



COOPERATIVE EXTENSION

INFO SHEET

Kentucky State University Cooperative Extension Connections

Human Nutrition and Food Safety

Food as Medicine: Eating the Rainbow

The Nutritional Value and Health Benefits of Colorful Fruits and Vegetables.

Key Concept

Fruits and vegetables provide essential vitamins, minerals, fiber, and antioxidants needed for healthy growth and normal body function. Eating different types and colors supports digestion, immunity, vision, heart health, and strong bones. A varied intake may also help reduce the risk of chronic diseases.

Most people consume vegetables as part of their meals on a regular basis. They consist of several different types, including leafy vegetables, root vegetables, and fruit vegetables, each of which contains essential nutrients that contribute to the normal functioning of the body. Regular vegetable consumption can promote health, digestion, and normal growth and development. Vegetables are seen as a key component of a healthy diet due to their nutritional benefits.

Fruits come in a variety of colors, and each color group provides different nutrients that are beneficial

to the body. Red colored fruits can be beneficial for heart health; orange and yellow fruits tend to be high in vitamin A. Green fruits are a good source of vitamins and minerals, and blue and purple fruits are recognized for their antioxidant properties. Fruits of various colors provide the body with a good mixture of vitamins and minerals necessary for proper growth and development.

Selected green vegetables and their nutritional value.



Arugula

It is a cruciferous vegetable popular in American salads.

The leaves have a peppery, spicy flavor that grows bitter with age. Regular consumption may help support eye health and digestion as part of an overall healthy diet.



Broccoli

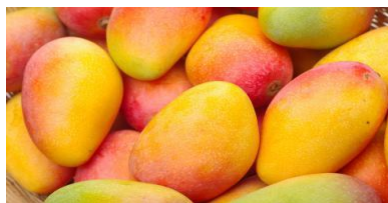
Broccoli is a green vegetable rich in vitamins C, K, and B9. It contains

antioxidants, including sulforaphane, and minerals such as calcium and potassium. It may help maintain heart health and support digestion, brain

function, and a healthy immune system.

Selected colorful foods, their respective nutrients, and examples of each.

Orange and yellow



foods are rich in carotenoids, vitamin C, and potassium. These compounds

act as potent antioxidants that support eye health, boost the immune system, promote healthy skin, and help lower inflammation.

Examples: apricot, carrot, pineapple, mango, cantaloupe, yellow squash, corn, papaya, sweet potato, lemon, orange.

Blue and purple



Foods promote cellular health, support heart and brain function, improve digestion,

and help combat chronic inflammation.

Examples: potato, cabbage, plum, blackberry, blueberry, fig, grape, eggplant, passion fruit, onion.

Sources

Centers for Disease Control and Prevention. (2026, February 20). Healthy eating tips.

<https://www.cdc.gov/nutrition/features/healthy-eating-tips.html>

Fernandes, A., Mateus, N., & de Freitas, V. (2023). Polyphenol-dietary fiber conjugates from fruits and vegetables: Nature and biological fate in a food and nutrition perspective. *Foods*, 12(5), 1052.

Lungu, I. I., Babarus, I., Oniciuc, L., & Stefanache, A. (2022). A review of essential microelements in the immune system. *International Journal of Immunology*, 10(1), 1-4.

Mitra, S., Paul, S., Roy, S., Sutradhar, H., Bin Emran, T., Nainu, F., ... & Mubarak, M. S. (2022). Exploring the immune-boosting functions of vitamins and minerals as nutritional food bioactive compounds: a comprehensive review. *Molecules*, 27(2), 555.

National Center for Complementary and Integrative Health. (2021). NCCIH strategic plan FY 2021 to 2025. *National Institutes of Health* <https://www.nccih.nih.gov/about/nccih-strategic-plan-2021-2025>

National Center for Complementary and Integrative Health. (2022). Whole person health stakeholder meeting: Full summary. *National Institutes of Health*. <https://www.nccih.nih.gov/news/events/stakeholder-meeting-for-research-on-whole-person-health>

Office of Disease Prevention and Health Promotion. (2025). Understanding Food Is Medicine. U.S. Department of Health and Human Services. <https://odphp.health.gov/foodismedicine/understanding-food-medicine>

For more information, contact:

Avinash M. Tope, Ph.D.
Associate Dean of Academics / Associate Professor,
Human Nutrition and Food Safety
502-597-6012
avinash.tope@kysu.edu

Contributors:

Maame Konadu Appiahene
Graduate Research Assistant
Sarah N. Carr, Ph.D.
Assistant Professor of Animal Science
Pratibha Gupta, Ph.D.
Research Associate Professor
Central State University, Wilberforce, OH USDA-1890-CBG Grant #13702801