

FACT SHEET: Synthetic Food Dyes

What are They?

Synthetic dyes are a group of chemicals derived from petroleum that are used in foods. Under the Food, Drug and Cosmetic (FD&C) Act, each food color is required to be analyzed for purity to ensure that specific contaminants - such as lead - are below legal limits. These colors must be listed on the ingredient label. Synthetic dyes also are used in other FDA-regulated products, including drugs, medical devices and cosmetics.

Use in Food

Presently, there are [42 different synthetic dyes](#) in use for FDA-regulated products; and [only nine](#) are allowed in food:

1. Blue No. 1
2. Blue No. 2
3. Green No. 3
4. Red No. 3
5. Red No. 40
6. Yellow No. 5
7. Yellow No. 6
8. Citrus Red 2 (Used only for coloring the skin of fresh oranges that are not processed.)
9. Orange B (No longer made in the U.S. due to contamination by a carcinogen.)

Food companies often add synthetic dyes to food and drink, especially those marketed to children, in part to make them more visually appealing. A [2016 study](#) on over 800 food products marketed primarily to children found more than 90 percent of candies, fruit-flavored snacks, and drink mixes contained synthetic colors.

Health Risks

Consumption of synthetic food dyes have been linked to adverse neurobehavioral symptoms, such as inattention, impulsivity and hyperactivity, in certain children, particularly those at risk for attention deficit hyperactivity disorder (ADHD). California's Office of Environmental Health Hazard Assessment (OEHHA) concluded in an [April 2021 report](#) that the scientific literature indicates that synthetic food dyes can impact neurobehavior in some children. The report also found that low-income families had higher intake of synthetic food dyes and that Black women and their children had significantly higher intake of synthetic food dyes compared to other groups.

Consumer Reports Position

Because they serve no nutritional purpose, synthetic colors should be banned. At the very least, a warning label should be added to foods and beverages that contain synthetic colors.