Silly Rabbit! Brightly Colored Sugary Rice Cereal Is for Kids — Or Is It?

Perhaps you have grown weary from your daily perusal of scholarly articles. Perhaps you desire to increase your performance on Jeopardy. Perhaps you desire to read an article about breakfast cereal.

Look no further.

Why should I care about breakfast cereal, you say? We will get to that. First, let’s review some history and satisfy your hunger for marginally useful knowledge.

Breakfast cereal began its evolution in the United States in the mid-1800s, during a period of heightened awareness of health and nutrition, entwined with the temperance movement. This begat a proliferation of sanitariums, which have a prominent role in the story and were, in large part, health spas that existed for wealthy patients to convalesce from consumption in the dark ages before antibiotics. Cereal was developed in a collaborative sort of way in a few sanitariums and may have been the first commercially manufactured “health food,” hard as that may be to swallow.

It started with Sylvester Graham, who we can thank for graham crackers. He was a charismatic Presbyterian minister who in the early 1800s became known for his love of sexual moderation, temperance, and vegetarianism and his hatred of white bread and masturbation. A touchy subject indeed—white bread does upset some people. The latter is a touchy-feely subject, in a way. Mr Graham can be at least partially credited for the philosophies of many sanitariums of the time. A similarly minded man and contemporary of Mr Graham’s, Dr James Caleb Jackson, the operator of the Jackson Sanitarium in Dansville, New York, developed “Granula” for his sanitarium patients in 1863, believed to be the first iteration of breakfast cereal. Granula was a brick of Graham’s whole wheat flour (sadly not what is now used to produce graham crackers), which was indeed hard to swallow without a leisurely overnight soak in milk and which seems a whole lot less appealing than Cap’n Crunch.

Enter Dr John Harvey Kellogg, also a promoter of vegetarianism and sexual moderation, who became connected to Dr Jackson via Ellen White, one of the founders of the Seventh-day Adventist Church. After becoming acquainted with the work of Dr Jackson, Ms White’s heavenly vision blossomed with the foundation of the Western Health Reform Institute in Battle Creek, Michigan, where Dr Kellogg was hired as medical director. He was an admirable and indefatigable champion of healthy living with a disdain for the “house-broken colon,” which he felt was the negative end result of a lack of dietary roughage and the root of society’s lack of moral fiber. He advocated for a diet filled with fruit and fiber,
bowel cleanouts not unlike we know them today (albeit with a different rationale), and 3 square bowel movements a day. (Square meaning substantial or satisfying, not unsophisticated or in shape, a square being a rather difficult form for even a well-meaning rectum to conjure.) Dr Kellogg’s work was satirized in the book and subsequent movie entitled The Road to Wellville, in which the sanitarium is portrayed as a haven for wealthy, stressed-out, health-conscious individuals (not unlike your average hard-working pediatrician). The sanitarium probably cannot avail you now but feel free to go to the door and inquire: It is now the Hart-Dole-Inouye Federal Center. It may once have been the world’s best place to get an enema, although the French may dispute that claim. You will need to find another spot to deposit your “seething mass of putrefying food residues,” that which Dr Kellogg was so intent on removing from every loaded American colon.

(An aside: Current thought on colon cleansing, or “hydrotherapy,” is a deep, dark Internet rabbit hole best left to Alice. Coffee enemas? Poorly conceived and poorly tolerated.)

Dr Kellogg and his brother William serendipitously discovered a way to make wheat flakes, then foisted them on the Institute’s patients for breakfast. Much to the delight of children and the ongoing dismay of the Trix rabbit and Sonny the Cuckoo bird, William decided to sweeten their invention, inflaming the good doctor to the point of legal action and starting a lucrative business that continues to thrive. Innovations such as pulverization and extrusion were developed later. From their experimental kitchen to your breakfast nook, the entirety of the cereal story is compiled in this work: The Great American Cereal Book. It delivers quite a sense of nostalgia for those who ate a lot of cereal in their younger days and others who drooled in the cereal aisle at the Piggly Wiggly, enjoying the visual extravaganza while their health-conscious mothers picked up some brussel sprouts and cabbage in aisle 1.

Now for some moderately scientific stuff.

Perhaps the revulsion that some feel for breakfast cereal is that it represents a pow-wow of several substances renowned to have a negative influence on children: refined sugar, food coloring, and advertising.

We do not need a high-minded study with P values to determine that humans need food. Humans also want things that taste good, sweets and fats in particular. Maybe not warmed lard with marshmallows, but who in their right mind is opposed to warm chocolate chip cookies? We will stick to the sweet part of these desires, given that “ready-to-eat” cereals generally do not have much fat and are usually eaten without butter. In addition to hunger, kids seem to have a natural aversion to roughage and a truffle pig-like ability to detect it. Kids also cannot be bothered to use the restroom in anything but a crisis, so they certainly cannot be expected to take the time to cook or prepare a salad. Cereal does not require the use of fire or knives, at least when used in the home for its intended purpose. Cereals intended for childhood consumption are safe, convenient, loaded with sugar, and mostly devoid of fiber; that is, right up their alley. As for parents, whatever lingering Puritan ethos we have as a society tells us that anything so desirable to an impressionable young mind cannot be anything but evil.

Beyond that, there is a persistent feeling in the lay public that refined sugar adversely affects children’s behavior, although it has not been shown in scientific settings to do so. In 1995, Wolraich et al reviewed 16 relevant studies and concluded that there was no sufficient evidence to claim that refined sugar intake significantly influences behavior, either in hyperactive children, normoactive children, or individuals referred to as “delinquents,” who likely were not self-identified. My delinquents are energized by calories of any origin when hungry, although they would relieve the leprechaun of his Lucky Charms pronto if given their choice of foodstuffs.

Medical training leads us to believe that excess calorie intake is in some biochemical way related to weight gain, and obesity is a rapidly expanding problem in the United States. Refined sugar is calorically dense and in theory gets metabolized rapidly, leading to the faster return of hunger and its elimination by eating again. Without a sufficient number of calisthenics to burn those calories, the cycle does not have a good ending, unless obesity and its morbidities are desirable. Having a high glycemic index, refined sugar has a theoretical tendency to stress islet cells, thereby contributing to the development of type 2 diabetes, even independent of total caloric intake. Ouch.

Not everyone is a hater, though. The Bell Institute of Health and Nutrition seems to have cornered the market on publication of pro–breakfast cereal studies. And why not? The Institute is, after all, a part of General Mills. Part of their argument is that cereal is...
better for kids than no breakfast at all, which is . . . reasonable.

Trix may be tasty, but it certainly does not look natural, any more than the concept of fruit-flavored corn is “natural.” The box is visually stunning and perhaps should not be viewed by excitable individuals with airway problems or those prone to seizures. Is food coloring harmful? Some think it is universally harmful, although most of the relevant literature is related to hyperactive children. The US Food and Drug Administration is (unofficially) not inclined to agree: “Food-related triggering of problem behaviors is not due to an inherent neurotoxic property of the food or food components, including any of the artificial food colors and preservatives, but appears to result from a unique intolerance exhibited by certain predisposed children to a variety of food items and color additives.”

A benchmark study in the United Kingdom regarding the effects of food additives on children’s behavior, published in Lancet in 2007, concluded that 6 common food-coloring agents and sodium benzoate increased hyperactivity in 3-, 8-, and 9-year-old members of the general population. This accusation was addressed in 2008 by the European Food Safety Authority, which concluded that the findings could not be used to justify an alteration of the Acceptable Daily Intake (like our Recommended Daily Allowance) of the respective food colors or sodium benzoate. This is a lively debate, but the concerns in the United States and Europe regarding the safety of food coloring have not resulted in any continent-wide regulatory action, take that as you will. Speaking of Lancet, quite a few pediatricians may feel that it owes them some remuneration, what with the autism/measles, mumps, and rubella vaccine thing, but we will speak no more of that.

Establishing that cereal is truly sinister is difficult, so take heart, Mikey! Mommy is not poisoning you. At least not with that Life cereal.

As for the advertising, it may be a little sinister. (You are likely thinking of the Apple Jacks jingle right now.) A total of $264 million was spent advertising cereals to children in the United States in 2011, and households purchased cereals that were advertised directly to children 13 times more frequently than nonadvertised cereals. Unfortunately, the least nutritious cereals tend to be those most frequently advertised to children. What cereal is most advertised on television? Cinnamon Toast Crunch, which is not the worst from a nutritional standpoint, just 38th healthiest of 43 “child and family brands,” as defined and ranked by the Yale Rudd Center for Food Policy & Obesity in their comprehensive report, “Cereal FACTS 2012.” This report contains all you could ever care to know about breakfast cereal and children. Number 43? Cap’n Crunch. His cheery demeanor belies his sinister underbelly. To their credit, manufacturers have made efforts to improve their cereals for children, and some have pledged to self-regulate their advertising.

Maybe the subject of breakfast cereal will never come up, but if it does, I daresay you will have something to say about it now. The subjects of refined sugar and artificial colors may well show up in The Hospital for Children Who Do Not Feel Well without virtue of proper bed placement, however. Most of us love children, or like them, or at least tolerate them to a degree, and we want them to be healthy. Should we let them eat sugary ready-to-eat cereals? Probably not as the sole component of a meal. You are a busy person. You have things to discuss with parents. Nutrition is among those things. Boldly assure parents that children will eventually eat or drink when hungry or thirsty, even if it is not something fantastically tasty or fun. At least tell them to offset the sugar with a pear or a carrot. Maybe all things in moderation, including a quasi-vice such as cereal. Unless, of course, no alternative exists.

If General Mills wants to send a crate of Cookie Crisp to a cash-strapped, vegetable-poor orphanage, we can call it charity, and there need be no moderation in that.

REFERENCES

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