Energy drinks have doctors worried—but business is booming

By Alexandra Sifferlin

HEATHER CHACE, A BIOLOGY TEACHER AT STRoud HIGH SCHOOL IN OKLAHOMA, says she first started noticing her students occasionally drinking energy drinks about six years ago. Now she sees them chugging them on a daily basis—leading to conversations about their “hearts racing” and their “feeling shaky,” she says.

“They’re not alone. About 50% of adolescents consume energy drinks, according to a recent report in Pediatrics, and 31% do so on a regular basis, increasingly opting for energy drinks over soda. It’s no surprise, given that a March 2015 report in the Journal of Nutrition Education and Behavior showed that even 46% of energy-drink ads on TV aired on channels that appeal to adolescents, like MTV, Fuse and BET, helping put the U.S. energy-drink business on track to grow more than 11% by 2019, to an estimated $26.6 billion in annual revenue. But as the industry booms, so does concern about whether energy drinks are safe for kids and teenagers.

The Center for Science in the Public Interest has called on the U.S. Food and Drug Administration to add safety warnings on energy-drink bottles. Senators Edward Markey, Dick Durbin and Richard Blumenthal have called for a ban on marketing to minors. And the American Academy of Pediatrics went so far as to say energy drinks have “no place in the diet of children and adolescents.” Their reasoning: unlike coffee and soda, many energy drinks contain two or more stimulants, including the natural-sounding supplements guarana and ginseng. How all these ingredients work together is unknown, but many experts say it appears to be a risky mix.

A 2010 study, for example, found that sugar-free energy drinks affected the heart in a way that scientists think increases the risk of adverse heart events in susceptible people. Other research says the drinks make it harder for kids to pay attention in school; scientists recently found that middle schoolers who consume sugary energy drinks are 66% likelier to display symptoms of hyperactivity than those who don’t. And a handful of lawsuits are under way alleging that popular brands such as Monster and Red Bull have been responsible for the deaths of minors. In some cases, the people who died had an underlying heart condition.

Energy-drink companies say their products are safe and contain no more caffeine than a cup of coffee. But experts are seeing problems with energy drinks that they just don’t see with soda and coffee, says Amelia Arria, director of the University of Maryland School of Public Health’s Center for Young Adult Health and Development. Indeed, energy drinks have been linked to more hospital visits than coffee or soda, says Arria. “Why it’s different, we still need to know. Scientists and clinicians have real concerns.”

IN THE U.S., when spinach gets contaminated with salmonella or ice cream carries listeria, manufacturers yank them from supermarket shelves and shoppers are alerted. But when an energy drink is blamed for sending someone to the hospital, the regulatory and public-health aftermath is murky.

That’s in part because of the way energy drinks are regulated. Companies can market a product as a dietary supplement or as a food, neither of which requires premarket safety approval by the FDA.

Another challenge is that it’s hard for public-health experts to prove definitively that energy drinks are safe—or unsafe—for everyone who drinks them. It would be considered unethical to design a study in which scientists wait to see if people have dangerous reactions to a product. Energy drinks are also hard to study because their ingredient blends are often proprietary, so scientists don’t know exactly how much of a given ingredient is in the can or bottle.

The FDA does collect consumer health complaints: supplement companies are required by law to file such reports, whereas beverage makers are asked to do so voluntarily. But when those reports are filed with the FDA, they are not automatically made available to consumers or even scientists.

TIME learned through a Freedom of Information Act request that from January 2012 to November 2014, the FDA received 224 adverse-event reports from energy-drink companies, including 5-Hour Energy, Full Throttle, Jolt Energy Drink, Monster Energy, Nos, Red Bull, Rockstar, AMP Energy and Venuom Energy. Six of them reported that a death had occurred. (Because of the nature of the reports, no more information is available about those cases, including how many of them involved minors.)
"In the absence of a therapeutic benefit [from energy drinks], the only acceptable number of adverse events is zero," says Dr. Steven Lipshultz, pediatrician in chief at Children's Hospital of Michigan. "We are not at zero."

The American Beverage Association, a trade group that represents energy-drink companies, says many of these products bear voluntary warnings that they're not recommended for children, pregnant or nursing women or people sensitive to caffeine. Representatives from Red Bull, Monster and other companies told TIME they do not market their products to kids.

But some critics aren't buying it. For instance, Monster hosts a social-networking site called the Monster Army, where kids as young as 13 post photos of themselves doing things like skateboarding in Monster gear. "A website that says 'Join my club' is not geared to adults," says Dr. Marcie Schneider, co-author of the AAP statement on energy drinks.

It's unlikely that the question of energy drinks' safety for children and teens will be resolved anytime soon. For now, the FDA says it will continue looking into the safety of caffeine in food products, including energy drinks. "As part of our review," agency spokesperson Theresa Eisenman says, "we are considering the current state of the science for potential health effects ... with an emphasis on specific populations, such as pregnant women or children."

In the meantime, Oklahoma teacher Chace says she advises students to be careful—and doesn't allow any drinks besides water in her classroom.