



## Noteworthy Dietetic Veggies Viz. Turnip Greens, Collard Greens, Bok Choy Swiss Chard

Raaz Maheshwari

Department of Chemistry, SBRMGC, Nagaur, Rajasthan, India

### TURNIP GREEN

Turnip greens, the leafy, green tops of turnips, are considered a delicacy in the South and have grown in popularity across the rest of the United States thanks to their assertive flavor and hearty nutritional profile. When you're buying turnip greens, choose ones with consistent color, crisp leaves and slender stems. One cup of cooked turnip greens has 1.2g of protein, 4.4g of carbohydrates and 3.5g of dietary fiber. A cup of turnip greens also has 27mg of vitamin C, 118mcg of folate, 203mg of potassium and 137mg of calcium. In 1 cup of turnip greens, you'll get about 20 calories. Fresh turnip greens are available from October to March, but canned and frozen turnip greens can be found year-round and have the same nutritional benefits. Check the package to be sure you're buying greens that are packed in water or flash frozen to maximize nutritional benefits. Turnip greens are a good addition to a healthy diet because they are low in calories, cholesterol, fat and sodium. They can be prepared in a variety of ways, including steaming, blanching and sauteing and used in salads, stews, casseroles or served on their own. Turnip greens contain many nutrients that benefit overall health. Vitamin C in turnip greens helps protect cells in the body from damage by free radicals. Folate helps with the production of new cells and strengthens bones. Potassium helps your body maintain normal kidney function and plays a role in conducting nerve information through the body. Calcium helps strengthen bones and teeth. Turnip greens contain calcium oxalates, which can cause health problems if they accumulate and crystallize in the body. If you have a history of gall bladder problems or kidney stones, you may want to avoid turnip greens because of their high oxalate content.

### BOK CHOY

It is otherwise known as bak choi, paak choi, Chinese chard cabbage and Chinese mustard cabbage is a vegetable that resembles celery although it is actually a member of the cabbage family. It has thick, white stalks and dark green leaves that have a round shape. Bok choy has been cultivated in China for centuries and is now commonly grown in Alberta, Canada and in California, USA. Bok choy is also grown in Europe where it was introduced in the 1700's. It is available year round, except in July and August, and it is best when purchased in the Fall and Winter. Currently, you can buy bok choy in many ethnic grocery stores and in many larger supermarket chains. It is becoming popular to use for cooking because it has a mild taste, similar to cabbage, and can be used in many recipes, either raw, as in salads, or cooked for use in soups and in stir-fries.

When purchasing bok choy, select stalks that are pure white and firm. Additionally, look for leaves that are dark green and non-wilted. Do not select bok choy that has any brown spots on its leaves, as this type of bok choy is less flavorful. Baby bok choy, which is a younger version of bok choy, should also be purchased according to these standards. Once purchased, you can safely store bok choy in your home for up to three days provided that you refrigerate the bok choy in a plastic bag as soon as you arrive home with your purchase. Because bok choy is a member of the cabbage family, you can cook it as you would a cabbage. When cooked, it has a sweet flavor and its stalks are firm. Baby bok choy is best when cooked whole and used as a side dish to a meat entrée. However, when cooking mature bok choy, do not cook it whole. Instead, first remove its leaves from their stalks and

cut the stalks into pieces. Next, take the leaves that were removed and cut them into pieces as well. Both bok choy's stalks and leaves are edible. Common uses for mature bok choy include steaming or boiling it then adding seasonings to the bok choy such as soy sauce, ginger, or hot peppers. You can also eat the raw stalks of both the baby and mature bok choy.

Another reason that bok choy is becoming popular to use, besides its similarity to cabbage, is because of its nutritional value. One half cup of raw bok choy, which is approximately 56 grams, contains only 10 calories. Additionally, bok choy contains no fat or cholesterol and is a good source of calcium. It is also low in sodium and high in vitamins C and A. Because both bok choy's stalks and leaves can be used in salads, it also provides a delicious and healthy meal for those who are on a diet. Bok choy is also easy to prepare. You need only wash the bok choy, chop it, then use it as you desire; for example, you can microwave or steam it for a simple and quick side dish or main meal.

Bok choy is a vegetable that will continue to be used in many international kitchens because it is a tasty alternative to cabbage as well as a healthy dietary addition

Bok choy is an excellent source of vitamin C and vitamin A and excellent source of vitamin C and vitamin A, and a good source of folate. Look for dark green, glossy leaves and bright white stalks. Avoid heads with brown spots on the leaves. This discoloration often indicates storage at too low a temperature and results in flavor loss. It will keep refrigerated in a plastic bag for up to two days. Thoroughly wash and drain. Although baby bok choy can be cooked whole, mature bok choy should be cut for cooking. Trim the leaves from the stalks, slice the stalks crosswise, and shred the leaves coarsely. Serve raw in salads. To cook, steam or boil the stalks for two minutes, then add the leaves and cook for another one to two minutes until the stalks are tender and the leaves just wilted. Drain and serve. Or stir-fry stalks in oil for two to four minutes; add leaves and stir-fry for two to three more minutes. Good with Asian flavors such as ginger and soy.

### COLLARD GREENS

Collard greens are highly nutritious staple green “cabbage-like leaves” vegetable. Collards are one of the most popular members of the *brassica* family, closely related to kale and cabbage and could be described as a non-heading (acephalous) cabbage. Botanically, the greens are named as ***Brassica oleracea L.*** (Acephala group).

Collards are probably originated in the eastern European or Asia minor region and now a day's grown almost all parts of the cooler temperate regions The plant grows up to 3-4 feet in height and bears dark green leaves arranged in a rosette fashion around an upright, stocky main stem.

Several cultivar types of collard greens are grown around the planet depending on the soil type, climate etc.

1. Blue Max: It has very attractive savoy- like blue-green leaves.
2. Georgia: It is also known as Georgia LS or Georgia Southern. It has blue-green and slightly savoyed leaves.
3. Vates: Plant is compact and leaves are smooth and dark green.
4. Champion: Low growing plant, featuring smooth, dark-green leaves with short internodes.
5. Flash: It is a very uniform Vates type with smooth, dark-green leaves.
6. Heavy-Crop: It has very large, slightly savoy like, blue-green leaves. Leaves have close internodes spacing so bunching can be more difficult.

### Health benefits of Collard greens

- Wonderfully nutritious collard leaves are very low in calories (provide only 30 cal per 100 g) and contain no cholesterol. However, these greeny leaves contain very good amount of soluble and insoluble dietary fibre that helps control LDL cholesterol levels and also; offers protection against hemorrhoids, constipation as well as colon cancer diseases.
- Widely considered to be healthful foods, collards are rich in invaluable sources of phyto-nutrients with potent anti-cancer properties, such as **di-indolyl-methane**(DIM) and **sulforaphane** that have proven benefits against *prostate, breast, cervical, colon, ovarian* cancers by virtue of their cancer cell growth inhibition and cytotoxic effects on cancer cells.
- **Di-indolyl-methane** has also found to be effective immune modulator, anti-bacterial and anti-viral properties by potentiating Interferon-gamma receptors and production.

- The leaves are also an excellent source of **folates**, provides about 166 mcg or 41.5% of RDA. Folates are important in DNA synthesis and when given during peri-conception period can prevent neural tube defects in the baby.
- Fresh collard leaves are also rich in **vitamin-C**. Provides about 59% of RDA per 100 g. Vitamin-C is a powerful natural anti-oxidant that offers protection against free radical injury and flu-like viral infections.
- Collard greens are also an excellent source of **vitamin-A** (222% of RDA per 100 g) and flavonoid poly-phenolic anti-oxidants such as *lutein*, *carotenes*, *zea-xanthin*, *crypto-xanthin* etc. These compounds are scientifically found to have antioxidant properties. Vitamin A also required maintaining healthy mucus membranes and skin and is also essential for vision. Consumption of natural fruits rich in flavonoids helps to protect from lung and oral cavity cancers.
- This leafy vegetable contain amazingly high levels of **vitamin-K**, provides staggering **426%** of recommended daily levels per 100 leaves. Vitamin K has potential role in the increase of bone mass by promoting osteotropic activity in the bone. It also has beneficial effect in **Alzheimer's disease** patients by limiting neuronal damage in their brain.
- Collards are rich in many vital B-complex groups of minerals such as niacin (vitamin B-3), pantothenic acid (vitamin B-5), pyridoxine (vitamin B-6) and riboflavin.
- The leaves and stems are good in minerals like iron, **calcium (Ca)**, copper (Cu), manganese (Mn), selenium (Se) and zinc (Zn).

Collard greens (*Brassica oleracea* L. Acephala group),  
fresh, raw, Nutrition value per 100 g  
(Source: USDA National Nutrient data base)

Principle	Nutrient Value	Percentage of RDA
Energy	30 Kcal	1.5%
Carbohydrates	5.69 g	4%
Protein	2.45 g	4%
Total Fat	0.42 g	1.5%
Cholesterol	0 mg	0%
Dietary Fiber	3.60 g	9%
<b>Vitamins</b>		
Folates	166 mcg	41.5%
Niacin	0.742 mg	5%
Pantothenic acid	0.267 mg	5%
Pyridoxine	0.165 mg	13%
Riboflavin	0.130 mg	10%
Thiamin	0.054 mg	4.5%
Vitamin A	6668 IU	222%
Vitamin C	35.3 mg	59%
Vitamin E	2.26 mg	15%
Vitamin K	510.8 mcg	426%
<b>Electrolytes</b>		
Sodium	20 mg	1%
Potassium	169 mg	3.5%
<b>Minerals</b>		
Calcium	145 mg	14.5%
Copper	0.039 mg	4.5%
Iron	0.19 mg	2.5%
Magnesium	9 mg	2%

Manganese	0.276 mg	12%
Selenium	1.3 mcg	2%
Zinc	0.13 mg	1%
<b>Phyto-nutrients</b>		
Carotene-β	3842 mcg	--
Crypto-xanthin-β	80 mcg	--
Lutein-zeaxanthin	8932 mcg	--

## SWISS CHARD

It is also known as *chard*, *silverbeet*, *perpetual spinach*, *spinach beet*, *crab beet*, and *mangold*

- It is in the same species as beetroot (beets)
- The word *Swiss* was used to distinguish it from French spinach varieties in 19th century seed catalogues, but in reality, it's roots trace back to Sicily and is mostly associated with Mediterranean cuisine, where it is still popular today
- Its thick stems range from white to yellow to red.
- It has shiny green ribbed leaves that fall between spinach and kale in terms of toughness and bitterness – so it's actually one of the most versatile greens for cooking
- Fresh young chard leaves can be eaten raw, but when sauteed, the bitterness of mature leaves will fade and it will taste sweeter than cooked spinach
- It is high in vitamins A, K and C, and is also rich in iron, potassium, dietary fiber and protein
- It usually has a fair bit of dirt on the leaves, so it needs a good clean under cold water before using
- Once washed, it should be wrapped in paper towels and refrigerated for up to 4 days

## Uses

- Typically, only the young leaves will be eaten raw (like baby spinach), although some people consume the uncooked mature leaves as well
- It can be used pretty much anywhere you would use cooked spinach or other thick leafy greens – including casseroles, stir-fries, stuffings, soups, and pastas
- The leaves can be seasoned and baked in the oven, just like kale chips

## Chard: Chock-full of Nutrition

A one-cup serving of boiled Swiss chard contains a mere 35 calories, yet provides:

- **Vitamin K**--More than 600 per cent of the recommended daily value. Important in blood clotting.
- **Vitamin A**--More than 100 per cent of the recommended daily value. Important in visual health.
- **Vitamin C**--42 per cent of the recommended daily value. Helps the immune system; protects cells against damage.
- **Magnesium**--47 per cent of the recommended daily value. Helps bone health; important in muscle function.
- **Potassium**--20 per cent of the recommended daily value. Helps maintain normal blood pressure levels; aids heart function.
- **Iron**--50 per cent of the recommended daily value. Helps prevent anemia; can boost energy; carries oxygen in the blood.
- **Vitamin E**--22 per cent of the recommended daily value. Acts as an antioxidant; helps protect cells against damage.
- **Dietary fiber**--14 per cent of the recommended daily value. Can reduce high cholesterol levels; promotes intestinal health.