

Garlic

I. What is Garlic?

- A. Garlic is a perennial that originally came from central Asia
 - 1. White, off white, or pinkish color
 - 2. Root vegetable that can grow two feet high or more
 - a. Part of the lily family
 - b. Cousin to the leek, onion, chive, and shallot
 - 3. Bulb is the most commonly used part of the plant, which is made up of about 4 to 20 cloves
 - a. Leaves and flowers are also edible, but milder in flavor than the bulbs and are often consumed while immature or tender
 - b. Flower stalks are sometimes used in place of asparagus like in stir fries.
- B. Garlic is harvested in mid July/early August
 - 1. There are over 300 varieties
 - 2. In the supermarket you can buy garlic bulbs, garlic cloves, minced garlic, garlic oil, garlic powder, etc.
- C. Why does garlic smell and give you garlic breath?
 - 1. When garlic cells are ruptured by cutting or pressing they release an enzyme called allinase, which chemically changes alliin to allicin, a sulfur containing molecule.
 - 2. This sulfur molecule is then absorbed in the bloodstream and lungs escaping through exhaled air and perspiration giving the term “garlic breath.”

II. History of Garlic

- A. One of the oldest cultivated plants in the world and has been grown for over 5000 years
- B. Egyptians ate garlic while building the pyramids because they felt garlic would give them strength to do so. They also used garlic as a money exchange
- C. Greeks and Roman athletes ate garlic before sporting events and soldiers ate garlic before going off to war to gain strength

- D. 18th century French Gravediggers drank garlic in wine to protect themselves from the plague
- E. In World War I and II soldiers were given garlic to prevent gangrene
- F. People thought that garlic would ward off vampires, so it was hung on doors, worn as jewelry, and rubbed on cattle.

III. Health Benefits of Garlic

- A. All studies on garlic have been preliminary so the evidence is not conclusive, but it is very promising 😊
- B. Garlic contains phytochemicals (chemical compounds that naturally occur in plants to protect against disease), manganese, vitamin B6, vitamin c, selenium, calcium, protein, tryptophan, phosphorus, thiamin, copper, and small traces of various other vitamins and minerals
- C. Could help reduce risk of cardiovascular disease
 - 1. The compounds in garlic may help to reduce LDL cholesterol (bad cholesterol) and total cholesterol and decrease blood pressure
 - 2. Routine eating of garlic may also help stimulate the production of certain chemicals in the lining of the blood vessel walls, which helps to relax them, thus increasing blood flow
- D. Has antiinflammatory, antiviral, and antibacterial characteristics
 - 1. Garlic contains compounds that inhibit inflammation along with vitamin c and is very useful in protecting against severe cases of asthma, and may help reduce the pain and inflammation of osteoarthritis and rheumatoid arthritis
 - 2. In addition allicin, one of the sulfur compounds of garlic, is a powerful antibacterial and antiviral agent that joins forces with vitamin c to kill harmful microbes. It has been shown to be effective against the common cold, flu, and stomach viruses.
- E. May decrease cancer risk
 - 1. Garlic is full of phytochemicals and has small traces of selenium, manganese, and vitamin c, which are all antioxidants that take on

free radicals (by products of every day living) and other harmful compounds to decrease the risk of cancer

F. May help with diabetes

1. The compounds in garlic may increase insulin levels in the body. The result is lower blood sugar; it helps to lower the need for insulin.

G. Important Note

- A. Avoid taking garlic 7 days before surgery, should be monitored if taking with blood thinning medications and aspirin, may interfere with oral contraceptives and certain drugs, and might promote undesirable body odor
- B. Even though you can buy garlic supplements, they may lack the phytochemicals that pass on benefits.

IV. Fun Facts

- A. Garlic's nickname is the stinking rose, a restaurant with the same name in San Francisco serves garlic ice cream.
- B. There are a few annual garlic festivals, one is in Gilroy, California. It is a three day festival.
- C. 90% of the garlic grown in the United States is from California
- D. China is the largest producer of garlic in the world producing 23 billion pounds annually
- E. The sticky juice within the bulb cloves is used as an adhesive in mending glass and china
- F. If aphids are attacking your roses or other plants, mix garlic pieces and water and watch them drop!
- G. Garlic plants are said to repel moles and rabbits, so maybe plant them in your garden to keep the pests away.
- H. Rubbing your hands on a stainless steel bowl is thought to quash garlic odor.
- I. Garlic and onions might be toxic to dogs and cats.

V. Choosing, Storing, and Cooking garlic

- A. For maximum health benefits and flavor, always choose fresh garlic

- B. When choosing garlic to buy, choose bulbs that are big, plump, and firm with tight silky skins, avoid sprouts, shriveled or moldy
- C. Store in a cool, dark dry place
- D. Keep fresh, whole bulbs for 3 to 4 months
- E. Individual cloves will keep for 5 to 10 days
- F. Keep commercial minced garlic or garlic oil in your refrigerator for 3 to 4 months
- G. Peel paper like covering from garlic cloves if you have a bulb
- H. Chop, mince, or crush garlic (the finer the cut the more the flavor)
- I. Before cooking chop garlic and let sit out for about 10 minutes to let the phytochemicals fully develop
- J. Garlic's intense flavor is mellowed the longer it is cooked. It also sweetens considerably with cooking.

VI. Serving Ideas

- A. Marinate pressed garlic in olive oil and use this flavored oil in dressings and marinade
- B. Puree fresh garlic, canned garbanzo beans, tahini, olive oil, and lemon juice to make quick and easy hummus dip.
- C. Sautee steamed spinach, garlic, and fresh lemon juice
- D. Add garlic to sauces and soups
- E. Puree roasted garlic, cooked potatoes and olive oil together to make delicious garlic mashed potatoes. Season to taste

VII. Activity (recipes included)

- A. Demonstrate preparation of garlic for roasting then sample a roasted garlic bulb
- B. Demonstrate peeling and crushing a garlic clove using a knife instead of a garlic press (attached photos might be helpful to pass around while you are demonstrating)
- C. Make Garlic Pesto and add it to Penne or Fettuccini pasta
- D. Make Garlic Spinach Dip, Garlic Hummus, Garlic Bread, or Garlic Pizza