

Power-Up Your Vegetable Choices

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Many of us have childhood memories of our parents telling us to eat our vegetables. Parents are right about many things, and eating vegetables is one of them. Vegetables provide vitamins and minerals needed for a healthy diet. They are low in calories, fat, and other unhealthy substances such as sodium and cholesterol. Vegetables also add color, texture, and flavor to our meals. Meals would be dull without vegetables.



Certain vegetables are seen as leaders in the fight against chronic diseases such as stroke, heart disease, some types of cancers, and vision problems.

Seven Health Benefits Vegetables Can Provide

Consumption vegetables is associated with:

- Lower risk for heart disease and stroke: Some research shows that the intake of 2½ cups of vegetables and fruit is associated with a reduced risk of cardiovascular disease, including heart attack and stroke.
- Management of diabetes
- Protection against mouth, stomach, and other cancers
- Weight control: Vegetables are low in fat and high in fiber, which helps you feel full longer.
- Eye health: A diet rich in dark green, leafy vegetables such as spinach and kale may reduce the chances of developing cataracts.
- Gastrointestinal health: Vegetables are rich in fiber, which prevents constipation and diverticulosis (the development of tiny pouches inside the colon that are easily irritated).

Do All Vegetables Provide the Same Health Benefits?

Although most individuals know it is important to eat vegetables, research is now showing that all vegetables may not be created equal. Certain vegetables are seen as leaders in the fight against chronic diseases such as stroke, heart disease, some types of cancers, and vision problems (Table 1).

Several studies showed people who ate a diet with generous amounts of dark green leafy, yellow/orange, and cruciferous vegetables such as broccoli or cabbage, tomatoes and pulses, had reduced risk of chronic diseases, including stroke, cardiovascular diseases, hypertension, diverticulosis, and certain cancers.

Cruciferous vegetables

“Cruciferous” is a Latin word for a family of plants that includes broccoli, cauliflower, cabbage (red and Chinese), brussel sprouts, rutabagas, turnips and kohlrabi. The word cruciferous is used because the blossoms of these plants resemble a cross

or crucifix. These vegetables are rich in vitamin C, fiber and water. They also contain substances called phytochemicals (“phyto” meaning plant).

Phytochemicals keep the body healthy by:

- Preventing cancer causing substances from becoming active in the body
- Reducing inflammation: Even though inflammation is formed naturally when the body is injured or when there is an infection, too much can damage cells and increase a person’s risk for cancer and other chronic diseases.
- Strengthening our immune system

Dark green leafy vegetables

Many types of dark green leafy vegetables are available to consumers: Spinach, romaine lettuce, leaf lettuce, mustard greens, collard greens, chicory, Swiss chard, turnip greens, and watercress to name a few. Dark green leafy vegetables are good sources of folate; vitamin A and

C, iron, calcium, magnesium, potassium and other nutrients. Darker leaves have more of these important nutrients. Researchers have found that carotenoids in dark green leafy vegetables can inhibit the growth of certain types of breast cancer cells, skin cancer cells, lung cancer cells and stomach cancer cells.

Orange/dark yellow vegetables

Dark yellow vegetables like carrots, winter squash, sweet potatoes, yams and pumpkin are an important source of beta-carotene in the diet. Beta-carotene changes to vitamin A in the body. Eating dark yellow vegetables may help in the prevention of cancer of the lungs, mouth, throat and cervix.

Tomatoes

Tomatoes contain an antioxidant, lycopene, shown to reduce the incidence of certain types of cancers, particularly, prostate, lung, and stomach. In raw tomatoes, lycopene is normally bound to the cell structure. As

the tomato is processed, lycopene is released from the cell structure and is more easily absorbed by the body. Lycopene is higher in processed foods such as pastes, cooked tomatoes, soups, ketchup and juices.

Pulses

These are also called legumes and include dried beans, peas, lentils, and soybeans. These foods contain phytochemicals (saponins, protease inhibitors and phytic acid) that protect cells in the body from damage that can lead to cancer. Saponins have been shown to prevent the reproduction of cancer cells and slow down the growth of tumor. Protease inhibitors slow the division of cancer cells and help prevent tumors from releasing substances that destroy nearby cells.

Understanding Your Vegetable Choices

The term vegetable is broadly defined as plants or parts of plants that are used for food. These include: leaves, stems,

Table 1. Vegetable nutrients and their benefits.

Nutrient	Foods that are good sources	How it helps the body
Vitamin A	Leafy green vegetables such as leaf lettuce, greens, and bok choy; broccoli; and deep yellow vegetables such as squash, pumpkin, and carrots	Eye health, healthy skin, and growth
Vitamin C	Brussels sprouts, green peppers, kale, cabbage, broccoli, tomatoes, and cauliflower	Healthy bones and teeth, stronger immune system, helps fight disease
Calcium	Leaf lettuce, greens, bok choy, broccoli	Strong bones and teeth, heart health
Potassium	Leaf lettuce, greens, bok choy, broccoli, carrots, tomatoes, squash, artichokes	Lower risk of kidney stones, reduce bone loss, reduces muscle cramps
Folate	Leaf lettuce, greens, bok choy, broccoli	Heart health, infant growth during child bearing
Fiber	Leaf lettuce, greens, bok choy, broccoli, carrots, squash, avocado	Digestive and heart health
Iron	Leaf lettuce, greens, bok choy, broccoli, artichoke	Growth and circulation of oxygen through the body
Magnesium	Leaf lettuce, greens, bok choy, broccoli, artichoke, avocado, sweet potatoes	Bone growth, heart health, and diabetes prevention

roots, flowers, and seeds. With such a broad definition for vegetables, foods such as corn that would normally qualify as a grain, potatoes that are mainly starch, and dried peas and beans that are seeds are classified as vegetables.

Different parts of the plant perform different functions. The part of the plant and the function it plays largely determine its composition and nutrition value. The leaves of plants normally perform a metabolizing function and do not store nutrients, however leaves such as spinach are rich in many vitamins that function in the growth and production of energy in the plant. Roots and seeds are storage parts of plants. Roots such as carrots and sweet potatoes are high in starch and fiber, and seeds and nuts are high in protein.

How Many Vegetables do I Need to Eat Each Day?

The amount of vegetables you need depends on your age, sex, and level of physical activity. Vegetable serving sizes listed below (Table 3) are appropriate for individuals who get less than 30 minutes a day of moderate physical activity. Those who are more physically active may be able to consume more vegetables while staying within caloric needs.

Foods in the vegetable group include:

- Vegetables cooked or raw
- Fresh, frozen or canned vegetables
- 100% vegetable juice
- Tomatoes and tomato products

Table 2. Main Vegetable Groupings.

<p>Dark green, leafy vegetables</p> <ul style="list-style-type: none"> • spinach • collard greens • Dark green leafy lettuce • watercress • kale • mustard greens • romaine lettuce • spinach • turnip greens <p>Orange/dark yellow vegetables</p> <ul style="list-style-type: none"> • acorn squash • butternut squash • carrots • Hubbard squash • pumpkin • sweet potatoes • yams <p>Tomatoes and tomato products</p> <ul style="list-style-type: none"> • tomato • tomato juice • tomato paste • spaghetti sauce • sun dried tomatoes <p>Starchy vegetables</p> <ul style="list-style-type: none"> • corn • green peas • lima beans (green) • potatoes <p>Cruciferous vegetables</p> <ul style="list-style-type: none"> • broccoli • cauliflower • radish • turnips • cabbage • brussel sprouts • green leafy vegetables such as collard greens, kale, watercress 	<p>Pulses/legumes</p> <ul style="list-style-type: none"> • black beans • black-eyed peas • garbanzo beans (chickpeas) • kidney beans • lentils • lima beans (mature) • navy beans • pinto beans • soy beans • split peas • tofu (bean curd made from soybeans) • white beans <p>Other vegetables</p> <ul style="list-style-type: none"> • artichokes • asparagus • bean sprouts • beets • celery • cucumbers • eggplant • green beans • green or red peppers • iceberg (head) lettuce • mushrooms • okra • onions • vegetable juice • wax beans • zucchini
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Table 3: Recommended Weekly Vegetable Intake.

Calorie Level of Pattern	1,000	1,200	1,400	1,600	1,800	2,000	2,200	2,400	2,600	2,800	3,000	3,200
Vegetables	1 cup	1½ cups	1½ cups	2 cups	2½ cups	2½ cups	3 cups	3 cups	3½ cups	3½ cups	4 cups	4 cups
Dark-green vegetables (spinach, kale)	½ cup	1 cup	1 cup	1½ cups	1½ cups	1½ cups	2 cups	2 cups	2½ cups	2½ cups	2½ cups	2½ cups
Red and orange vegetables (sweet potato, carrots)	2½ cups	3 cups	3 cups	4 cups	5½ cups	5½ cups	6 cups	6 cups	7 cups	7 cups	7½ cups	7½ cups
Beans and peas (legumes)	½ cup	½ cup	½ cup	1 cup	1½ cups	1½ cups	2 cups	2 cups	2½ cups	2½ cups	3 cups	3 cups
Starchy vegetables (corn/ potatoes)	2 cups	3½ cups	3½ cups	4 cups	5 cups	5 cups	6 cups	6 cups	7 cups	7 cups	8 cups	8 cups
Other vegetables	1½ cups	2½ cups	2½ cups	3½ cups	4 cups	4 cups	5 cups	5 cups	5½ cups	5½ cups	7 cups	7 cups

Source: 2010 Dietary Guidelines

Overcoming Hurdles to Better Health

Find the time to eat more vegetables by:

- Keeping them handy and reaching for them as a snack
- Cooking extra vegetables when you have time so they will be ready when you need them
- Getting family members involved with cooking and preparation

Overcome your dislike of vegetables by:

- Trying new things, cook them a different way, or add your favorite seasoning
- Eating what you are comfortable with, you don't have to jump in all at once
- Trying to give vegetables a fair chance, sometimes it takes time to get used to a particular flavor

- Getting fresh vegetables if you can, they tend to have more flavor

Overcome food costs by:

- Buying fruits and vegetables in season, they will be cheaper that way
- Buying only enough for the next couple of days to avoid waste
- Using frozen and canned vegetables. They are cheaper and will not spoil quickly
- Trying to grow your own ingredients
- Buying vegetables at local markets as they are often cheaper
- Looking for deals and sales on vegetables at the grocery store or through coupons. Remember, vegetables are only a deal if you buy and use them
- Cutting vegetables yourself. Precut vegetables cost more than whole vegetables.

- Picking your own at local farms when possible

Gain motivation by:

- Congratulating yourself: Don't get down if you think you are not doing well, instead celebrate small successes.
- Getting your friends or relatives to start eating more vegetables with you
- Setting realistic goals for using vegetables—remember that every little bit counts

Take Action

Here are some ideas on how to eat more vegetables throughout the day:

Breakfast

- Have vegetable juice, carrot or pumpkin milk, or a smoothie made with fruit and vegetables.
- Add vegetables to omelets and/or serve omelets with salsa.
- Add vegetables to muffins or bread.

Lunch

- Have vegetables on your sandwich (leaf lettuce, tomato slices, fresh spinach leaves, cucumber slices, grated raw carrots or squash).
- Have a half-cup of vegetables, cooked or raw, as a salad.
- Add beans or peas to salads (e.g., kidney or garbanzo beans), soups (e.g., split peas or lentils), or side dishes (e.g., baked beans or pinto beans), or serve as a main dish.
- Drink vegetable juice.
- Have a bowl of vegetable soup.

Dinner

- Add dark green, red, and orange vegetables to soups, stews, meats, and other side dishes.
- Include vegetables in casseroles (e.g. vegetable lasagna).
- Stir-fry vegetables and serve with rice and pasta.
- Make a vegetable pizza or try vegetables wrapped in tortilla.
- Have a salad either as a side dish or main dish.
- When adding sauces, condiments, or dressings to vegetables, use small amounts and look for lower-calorie options (e.g., reduced-fat cheese sauce or fat-free dressing). Sauces can make vegetables more appealing, but often add extra calories.
- Have vegetable soup.
- Have a vegetable entrée (mixed vegetable au gratin, vegetable casserole, or sautéed vegetables).

- Have dessert made with vegetables, such as pumpkin pie or cookies with pureed vegetables.

Snacks

- Keep raw, cut-up vegetables handy for quick snacks.
- Choose lower-calorie dip, such as yogurt-based dressings or hummus, instead of sour cream or cream cheese-based dips.

Eating out

- Choose a vegetable as a side dish.
- Request cooked vegetables be prepared with little or no fat and salt.
- Ask for salad dressing on the side, so you can decide how much to use.

Resources

Tips and vegetable recipes:

<http://www.cdc.gov/nutrition/everyone/fruitsvegetables/>.

Calculate fruit and vegetable recommendations based on your calorie needs for your age, sex, and activity level: <http://www.fruitsandveggiesmatter.gov/>.

Find out the amount of food groups needed daily: <http://www.choosemyplate.gov/myplate/index.aspx>.

Interactive tools: (recipe makers and My Plate analyzer)

<http://www.fruitsandveggiesmatter.gov/activities/index.html>.

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