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Artificial Food Dyes: Harmful or Harmless in Children?

Research has shown that color influences consumers by leveraging the emotional connection to taste[1]. For instance, red and yellow can stimulate the appetite, green foods are often linked to healthy food, regardless of their nutrition level, white food can lead to excessive consumption, since the absence of color makes consumers forget about the calories, and unnatural colours such as blue, black and grey generally suppress appetite. Moreover, artificial food colorings are much cheaper, brighter and have a longer shelf-life than their natural counterparts. In Canada, ten dye colours are approved by the Canadian Food Inspection Agency (CFIA). Therefore, manufacturing companies have seen many benefits in using artificial dyes for food marketing and to manipulate people's eating habits.

In the last 50 years, artificial food colouring consumption has increased by 500%. Moreover, children are the biggest consumers. A 2014 study revealed that between 2007 and 2010, some dyes were consumed almost daily by up to 98% of 2-to-5-year-olds, 95% of teenage boys aged 13-18, and 94% of the entire U.S. population aged 2 and up. Moreover, over 90% of kid-oriented candies, fruit-flavored snacks, and drink mixes and powders are artificially colored. Due to these shocking statistics, it is normal to wonder whether these synthetic food dyes can affect the health of younger consumers.

Over the last 45 years, there were over 27 clinical trials in children and in animals performed all over the world to answer this question. The results were unfortunate: synthetic food dyes were linked to adverse neurobehavioral outcomes in children, such

[1] https://www.fitday.com/fitness-articles/nutrition/how-color-can-change-your-appetite-and-eating-habits.html

as inattentiveness, hyperactivity, and restlessness. Once the dyes were eliminated from the children's diet, 75% of parents noticed an improvement in their child's behavior and attention.

Overall, the dangers of artificial food dyes are considered inconclusive, since they appear to affect only a minority of children, mostly with ADHD. However, the studies were enough to convince the United Kingdom and the European Union to enact a law in 2010 that requires most dyed foods to bear a label warning consumers that food colorings "may have an adverse effect on activity and attention in children". Today, most foods manufactured in those regions do not contain synthetic dyes anymore.

Unfortunately, the level of awareness on the issues has been lower in the U.S. and Canada. The latest effort dates back to 2016, when the Center for Science in the Public Interest (CSPI) submitted legal arguments, accompanied with updated research and a letter signed by 13 scientists, for a warning label to be added. The same year, the CFIA finally adopted new guidelines in its labeling requirements to offer more transparency to consumers. For instance, colourants can no longer hide behind the label "colours"; instead, they must be listed by their specific common names[2]. Canadian food manufacturers and importers have until December 2021 to comply.

In conclusion, parents who wish to limit synthetic color additives in their children's diet should try to steer clear of most processed and packaged foods, such as soda and concentrate fruit cocktail, to find healthier and more natural alternatives, including homemade smoothies and fresh fruit juice. You should always check the food ingredient list on labels to be sure. Moreover, although labelling transparency is a step in the right direction, for many, it is not enough. If popular kid's food brands can be sold dye-free in Europe (eg. Fruit Loops and Starburst Fruit Chews), we must encourage similar actions from the CFIA to remove artificial dyes from our kid's food and push for more natural alternatives.

[2] https://sensientfoodcolors.com/en-us/regulatory/colour-labeling-changes-coming-canada/