Use Color to Guide Healthy Food Choices

Think about the last meal or snack you ate. Was it mainly tan/beige or was it full of bright colors found in nature? If you think about it, many of the foods that come from a factory or restaurant packaged in a box or wrapper are tan or beige in color. On the other hand, fruits and vegetables come in a wide range of colors, and when properly stored and prepared, contain all of the vitamins and minerals that Mother Nature intended. Vitamins and minerals, however, are only part of the story. Phytochemicals, (pronounced phȳtō-chemicals,) also known as phytonutrients, are naturally occurring plant chemicals that help provide the bright colors, strong aromas, and flavors that protect plants from pests. Research is showing that these compounds may also help promote good health.

Many people only include a few fruits and vegetables in their regular diet, but a rainbow of colors provides a broader range of nutrients. Research is beginning to show that combined compounds work together to provide powerful protection for our health, and that the combination provides a greater benefit than any one nutrient alone.

Each of the colors: red, orange, yellow, green, blue, and even brown, white, and black contain different combinations of nutrients that can help prevent or slow the progress of chronic diseases such, as high blood pressure, diabetes, and certain types of cancer. The list below outlines some of the benefits of the different fruit and vegetable color groupings.

Red & Blue fruits and vegetables get color from anthocyanins and can be excellent sources of Vitamin C. Lycopene and resveratrol are two well-researched nutrients found in red foods. Lycopene is protective against prostate cancer and resveratrol is beneficial for heart health.

Orange & Yellow produce gets color from carotenoids. Our bodies turn carotenoids into active Vitamin A. The carotenoid family includes lutein and zeaxanthan, which promote eye health, heart health and reduce the risk of certain types of cancer.

Green fruits and vegetables get color from chlorophyll. They contain carotenoids, sulfur compounds, and other phytochemicals that may aid in removing potentially cancerous compounds from our bodies. The lighter shades in this group have something to offer too. Celery contains apigenin which research is showing can promote the death of cancer cells.
Many phytonutrients help to give color, but some are colorless. White, brown, and black fruits and vegetables (think onions, garlic, cauliflower, mushrooms, black beans, and white potatoes with skin) all contain anthoxanthins. This nutrient potentially aids in reducing blood pressure and in controlling cholesterol. These foods are also rich in potassium.

The following easy kitchen tricks will help you get the biggest nutritional bang for your buck.

**Eat the Peel, Don’t Pare Too Much**
It is not unusual for a piece of produce to have a brightly colored outer layer and pale inner flesh. Often phytonutrients are most abundant in that outer layer. For example, the antioxidant phytonutrient quercetin is found in apples, onions, and other produce. Quercetin is the focus of much research for its anti-inflammatory properties. Peeling an apple or removing too many layers of an onion reduces the amount of quercetin. Apple peels also contain fiber, pectin, and depending on the color of peel, various other health-promoting nutrients.

**Eat a Variety of Forms**
Enjoy all forms of fruits and vegetables to get the maximum benefit from the nutrients. The way in which a food is handled before being eaten can affect the availability of nutrients to our bodies. Canning, freezing, drying, and cooking may make some nutrients more available for our bodies to use. For example, tomatoes contain the antioxidant nutrients Vitamin C and lycopene. Cooking or heating tomatoes breaks down the cell wall and makes lycopene easier for our bodies to use (bioavailability). On the other hand, cooking breaks down vitamin C. Including fresh, frozen, canned, and dried fruits and vegetables in your diet will help you get the maximum nutrition from your diet.

**Color Counts but Variety is Key**
Variety in what we eat is a long-standing recommendation for a healthy diet. At this time, there are no recommendations on how many servings of each color a person should eat. Each color of produce has health benefits, but no one color is better than another. Striving to eat 5 to 9 servings of fruits and vegetables each day, including a variety of colors, is a good strategy to get a broad variety of essential vitamins, minerals, and other nutrients.

**References:**

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