

Nutrition FACT CHECK



Food Dyes



What are food dyes?

According to the USDA, a color additive is any substance that imparts color to a food, drug, cosmetic, or to the human body. Color additives include both synthetic substances and substances derived from natural sources. Color additives are sometimes called food dyes.

Types of food dyes

Synthetic food dyes are often used in processed foods to add and enhance color and visual appeal.

Artificial dyes are commonly associated with diets rich in processed snacks, sugary beverages, fast foods and low in whole grains, fruits and vegetables.

Regulatory standards and labeling practices vary internationally and while some countries have banned or restricted certain dyes, others continue to allow their use.

The United States Food and Drug Administration (FDA) regulates food colors and requires evidence of safety before a color additive can be approved for use in food.

Permitted food colors are classified as either subject to certification or exempt from certification.

To gain approval, color additives must undergo evaluation based on several criteria, including their chemical characteristics, typical consumption levels and both short- and long-term potential health effects.

- Colors exempt from certification include pigments from natural sources like vegetables, minerals or animals.
- Certified color additives are synthetically produced and are required to undergo batch-by-batch certification for purity and identification
- These dyes are mainly present in foods such as breakfast cereals, baked goods, candies, cake decorating icings, condiments, confections, drinks (including sports drinks, soft drinks and juices), gelatin and packaged goods.

The FDA sets clear guidelines regarding which products an additive can be used in, the maximum allowable quantities and labeling requirements for consumer packaging.



Food dyes and your health

- To date, no human studies have shown a causal link between synthetic food dye exposure and cancer.
- Food dyes are often a component of foods that are high in added sugars.¹⁸ A 2019 meta-analysis of 14 observational studies found that diets high in refined sugar and saturated fat were a risk to ADHD, while higher intake of fruits and vegetables were protective against hyperactivity or ADHD.¹⁹
- While some evidence suggests synthetic dyes may affect the behavior of a small subset of children, the findings are inconsistent.
- Abundant evidence suggests that improving overall diet quality through reducing the intake of foods high in added sugars and unhealthy fats while increasing access to whole, minimally processed foods offers more substantial and equitable benefits to human health.
- The California Office of Environmental Health Hazard Assessment's 2021 systematic review on the impact of synthetic dyes on children concluded that sensitivity to food dyes likely varies greatly from person to person.
- More research on diet, food additives and behavior is warranted.



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