

## Cover your plate with color

You may have heard the saying “Eat a Rainbow” for good health. Though simple, the colorful advice is based on sound, ongoing research showing that, in addition to vitamins and minerals, brightly-colored vegetables and fruits contain phytonutrients, or plant-based compounds, which provide protective health benefits. **Phytonutrients** appear to protect the body’s cells from damage caused by harmful compounds in food and the environment, and stop cancer cell growth in a variety of ways. As the Dietary Guidelines recommend, you benefit from filling **half your plate with fruits and veggies at every meal.**

The good news is that consumers don’t have to know HOW these thousands of amazing substances work in their bodies to keep them healthy. The protective effects of phytonutrients appear to be safest and most helpful when eaten as part of a healthy diet — not in supplements. Simply select a wide variety from the many delicious, colorful food choices and forms available — fresh, frozen, dried, or canned — with little or no added sugar, salt, or fat. Fruits and vegetables — more does matter!



Just as healthful food choices partner with other healthy behaviors to protect us from disease, K-State Research and Extension proudly partners with Kansas State University’s Johnson Cancer Research Center to bring you this message of good health.

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# Choose Foods that Lower Your Risk of Cancer



The 2015–2020 Dietary Guidelines urge all Americans to “consume a healthy eating pattern” that includes a variety of **vegetables** of all subgroups — dark green, red and orange, legumes (beans and peas), starchy and other; **fruits**, especially whole fruits; and **grains**, at least half of which are whole grains. That recommendation was developed after numerous population studies suggested that diets rich in vegetables, fruits, and whole grains may offer some protection against cancer, heart disease, and type 2 diabetes.

### Less is more

Healthy eating patterns limit several foods linked, through research, to chronic diseases, including saturated fats and trans fats, added sugars, and sodium (salt). For consumers, that means choosing **fewer processed meats, salty foods, sugar-sweetened drinks, full-fat dairy foods, and large portions of red meat**. Alcohol, if consumed, should be limited to one drink per day for women and two drinks per day for men. Studies have shown that minimizing these categories of foods, as well as aiming for a healthy weight and physical activity level, are important factors in the body’s fight against cancer and other diseases.

### A grain of truth

Whole-grain foods have up to five times more **antioxidant** (anti-aging at the cell level) activity than do common vegetables, fruits, or white bread. Consuming a wide range of antioxidants is important, since different ones protect against cell damage in different ways. Population studies have shown that foods high in dietary fiber and whole grains probably lower the risk of colorectal cancer.

## Make a Colorful Plate

### Color

#### Red



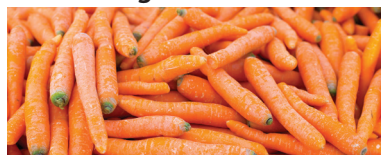
### Fruits and Vegetables

Strawberries, tomatoes, beets, watermelon, cherries, red bell peppers, red potatoes, red grapes, pink grapefruit, cranberries, red apples, red pears, red onions

### Health Benefits

Reduce risk of several cancers; lower blood pressure; may help improve memory; provide several antioxidants to protect cells from aging

#### Dark Orange



Carrots, butternut squash, pumpkin, sweet potatoes, mangoes, apricots, cantaloupe

Protect against infection; keep eyes and skin healthy; high in antioxidants that protect cells from damage — including several types of cancer

#### Yellow/Orange



Oranges, pineapple, sweet corn, yellow tomatoes, yellow summer squash, yellow peppers, tangerines, yellow pears

Protect against age-related vision problems and risk of prostate cancer

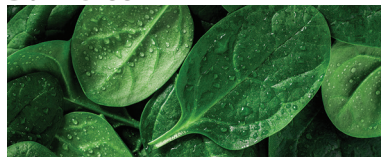
#### Yellow/Green



Avocado, green apples, green beans, iceberg lettuce, Brussels sprouts, cabbage, kiwifruit

Help maintain eyesight; may reduce risk of vision problems in later life

#### Dark Green



Broccoli, spinach, romaine, kale, collard and other leafy greens

May protect against some cancers; important in eye and heart health

#### Blue/Purple



Purple grapes, purple plums, blueberries, blackberries, prunes, raisins, purple Belgian endive

Slow the growth of colon cancer cells; act as anti-cancer agents in digestive tract

#### White/Brown



Bananas, brown pears, cauliflower, mushrooms, garlic, onion, white potatoes, ginger, dates, jicama

Strong anti-cancer growth (reduce risk of colon, breast and prostate cancers)