

## Asparagus : A power house vegetable for all the nutrients



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Asparagus, officially known as asparagus officinalis, is a member of the lily family. This popular vegetable comes in a variety of colors, including green, white and purple. It's used in dishes around the world, including frittatas, pastas and stir-fries. Asparagus is also low in calories and packed with essential vitamins, minerals and antioxidants. Here is the health benefits of asparagus.



**Health benefits of asparagus:** The wide availability of fast food has made diets unhealthy and unbalanced all over the world. This is a major reason why dieticians and physicians constantly stress the importance of eating vegetables regularly by including them in your diet. This is because the essential minerals and nutrients that they provide are instrumental to the body's processes. Asparagus is packed with essential minerals and nutrients which are beneficial to the health. Here are some of the health benefits.

**Many nutrients but few calories:** Asparagus is low in calories but boasts an impressive nutrient profile. In fact, just half a cup (90 g) of cooked asparagus contains.

Calories: 20

Protein: 2.2 g

Fat: 0.2 g

Fibre: 1.8 g

Vitamin C: 12% of the RDI

Vitamin A: 18% of the RDI

Vitamin K: 57% of the RDI

Folate: 34% of the RDI

Potassium: 6% of the RDI

Phosphorus: 5% of the RDI

Vitamin E: 7% of the RDI

Asparagus also possesses small amounts of other micronutrients, including iron, zinc and riboflavin. It's an excellent source of vitamin K, an essential nutrient involved in blood clotting and bone health. In addition, asparagus is high in folate, a nutrient that is vital for a healthy pregnancy and many important processes in the body, including cell growth and DNA formation.

**It can help you meet your weight-loss goals:** Not only is asparagus low in fat and calories (one cup sets you back a mere 32 calories), but it also contains lots of soluble and insoluble fibre, making it a good choice if you're trying to lose weight. Because your body digests fibre slowly, it keeps you feeling full in between meals.



"Fibre can definitely help you feel satiated, making it beneficial for weight loss," says Gans. "It can also aid constipation and research suggests it may help lower cholesterol."

To maximize the veggie's calorie-torching potential, pair it with a hard-boiled egg: the combination of fibre-rich asparagus with the egg's protein will leave you feeling satisfied.

**Good source of antioxidants:** Antioxidants are compounds that help protect your cells from the harmful effects of free radicals and oxidative stress. Oxidative stress contributes to aging, chronic inflammation and many diseases, including cancer. Asparagus, like other green vegetables, is high in antioxidants. These include vitamin E, vitamin C and glutathione, as well as various flavonoids and polyphenols. Asparagus is particularly high in the flavonoids quercetin, isorhamnetin and kaempferol.

These substances have been found to have blood pressure-lowering, anti-inflammatory, antiviral and anticancer effects in a number of human, test-tube and animal studies. What's more, purple asparagus contains powerful pigments called anthocyanins, which give the vegetable its vibrant colour and have antioxidant effects in the body. In fact, increasing anthocyanin intake has been shown to reduce blood pressure and the risk of heart attacks and heart disease. Eating asparagus along with other fruits and vegetables can provide your body with a range of antioxidants to promote good health.

**It may keep your urinary tract happy:** Asparagus contains high levels of the amino acid asparagine, making it a natural diuretic. In other words, eating more of the spears can help flush excess fluid and salt from your body, which may help prevent urinary tract infections.



"When women are not urinating enough, they can get a UTI," explains Gans. It's possible that a diet rich in asparagus could prevent these painful infections from developing, since going to the bathroom more frequently can help move bad bacteria out of the urinary tract.

**Can improve digestive health:** Dietary fibre is essential for good digestive health. Just half a cup of asparagus contains 1.8 grams of fibre, which is 7 per cent of your daily needs. Studies suggest that a diet high in fibre-rich fruits and vegetables may help reduce the risk of high blood pressure, heart disease and diabetes. Asparagus is

particularly high in insoluble fibre, which adds bulk to stool and supports regular bowel movements. It also contains a small amount of soluble fibre, which dissolves in water and forms a gel-like substance in the digestive tract. Soluble fibre feeds the friendly bacteria in the gut, such as *Bifidobacteria* and *Lactobacillus*. Increasing the number of these beneficial bacteria plays a role in strengthening the immune system and producing essential nutrients like vitamins B12 and K. Eating asparagus as part of a fibre-rich diet is an excellent way to help meet your fibre needs and keep your digestive system healthy.

**It contains vitamin E:** Asparagus is also a source of vitamin E, another important antioxidant. This vitamin helps strengthen your immune system and protects cells from the harmful effects of free radicals. To fill up on its benefits, roast asparagus with a little olive oil: "Our body absorbs vitamin E better if it's eaten alongside some fat," says Gans. "And when you cook it with olive oil, you're getting healthy fat and vitamin E."



**Helps support a healthy pregnancy:** Asparagus is an excellent source of folate, also known as vitamin B9. Just half a cup of asparagus provides adults with 34 per cent of their daily folate needs and pregnant women with 22 per cent of their daily needs. Folate is an essential nutrient that helps form red blood cells and produce DNA for healthy growth and development. It's especially important during the early stages of pregnancy to ensure the healthy development of the baby. Getting enough folate from sources like asparagus, green leafy vegetables and fruit can protect against neural tube defects, including spina bifida. Neural tube defects can lead to a range of complications, ranging from learning difficulties to lack of bowel and bladder control to physical disabilities. In fact, adequate folate is so vital during pre-pregnancy and early pregnancy that folate supplements are recommended to

ensure women meet their requirements.

### Helps lower blood pressure:

High blood pressure affects more than 1.3 billion people worldwide and is a major risk factor for heart disease and stroke. Research suggests that increasing potassium intake while reducing salt intake is an effective way to lower high blood pressure. Potassium lowers blood pressure in two ways: by relaxing the walls of blood vessels and excreting excess salt through urine. Asparagus is a good source of potassium, providing 6 per cent of your daily requirement in a half-cup serving. What's more, research in rats with high blood pressure suggests that asparagus may have other blood pressure-lowering properties. In one study, rats were fed either a diet with 5 per cent asparagus or a standard diet without asparagus. After 10 weeks, the rats on the asparagus diet had 17 per cent lower blood pressure than the rats on the standard diet. Researchers believed this effect was due to an active compound in asparagus that causes blood vessels to dilate. However, human studies are needed to determine whether this active compound has the same effect in humans. In any case, eating more potassium-rich vegetables, such as asparagus, is a great way to help keep your blood pressure in a healthy range.

**It may help you get in the mood:** You may want to consider adding asparagus to your next date night menu: the veggie is a natural aphrodisiac thanks to vitamin B6 and folate, which can help boost feelings of arousal. Plus, vitamin E stimulates sex hormones, including estrogen in women and testosterone in men.



**It beats bloating:** When it comes to fighting bloat, asparagus packs a mean punch. The veggie helps promote overall digestive health (another benefit of all that soluble and insoluble fibre!). And thanks to prebiotics—

carbohydrates that can't be digested and help encourage a healthy balance of good bacteria, or probiotics, in your digestive track—it can also reduce gas. Plus, as a natural diuretic, asparagus helps flush excess liquid, combating belly bulge.

**It boosts your mood:** Asparagus is full of folate, a B vitamin that could lift your spirits and help ward off irritability. Researchers have found a connection between low levels of folate and vitamin B12 in people who are suffering from depression, leading some docs to prescribe daily doses of both vitamins to patients with depression. Asparagus also contains high levels of tryptophan, an amino acid that has been similarly linked to improved mood.

**The bottom line:** Asparagus is a nutritious and tasty addition to any diet. It's low in calories and a great source of nutrients, including fibre, folate and vitamins A, C and K. Additionally, eating asparagus has a number of potential health benefits, including weight loss, improved digestion, healthy pregnancy outcomes and lower blood pressure. Plus, it's inexpensive, easy to prepare and makes a delicious addition to a number of recipes.

**Preparing for planting:** Asparagus is planted in early spring as soon as the soil can be worked. The plant is normally grown from "crowns" (1-year-old plants). Before you do anything, check the pH of your soil. Asparagus likes a pH of 6.0 to 8.0.

**Planting asparagus:** Select and prepare your asparagus bed with care — this crop will occupy the same spot for 20 years or more. It can tolerate some shade, but full sun produces more vigorous plants and helps minimize disease. Asparagus does best in lighter soils that warm up quickly in spring and drain well; standing water will quickly rot the roots.

Prepare a planting bed for your asparagus, like this simple raised bed, that's about 4 feet wide by removing all perennial weeds and roots and digging in plenty of aged manure or compost.

Asparagus plants are monoecious — meaning each individual asparagus plant is either male or female. Some varieties of asparagus, such as Jersey Knight and Jersey Giant, produce all male or primarily male plants, so they're more productive — male plants yield more harvestable shoots because they don't have to invest energy in producing seeds. Choose an all-male asparagus variety if high yield is your primary goal.

Tatting asparagus from one-year-old crowns gives you a year's head start over seed-grown plants. Two-year-old crowns are usually not a bargain. They tend to suffer more from transplant shock and won't produce any

faster than one-year-old crowns. Buy crowns from a reputable nursery that sells fresh, firm, disease-free roots. Plant them immediately if possible; otherwise, wrap them in slightly damp sphagnum moss until you are ready to plant.

To plant asparagus crowns, dig trenches 12 inches wide and 6 inches deep (8 inches in sandy soil) down the center of the prepared bed. Soak the crowns in compost tea for 20 minutes before planting. Place the crowns in the trenches 1½ to 2 feet apart; top them with 2 to 3 inches of soil. Two weeks later, add another inch or two of soil. Continue adding soil periodically until the soil is slightly mounded above surface level to allow for settling. **Mulching and watering of asparagus:** When the trench is filled, add a 4- to 6-inch layer of mulch and water regularly. Do not harvest the spears in the first year (the plant needs time to grow out its root system), but cut down dead foliage in late fall and side-dress with compost. During the second year, harvest for only 3 to 4 weeks, side-dressing in spring and early fall and cutting down dead foliage in late fall. During the third year, the bed should be in full production, so you can start to harvest asparagus sparingly throughout the season. Water regularly during the first two years after planting. As asparagus matures, it crowds out most weeds and sends long, fleshy roots deep into the earth, so watering is less critical. Fertilize in spring and fall by top-dressing with liquid fertilizer (such as compost tea) or side-dressing with a balanced fertilizer. Leave winter-killed foliage, along with straw or other light mulch, on the bed to provide winter protection. Remove and destroy the fern-like foliage before new growth appears in spring; it can harbor diseases and pest eggs.

**Starting asparagus from seed:** It takes patience to start your asparagus patch from seed, but there are advantages to gain from the extra wait. Seed-grown plants don't suffer from transplant trauma like nursery-grown roots, and you can buy a whole packet of seed for the same price you'll pay for one asparagus crown. Most seed-grown asparagus plants eventually out-produce those started from roots. Growing from seed also allows you to selectively discard female asparagus plants and plant an all-male bed, no matter what variety you choose to grow. In the North, start seedlings indoors in late February or early March. Sow single seeds in newspaper pots, place the pots in a sunny window and use bottom heat to maintain the temperature of the mix in the pots at 77 degrees. When the seeds sprout, lower the temperature to 60 to 70 degrees. Once the danger of frost is past, plant the

seedlings (which should be about 1 foot tall) 2 to 3 inches deep in a nursery bed.

When tiny flowers appear, observe them with a magnifying glass. Female flowers have well-developed, three-lobed pistils; male blossoms are larger and longer than female flowers. Weed out all female plants. The following spring, transplant the males to the permanent bed.

**Solving pest problems and defects:** Healthy asparagus foliage is necessary for good root and spear production. Asparagus beetles, which chew on spears in spring and attack summer foliage, are the most prevalent problem. The 1/4-inch-long, metallic blue-black pests have three white or yellow spots on their backs. They lay dark eggs along the leaves, which hatch into light gray or brown larvae with black heads and feet. Control by hand picking; spray or dust seriously infested asparagus plants with an insecticidal soap. These methods also control the 12-spotted asparagus beetle, which is reddish brown with six black spots on each wing cover. Asparagus miner is another foliage-feeding pest; it makes zig-zag tunnels on the stalks. Destroy any infested ferns.

Avoid asparagus rust, which produces reddish brown spots on the stems and leaves, by planting resistant cultivars. Minimize damage from *Fusarium wilt*, which causes spears, leaves, and stems to be small with large lesions at or below the soil line, by purchasing disease-free roots and using good garden sanitation. Crown rot causes spears to turn brown near the soil line. Prevent crown rot by planting in raised beds, maintaining good drainage, and keeping soil pH above 6.0.

If your asparagus bed does become infected by disease organisms, your best option is to start a new bed in a distant part of the garden, using newly purchased or grown plants.

If young spears turn brown and become soft or withered, they may have been injured by frost. Cover spears with mulch or newspaper when freezing nights are predicted.

**Harvest of asparagus:** If you have young plants, the season may last 2 to 3 weeks. However, established plants produce longer—upto 8 weeks. Asparagus can take three growing seasons to harvest, though you may be able to lightly harvest during the second year. Check your plant every other day for harvest-ready spears. Spears grow quickly and may become too woody before you know it! Once an asparagus spear starts to open and have foliage, it's too tough for eating. Harvest spears at 6 to 8 inches tall and at least ½ inch thick, cutting the spears off with a

knife or scissors at the soil line. Stop harvesting spears when the diameter of the spears decreases to the size of a pencil. After harvest, allow the ferns to grow; this replenishes the nutrients for next year's spear production. Always leave one or two spears. Cut back asparagus after the foliage has died back and turned brown or yellow. This is usually in the fall after frost. Cut back to the ground. **Storage of asparagus:** Asparagus does not keep for very long after it's picked, so be sure to eat it within two or three days from harvest. Brush off any visible dirt or give the spears a light washing with cold water before storing. It's very important to dry washed spears thoroughly; moisture can lead to mold. To store, bundle the spears together, wrap the stem ends of the spears in a moist

paper towel, and place the bundle in a plastic bag. Store in the crisper drawer of your refrigerator. If you have enough space in your fridge, you can also store asparagus by placing the spears in a cup of water. Keep about an inch of clean water in the cup.

**Conclusion:** Asparagus is a nutritious and tasty addition to any diet. It's low in calories and a great source of nutrients, including fibre, folate and vitamins A, C and K. Additionally, eating asparagus has a number of potential health benefits, including weight loss, improved digestion, healthy pregnancy outcomes and lower blood pressure. Plus, it's inexpensive, easy to prepare and makes a delicious addition to a number of recipes.

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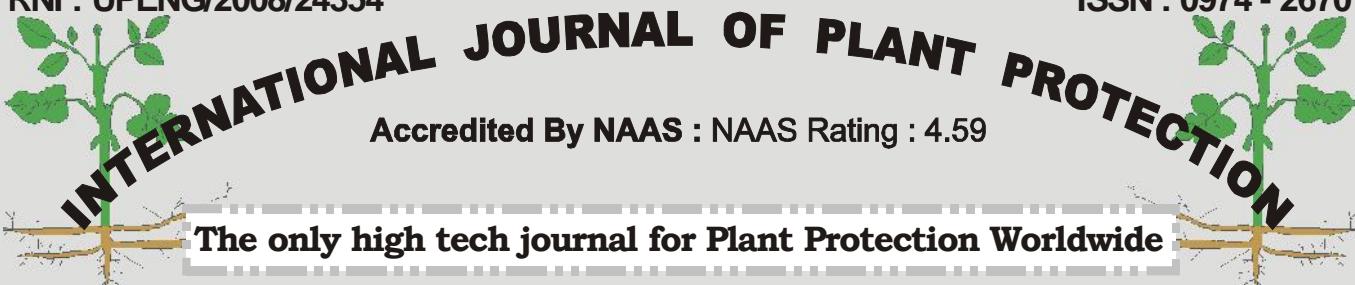
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