. However, most often, when garlic is added to any dish, it is cooked for a time longer than 15 minutes resulting in the destruction of Allicin. Hence, experts do not recommend cooking as an effective method of consuming garlic for its anti-cancer benefit.

Cooking of garlic for a longer time also causes a loss of nutrients of this amazing medicinal herb. While cooking for 10-15 minutes causes a minimal loss of nutrients; cooking it for about 15 to 30 minutes can result in moderate loss of the nutrients. Allowing garlic to cook for more than 45 minutes can reduce its nutrient content substantially.

#### **FREEZING GARLIC**

The different ways to freeze garlic are mentioned below:

• Chop the garlic cloves into fine pieces and wrap them tightly in a plastic wrap or a freezer bag and get it stored in the freezer. To use, break off or grate the amount

needed.

- Garlic cloves can be frozen in their whole form without peeling them. The cloves can be removed as and when needed.
- The cloves can be peeled and then put in a food processor or a blender to make a puree by combining one part of garlic with two parts of oil. The puree can stay soft enough in the freezer. The parts of it can be scraped out whenever needed.

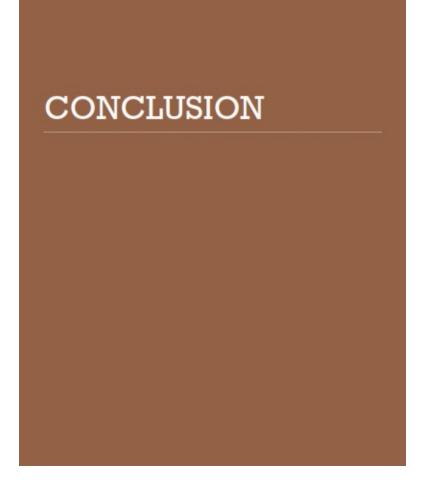
Freezing garlic does not destroy its anti-cancer properties. Though garlic is easily available in almost all parts of the world, these tips can come in handy for those cancer patients who would like to get the best quality of cloves and store them for future use.

The best properties of garlic become active when it is used in the ways described above.

Having said that; it doesn't mean that the other ways of consuming it are not effective. It only means that the benefits obtained from its whole form are not as effective as those obtained from its crushed form. Patients with cancer are advised to keep these points in mind to take maximum advantages of the medicinal properties of garlic.

#### **REFERENCES:**

• 1. <u>The world's healthiest foods. The best ways to prepare and store garlic.</u> <u>whfoods.org.</u>



There is no suspicion that garlic is a highly effective medicinal herb. Though it was primarily used for lowering cholesterol levels and for protecting the heart from life-threatening conditions like a cardiac failure and heart attacks. This herb has gone beyond that and proved to be effective in combating cancer as well.

Garlic helps in the treatment and prevention of cancer by acting on the free radicals and destroying them with its antioxidant action. It also kills the bacteria and fungi that can cause cancer and also prevent the further growth of the cancer cells by inhibiting angiogenesis. Garlic modifies the inflammatory response of the immune system to ensure there is no damage to the tissues and cells in the body, which is just another action of this herb for preventing the development of cancer. In short, it acts in some ways to safeguard the healthy organs from the cancer-causing and cancer-promoting processes and toxins.

Garlic can be used in the treatment of cancer of different organs including the breasts, the brain and the soft tissues like the bones and the muscles. It can also be used for the prevention and treatment of cancers in the digestive tract involving the esophagus, the stomach, the colon and the rectum. It is very important that garlic is used in the ways that result in the extraction of the maximum of its anti-cancer properties. Patients are advised to eat crushed garlic cloves to obtain optimum results in a much less time. Alternatively, they can also use garlic supplements that offer benefits similar to that of crushed garlic.



A lot of cancer patients are beating the disease each day. An educated patient is always one step closer to healing.

Today, cancer is no more considered to be a life-threatening disease. Scientists have been successful in their research and studies aimed at finding the cure for cancer. The recent development of the medical science has made cancer a curable disorder with a better survival rate. The number of patients recovering completely and leading a normal life after a successful cancer treatment with radiation, chemotherapy, and surgery, in some cases, has shown a steady rise in the last few decades.

The number of cancer survivors can increase further if these conventional treatments are coupled with the use of nature's herbs like garlic. It can help prevent the growth and spread of cancer and also enhance the results of the conventional treatments. Patients can contact a cancer specialist to learn more about the medicinal properties of garlic and how to use this herb for managing cancer in a more effective way.

#### ON THE WEBSITE YOU CAN

# 1

Get free access to one of the world's most detailed database of cancer information

> 2 ad about all avai cancer treatmen

concer treatments (both traditional as well as alternative and complementary concer treatments)

> **3** e a sound de

Make a sound decision on the best treatment to follow in your fight against cancer.



# DR. ADEM RECOMMENDS

As technology and research evolve, scientists find more and more treatments to cure cancer. To this day there are several types of cancer that can be cured if identified in time.

If you want to learn more about cancer cures or concer treatments, I invite you to my website, <u>www.ak-adem.com</u>. Here you will find a solid encyclopedia of science-based (and researchbased) cancer facts. Everything is explained in a language that is easy to understand by non-professionals (patients and their families).

You can also use the 2 services I have created for cancer patients:

+ Find A Clinic

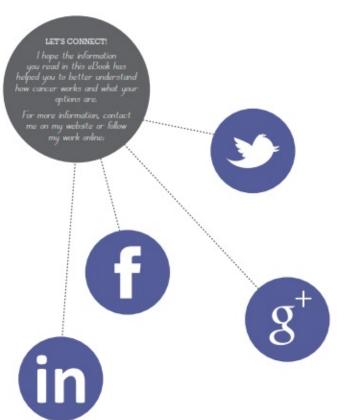
Homecare Plan

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#### BE AN EDUCATED PATIENT

As a complementary and alternative cancer specialist, I recommend all my patients to inform themselves on the cancer they or someone dear have been diagnosed with. An educated patient is a patient one step closer to healing.

I also emphasize the importance of keeping an open eye on your choices. Read and trust only facts-based, specialised medical content that has been published by ancology professionals. Always ask the opinion of several doctors before deciding to follow a treatment. Ask as many questions as you need in order to feel comfortable with your treatment decision.



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