Sugar Doesn't Make Kids Hyper

By ACSH Staff — February 7, 2002

"If my son eats anything with sugar in it, he starts bouncing off the walls. He had a piece of cake at his cousin's birthday party last Saturday, and I couldn't get him to settle down for the rest of the day. The next time he goes to a party no cake!"

If you're a parent, you've probably heard a lot of comments like this one. Many people think that eating sugar makes kids "wired." Some even think that sugar can cause attention-deficit hyperactivity disorder (ADHD). In a survey conducted by University of Florida researchers, 30% of white parents and 59% of African-American parents attributed ADHD to excessive sugar in children's diets. In another study, 41% of a group of elementary school teachers said that hyperactivity could be caused by sugar or other food ingredients.

What the Research Shows

At least 23 scientific studies have evaluated the effect of sugar on children's behavior under controlled conditions. Most of these studies followed the same general design: children were given foods or drinks containing either sugar or another sweetener (aspartame or saccharin), and the researchers observed and tested the children's behavior for several hours afterward. Neither the children nor the researchers knew which sweetener each child had received until after the study was over. Some of these studies involved normal children, others involved children who were believed by their parents to be sensitive to sugar, and still others involved children who had ADHD or other psychological or physical problems.

All of the studies reached the same general conclusion: when you give kids sugar under controlled conditions, nothing much happens. Most of the studies found no noticeable effects. In a few studies, subtle effects were detected, but they weren't always in the expected direction. For example, in a study at Long Island Jewish Medical Center, children with ADHD who had consumed sugar had poorer scores than those who had consumed aspartame on a test of attention (which you might expect), but in a study at the University of Toronto, activity levels in children who had drunk sugar-sweetened Kool-Aid were slightly lower than those of children who had drunk aspartame-sweetened Kool-Aid (exactly the opposite of what you might expect). Overall, these minor effects tend to cancel each other out. When scientists from Vanderbilt University performed a combined statistical analysis of all of the studies (including these two), they found no evidence that sugar has any effect on children's behavior or cognitive performance.

But I've never met a parent who finds that conclusion easy to believe.

The problem here is that parents have seen kids go wild after eating or drinking something sweet. I've seen my own children do it. Some children seem to do it consistently, every time they eat something sugary, and some parents are so convinced of sugar's effects that they go out of their
way to prevent their children from eating sweets (even to the point of just saying no to birthday cake). Yet the research results tell us that sugar is not at fault.

So if it isn't the sugar that's causing our kids to bounce off the walls, what is it?

**What's Really Happening Here?**

One possibility is that the kids are reacting to some other ingredient in sweet foods or drinks. Caffeine is an obvious candidate here, especially for kids who love soda. A can of cola contains about one-third as much caffeine as a cup of brewed coffee. Most children don't consume a lot of caffeine (in one study of school-age children, the average caffeine intake was only about 16 mg/day half the amount in a can of cola), but some kids are exceptions to this rule, and some individuals are more sensitive than others to the effects of caffeine. So perhaps caffeine is the culprit in at least a few instances.

Food dyes, on the other hand, probably aren't a factor. The idea that food dyes could cause hyperactivity was proposed almost thirty years ago by Dr. Ben Feingold, and it was received quite enthusiastically at first. But scientific studies similar in design to the sugar studies described above have shown that dyes aren't as important as Dr. Feingold believed. Practically all children who seem to respond to food dyes under uncontrolled conditions don't respond when they're tested in controlled experiments. The percentage of children who may have a true behavioral response to food dyes is at most very small. If your child seems to react to sugary foods, it's very unlikely that colorings in the foods are responsible.

Parental expectations are probably more important. If we parents think that our children react to sugar, we may interpret their behavior in this way even if nothing is really happening. This was demonstrated in a somewhat devious study at the Menninger Clinic. The researchers there gave some supposedly sugar-sensitive boys Kool-Aid that was sweetened with aspartame. The mothers of half of the boys were told, falsely, that their sons had been given sugar. The other mothers were told that their children had received an inactive "placebo" drink. Then the researchers watched the mothers interact with their sons. The mothers who thought that their children had received sugar stayed closer to their children and made more efforts to control their behavior than the other mothers did (presumably because they were expecting trouble). They also rated their sons' behavior as more "hyperactive," even though the boys' actual activity levels were lower than those of the boys whose mothers had been told that they had received a placebo. Clearly, expectations affect the ways in which parents and children interact and the ways in which parents perceive their children's behavior. Expectations might even affect a child's actual behavior. If you tell a child often enough that he goes nuts after he eats candy, he may very well do just that.

A sort of "special occasion effect" may also play a role. In our culture, sweet treats are usually associated with special occasions such as parties and holidays and these events in themselves may be stressful or exciting for children. Small children may misbehave on special occasions because their routine has been disrupted (especially if they have missed their naps). Older children may "act up" because they are enthusiastic about the event, because the situation is less structured than usual (e.g., classroom parties), or because the adults are too busy to supervise them closely. In some families, especially those in which parents usually forbid children to eat
sweets, the mere fact that a child has been allowed a rare sugary treat may be exciting enough to cause an outburst of "wild" behavior.

Of course, some people would say that it doesn't really matter whether sugar causes kids to misbehave; if this belief prompts parents to give their kids carrot sticks instead of cookies, it's a good thing, whether or not it's really true. But you'll never see ideas like that on this web site. At ACSH, we favor facts over fiction. People make better choices when they have correct information. If your child gets out of control at birthday parties or other special events where sweets are served, you need to know that preventing him from eating sweets on those occasions isn't likely to help. Other changes such as explaining beforehand how he should behave, making sure that there's plenty of adult supervision, or removing him from the situation as soon as trouble starts are more likely to be effective. But if you're focusing your attention on the menu, you may not think of these things.

Besides, a birthday party wouldn't be a birthday party without the cake.