

A Call for Better Research

Scientists who study the effects of additives on behavior have traditionally studied only the handful of allowed synthetic food colorings, **ignoring the other 12,000 food additives now in use but never tested for behavioral or neurological effects.** Safety studies usually test each additive alone, although we eat lots of them together, often combined in a single product. A landmark study (Lau 2006), recently found that two additives commonly used together inhibited developing neurons many times more than they were expected to do, based on the damage each caused alone. More studies on such common combinations are urgently needed.

Animal studies on food dyes traditionally focus on whether they cause cancer, damage reproduction, or distort physical development. They have only rarely concerned themselves with cognitive function in either animals or people – and when they do, they use concentrations of the dyes at levels far below the known average daily intake. Long ago, a group of food additive and chemical companies calling themselves The Nutrition Foundation recommended using **27 mg per day** of artificial food colors in human studies on food additives and behavior. Meanwhile, a National Academy of Sciences study on 12,000 people showed that 99% of them ate up to an average of **327.6 mg of dye per day** (in 1977). With today’s blue oatmeal and red applesauce, it may be much higher.

Food Coloring	Average Mg / Day We Ate in 1977 per National Academy of Science Survey	Mg / Day the Nutrition Foundation Recommends for Research on ADHD & Diet
Red No. 3	24.0	1.6
Yellow No. 5 + No. 5 Lake	65.0	7.3
Green No. 3	04.3	0.1
Blue No. 1 + No. 1 Lake	22.6	0.8
Yellow No. 6 + No. 6 Lake	51.0	6.1
Blue No. 2 + No. 2 Lake	10.9	0.5
Red No. 40 + No. 40 Lake	127.0	10.5
Orange B (not used since 1978)	NOT LISTED	0.1
TOTAL	327.6	27.0

27 mg of coloring is about how much is in a single glass of a red drink made from a powdered mix. It is about how much is in a half-teaspoon of bright red frosting or a half-teaspoon of green ketchup.

Although companies decline to tell us how much coloring is actually in their products, an analytical balance and an artist’s eye brings you the following estimates:

- Red frosting = **155 mg** of Red #40 per Tb
- Green ketchup = **150 mg** of pre-mixed Yellow #5 and Blue #1 per Tb
- 6 oz red cherry drink from a mix = **18 mg** of Red #40

The Feingold Association would like to see research that:

1. Studies the Feingold Program as it is really used in the real world – with Feingold Association Program materials;
2. Uses realistic amounts of mixed additives, for a reasonable time period, for challenges;
3. Studies prevalence and relative toxicities of the different natural salicylate compounds;
4. Studies the combination of various salicylate compounds with synthetic additives;
5. Studies neurological effects of synthetic flavorings alone and in combination with other additives and salicylates.

Look around your local supermarket at the blue sports drinks, colored ketchup, garish cereals and “fruit” roll-ups, and you will wonder just how much of these chemicals you really eat in a day. Even the fat-free mayonnaise and sour cream contains coloring to keep its rich white appearance. What about that healthy-looking yellow bread? Is it egg yolk? Or Yellow #5? Are those really blueberries in the blueberry muffin? Or lumps of colored, flavored gel? Did the color of that strawberry popsicle come from a strawberry ... or a test tube?