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## Nutritional and Health benefits of beet root leaves

### Jaya Sinha and Shakuntala Kumari

#### Abstract

The beetroot or beet is the taproot portion of a *Beta vulgaris* subsp. *vulgaris* plant in the Conditiva Group. The plant is a root vegetable also known as the table beet, garden beet, dinner beet, or else categorized by color: red beet or golden beet. It is also a leafy vegetable called beet greens. The garden beet is a biennial plant and is primarily grown for the thick fleshy taproot that forms during the first season. In the second season a tall, branched, leafy stem arises to bear clusters of minute green flowers that develop into brown corky fruits commonly called speedballs. The oblong leaves typically have a red petiole (leaf stem) and midrib and can be harvested continually throughout the first growing season, though production slows in the heat of summer. Beet greens are filled with superhero nutrients. Beet greens boost immunity, lower blood pressure, improve mental health, strengthen bones, and more. Historically, beet greens (the leafy tops of the beetroot) were used for their amazing healing properties as Hippocrates believed that the juice from beet leaf bindings would help heal wounds. Today, beet greens are used in various dishes from homemade baked beet greens chips, ginger stir-fry with beet greens, or added to your favorite smoothie or salad.

**Keywords:** Beet greens, beet tops, nutrients, health benefits

#### Introduction

The beetroot or beet is the taproot portion of a *Beta vulgaris* subsp. *vulgaris* plant in the Conditiva Group. The plant is a root vegetable also known as the table beet, garden beet, dinner beet, or else categorized by color: red beet or golden beet. It is also a leafy vegetable called beet greens. Beetroot can be eaten raw, roasted, steamed, or boiled. Beetroot can also be canned, either whole or cut up, and often are pickled, spiced, or served in a sweet-and-sour sauce.

The garden beet is a biennial plant and is primarily grown for the thick fleshy taproot that forms during the first season. In the second season a tall, branched, leafy stem arises to bear clusters of minute green flowers that develop into brown corky fruits commonly called speedballs. The taproot ranges in shape from globular to long and tapered. Skin and flesh colours are usually dark purplish red, though some are nearly white or orange. Beetroots should be smooth, firm, and unblemished, medium-sized specimens are the most tender. The oblong leaves typically have a red petiole (leaf stem) and midrib and can be harvested continually throughout the first growing season, though production slows in the heat of summer. Overharvesting of the leaves can negatively affect the size of the beetroot. In mild climates the plant can overwinter, though the leaves turn bitter and unpalatable when the plant flowers in its second season.

The deep purple colour of beetroot, or beet, is unmistakable, whether it is being eaten raw, grated into salads, or pureed into smoothies or soups. However, it is not just the attractive appearance that makes beetroot such an appealing ingredient, it is packed full of vitamins, minerals and nutrients, making it one of the healthiest foods available.

Beta is the ancient Latin name for beetroot, possibly of Celtic origin, becoming beta in Old English. Root derives from the late Old English rot itself from Old Norse rot.

#### History

The domestication of beetroot can be traced to the emergence of an allele that enables biennial harvesting of leaves and taproot. Beetroot was domesticated in the ancient Middle East, primarily for their greens, and were grown by the Ancient Egyptians, Greeks, and Romans. By the Roman era, it is thought that they were also cultivated for their roots.

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From the middle Ages, beetroot was used to treat various conditions, especially illnesses relating to digestion and the blood. During the middle of the 17<sup>th</sup> century, wine often was colored with beetroot juice. Food shortages in Europe following World War I caused great hardships, including cases of mangel-wurzel disease, as relief workers called it. It was symptomatic of eating only beetroot.



**Fig 1:** Beet root along with its green leaves

### Cultivation

Beets are most extensively grown in temperate to cool regions or during the cooler seasons the growing season is about 8 to 10 weeks in favourable climates. They grow best in deep loose soils that are high in organic matter; they respond well to chemical fertilizers and manures. Grown extensively under irrigation, beets tolerate a relatively high salt content of the soil but are sensitive to high acidity and to a low content of boron. Boron deficiency retards growth and causes black lesions in the root flesh.



Although you may be more familiar with the beetroot's (the bulbous portion of the beet) incredible nutritional value, beet greens are also filled with superhero nutrients. Beet greens boost immunity, lower blood pressure, improve mental health, strengthen bones, and more.

Historically, beet greens (the leafy tops of the beetroot) were used for their amazing healing properties as Hippocrates believed that the juice from beet leaf bindings would help heal wounds. Today, beet greens are used in various dishes from homemade baked beet greens chips, ginger stir-fry with beet greens, or added to your favorite smoothie or salad.

Kale, spinach, and chard have gained a lot of attention in the last few years; however, beet greens deserve love too. Beet greens are high in nutritional value and are packed with vitamins, minerals, fiber, and antioxidants. There are so many amazing benefits to eating more beet greens.

Beetroot leaves are a nutritious food and contain many nutrients that offer many health benefits, including:

**Vitamins:** Beet leaves are high in vitamins A, C, and K, which support eye health, the immune system, and bone health:

- **Vitamin A:** Helps keep eyes healthy
- **Vitamin C:** Boosts the immune system and keeps skin healthy
- **Vitamin K:** Important for bone health and blood clotting

**Minerals:** Beet leaves contain calcium, iron, potassium, and magnesium.

- **Iron:** More iron than spinach, which helps make red blood cells and carry oxygen around the body
- **Calcium:** Strengthens bones
- **Potassium and magnesium:** Help relax blood vessels, which can improve blood flow and reduce blood pressure
- **Fiber:** Helps with digestion and promotes satiety
- **Antioxidants:** Contain antioxidants like beta-carotene, lutein, and zeaxanthin, which help protect cells from damage
- **Heart health:** The combination of nutrients in beet leaves may help support heart health
- **Mental health:** Vitamin K may reduce damage to neurons in the brain, which could slow the progression of Alzheimer's disease

You can eat beetroot leaves raw or cooked. They taste great sautéed as a side dish or tossed in a salad. Beetroot leaves are not only edible and safe to eat. They're delicious, scrumptiously sweet, silky and tender, these leafy greens are hard to beat when it comes to taste and texture.

Beet greens, also known as beetroot tops, were once actually used for medicine, while Ancient Romans believed they were an aphrodisiac. The peak season for beetroots is between June and October in the UK, and they are part of the same food group as spinach and chard.

### Storage tips

- Greens are best used soon after you buy your beets. To preserve your beet tops for as long as possible, wrap them in paper and keep them in the fridge, but try and use them within a few days.
- Beet leaves can also be dehydrated and can be kept for several months.

### Cooking with beetroot leaves

Wondering how to eat beetroot leaves and stalks? The best way to enjoy the leaves is to cook them quickly to preserve their beautiful bright green colour. Start by trying these scrumptious methods.

### Can beetroot leaves be juiced?

Beetroot leaves can be juiced very easily and enjoyed as a magnificent detox smoothie. Perfect for those dreaded Mondays after a heavy weekend!

### How to juice beetroot leaves

- Cut your beetroot and leaves into small pieces.
- Place them in your blender or juicer.
- Juice them until all the liquid has been extracted.

### Sautéed beet greens

Sautéed leaves are a crunchy, crispy treat that really make those sweet beets sing. Just toss them in a pan and start fry'.

**Blanching**

Blanching is a fancy chef's word for briefly cooking something in boiling water, before usually plunging it into ice-cold water. This method traps flavor, texture and colour, making it perfect for cooking beautiful beet top.

**Steaming**

Putting beet leaves in a steamer will add moisture to the dish, while softening the stalks and making them easier to chew.

Plus-beet greens are so versatile, they can be eaten numerous ways, such as raw in smoothies, sautéed as a side dish, or steamed in soups.

**Incredible health benefits of beet greens****Beet Greens Boost Immunity**

Beet greens are high in Vitamin C, essential for boosting immunity. Vitamin C plays a crucial role in helping improve your immune system and fight off cold and flu viruses. One cup of cooked beet greens contains almost 60% of your daily nutritional value with little to no sugars. Beet greens are also low in fat and calories.

**Beet greens lower blood pressure and boost cardiovascular function**

Beet greens and the infamous beet root contain high levels of nitrates the body converts to nitric oxide which improve blood health and help lower blood pressure. Nitrates are also incredible for increasing oxygen levels and greatly improving cardiovascular function.

Studies show that people who consume supplements and foods such as beet juice and beet greens containing natural healthy nitrates have increased energy and cardiovascular function and reduced risk of heart disease.

Beet Greens Recipe: Super Cleanser Beet Greens Smoothie.

**Beet greens improve eye health**

Beet greens contain Vitamin A (Beta-Carotene) and Lutein, important for improving eye health. One cup of beet greens equals more than 100% of our daily required value of Vitamin A. We know the cartoon character Bugs Bunny ate carrots filled with Vitamin A for increased energy and eyesight; carrots aren't the only vegetable with high concentrations of this valuable vitamin. Dark leafy greens, such as beet greens are rich with Vitamin A!

A study conducted by the age-related eye disease study research group demonstrates that giving people (over the age

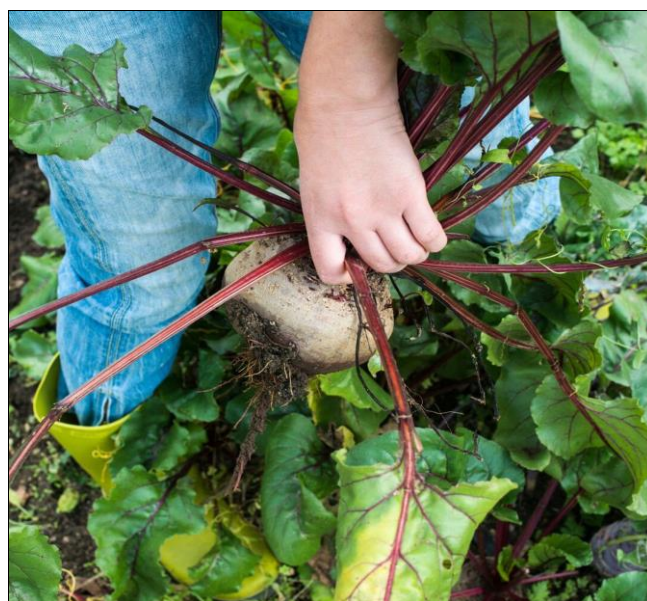
of 50) a supplement that includes beta-carotene reduced their risk of developing advanced macular degeneration. In addition to Vitamin A, Lutein (a carotenoid with anti-inflammatory properties) is found in beet greens and can prevent age-related macular disease.

**4. Beet greens strengthen bones**

You may have been taught from a young age that you need calcium for strong bones. Yup. Calcium, along with magnesium, Vitamin D, and Vitamin K are important for keeping bones strong. Rich in calcium, beet greens are awesome for strengthening the bones and warding off osteoporosis. For vegetarian, vegans, and those who prefer non-dairy foods, using leafy green vegetables like beet greens is a great way to add more calcium to your diet and strengthen your bones.

Vitamin K is also integral for building strong bones, and 1 cup of beet greens contains over 100% of your daily required intake. Why is Vitamin K important for the bones? "Vitamin K works with vitamin D to ensure that calcium finds its way to the bones to help them develop properly," says Dr. Sherry Ross, a women's health expert at Providence Saint John's Health Center in Santa Monica, California.

Shared by *Life Science*, a "report by the Brigham and Women's Hospital and Harvard Medical School found that women who get adequate amounts of vitamin K in their diet are less likely to break a hip." There are so many reasons to eat more beet greens!.

**Beet greens improve mental health**

Boost your mood and improve your mental health with beet greens. Vitamin B6 improves mood and boosts depression, and beet greens contain high amounts of Vitamin B6.

Research shared in the integrative medicine insights discusses the importance and relevance of dietary nutrients for mental health. "Some of the earliest research studies on nutrients relevant to mental illness observed irritability and mood problems in people known to be deficient in the B vitamins, as well as reported positive improvements in mental illness when treated with such nutrients as manganese and nicotinic acid; regardless of whether or not the patients could be found to be deficient."

Beet greens are also high in Vitamin K, which research indicates can reduce and limit damage to neurons in the brain. This means that Vitamin K may slow the progression of

Alzheimer's disease.

### Beet greens boost blood health

Containing more iron than spinach, beet greens improve blood health by preventing and treating anemia. Iron is a vital part of hemoglobin, the substance found in red blood cells that transports oxygen from your lungs throughout your body. Many people suffer from an iron deficiency called anemia. If your body is low in iron, then you can't make enough oxygen-carrying red blood cells. Every cell in your body needs iron, and beet greens are a rich source of iron to improve your blood health!

**Beet greens are also high in vitamin B6, a vitamin that is vital for creating red blood cells and neurotransmitters**



### Beet greens help create healthy skin

Want clear healthy skin? Add beet greens to your diet. Beet greens are high in Vitamin C and also detoxify the liver for promoting clear glowing skin. The antioxidant properties of Vitamin C help promote collagen production which is vital for skin health. Beet greens are also filled with fiber to keep you regular and help flush out the body's toxins and waste to help keep your skin clear and healthy.

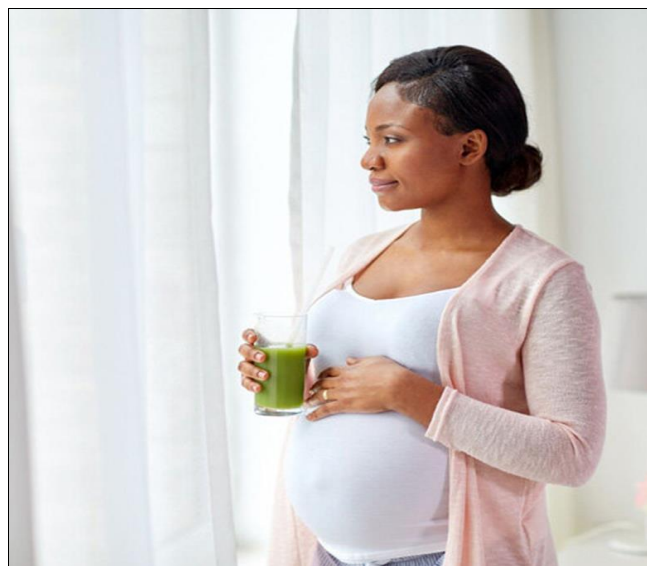
### Beet greens improve digestive health

High in fiber, beet greens improve digestion and improve chronic constipation. Boost your fiber intake with leafy greens, fruits, and vegetables to stay regular. Besides being bulky in both soluble and insoluble fiber (essential to healthy digestion), beet greens help your gut by encouraging healthy bacterial growth throughout your digestive tract. Beet greens (and other dark leafy green vegetables) are like superhero prebiotics, by naturally stimulating good gut bacteria; a happy gut is vital for health! Gut Health Recipes: 30 Fermented Food and Drink Recipes for Better Gut Health

### Beet greens promote healthy teeth

Beet greens are high in calcium, magnesium, and Vitamin D for promoting strong teeth. Foods high in calcium and magnesium help to build strong enamel which prevents cavities. Vitamin D is essential for aiding calcium absorption. Improve the health of your teeth by eating more foods (like beet greens) rich in calcium, minerals (like magnesium), and

Vitamin D.



### Beet greens support a healthy pregnancy and pre-natal care

Beet greens are SUPER rich in Vitamin B9, Folate which is necessary for both adults and infants as it regenerates red blood cells in the immune system.

During pregnancy, folate (vitamin B9) is vital for ensuring healthy growth of the baby's cells and tissues. Ensuring you meet the recommended daily intake of folate when pregnant lowers your baby's risk of certain congenital disabilities and neurodegenerative disorders.

Research indicates that naturally consuming folate through foods has a better absorption rate. Therefore, eating beet greens and other foods high in folate is important and beneficial for the health and growth of your baby.

For a quick and easy beet greens recipe, try superhero sautéed beet greens or minty shamrock vegan smoothie with banana and beet greens.

Looking for more ways to eat beet greens? Check out: 15 creative ways to use beet greens.

### More beet greens health tips/concerns

For individuals with existing and/or untreated kidney or gallbladder problems, you may want to avoid eating large amounts of beetroots and beet greens. Like many other healthy foods, beets (notably beet greens) contain amounts of oxalates (naturally occurring substances found in plants, animals, and human beings).

For those concerned with or sensitive to oxalates, a quick flash boil (1-2 minutes, also known as "blanching") will reduce the oxalates levels.

Beet greens are high in Vitamin K, so if you are a patient taking anti-coagulants (such as warfarin), you may be encouraged to avoid dark leafy greens. As always, if you have dietary or health concerns, please check with your physician. See Just Beet It's "Disclaimer" under Legal for further details regarding physician care.

### Conclusion

Beet roots are easy to cultivate and have many nutritional and health benefits. Beet greens boost immunity, lower blood pressure, improve mental health, strengthen bones, and more. Today, beet greens are used in various dishes from homemade baked beet greens chips, ginger stir-fry with beet greens, or added to your favorite smoothie or salad. Beet greens are high

in nutritional value and are packed with vitamins, minerals, fiber, and antioxidants. There are so many amazing benefits to eating more beet greens.

### References

1. Eldridge S, The Editors of Encyclopaedia Britannica. [Title not provided]. Encyclopaedia Britannica, 2024 Nov 15.
2. Wikipedia. [Internet]. Available from: [www.wikipedia.com](http://www.wikipedia.com).
3. Bradford A. Vitamin K: Sources & Benefits. Life Science Publication; 2015. Available from: <https://www.livescience.com/51908-vitamin-k.html>.
4. Cornish S, et al. The Role of Vitamins and Minerals in Psychiatry, 2008. Available from: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC304601>
5. Harvard Health Publishing. Iron and Your Health. Harvard Medical School, 2015. Available from: <https://www.health.harvard.edu/staying-healthy/iron-and-your-health>.
6. Nutrition Data. [Internet]. Available from: <https://nutritiondata.self.com/facts/vegetables-and-vegetable-products/2353/2>.
7. Robinson J. Eating on the Wild Side. New York: Little, Brown and Company, 2013.
8. Splittstoesser WE. Beet. In: Public Libraries, 2014. Available from: <http://www.worldbookonline.com/pl/infofinder/article?id=ar052980>.
9. Stanaway L, et al. Performance and Health Benefits of Dietary Nitrate Supplementation in Older Adults: A Systematic Review, 2017. Available from: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5707643>