

## **The New Roller Coasters: Thrills, Chills and Few Spills**

*It's summer, and America's amusement parks are filling up with families eager to ride the latest roller coasters. Despite some high-profile accidents, the rides are surprisingly safe*

**BY JESSICA REAVES AND FRANK PELLEGRINI**

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Roller coasters are supposed to scare us. They wrap our non-phobic, perfectly natural fears of heights, speed and being turned upside down 200 feet above the cotton-candy stand into one vomit-inducing 2-minute thrill ride — and then they set us back on the ground, pat us on the back, and tell us where the end of the line is so we can go again.

And most of us thrill-seeking Americans — especially the kiddies — scamper away gleefully to comply. People love roller-coasters for the same reason some toddlers giggle happily when their fathers swing them around by an arm and a leg: Behind the dizzying thrills there's a full expectation of being safely returned, flushed and panting, to their mothers' arms. As Ann Brown, chair of the Consumer Product Safety Commission, put it at a recent hearing on roller coaster safety, "Thrill rides are supposed to give people the illusion of danger — not actually put people at risk."

But lately, reading the newspapers about some rides has been a little scarier than we may be comfortable with. In June, Disney continued what's shaping up to be a less-than-stellar year by settling a lawsuit brought by Deborah Bynum, who claims she had a brain hemorrhage after a 1998 spin on the "Indiana Jones Adventure" ride at Disneyland. Last September, Brandon Zucker, now 5, suffered severe brain damage when he fell out of the Anaheim park's Roger Rabbit Car Toon Spin.

Company spokesman Ray Gomez says Disney stands behind the safety of its rides. "We believe that the Indiana Jones attraction is safe," Gomez says. "Thirty-three million people have visited the attraction since it opened in 1995. There are no plans to make any changes."

### **Accidents do happen**

Accidents don't only happen at Disneyland, of course. Casualties around the country, including several serious brain injuries, have prompted safety advocates to urge national standards for amusement park rides. And some scientific studies have surfaced in recent months tracing subdural hematomas, or blood clots, to riding high-speed roller coasters. In June, 28-year-old Pearl Santos died of a ruptured brain aneurysm after riding the Goliath roller coaster at the Six Flags Magic Mountain park in Valencia, California.

By the numbers, the biggest, baddest, thrilling-est roller coaster in North America is "Superman: The Escape" at Six Flags Magic Mountain — 415 feet high with a 328-foot drop and cars that travel as close as roller coasters get to a speeding bullet: 100 miles per

hour. Behemoths like that get built for a reason — that's how park-goers want it, and a real headliner roller coaster, though it may take \$20 million to build, can make a park into a financial success by drawing beer-and-bravado-laced teens from miles around.

But has the modern thrill ride gotten too thrilling? Do the new super-speedy, loop-de-loopedy coasters simply exert more stress than the human body is designed to withstand? Maybe, says safety consultant Bill Avery. The question turns out to hinge not so much on velocity as it does on quick changes of direction. "Just because it's bigger and moves at a higher speed doesn't necessarily make it more dangerous," Avery says. "But what's happened is that a lot of the rides have gone to rapid, multi-directional changes on the track, and when you have rapid changes either side to side, or up or down, then you increase the potential for injuries to occur."

"You'll see a lot of analogies comparing these rides to the space shuttle," Avery says. "But there's a huge difference: Space shuttles go in one direction. If those guys took an immediate left, at those forces, there wouldn't be anything left."

### **Are they dangerous?**

So how dangerous are amusement parks? Well, there are certainly more perilous summer pleasures. According to the CPSC, more people were injured in 1999 using trampolines (98,889) golf equipment (47,386) and bicycles (614,594) than the 7,260 injuries sustained at fixed-site U.S. parks and attractions (and that includes the go-karts). Only 138 required hospitalization — and that's out of 309 million people who attended amusement parks that year. The CPSC puts fatalities at two per year over the last two decades.

An industry group, the International Association of Amusement Parks and Attractions, happily does the math: "Assuming each guest takes ten rides (for a total of 3.2 billion rides in the U.S. yearly), the likelihood of being injured seriously enough to require hospitalization is therefore over one in 23 million, and the chance of being fatally injured is more than one in half a billion. In short, based on government data, over 99.99 percent of those guests who board rides at parks and attractions enjoy their experience without any incident whatsoever."

And business is brisk. Attendance at fixed-site amusement parks has been rising steadily from 253 million in 1990 to 317 million in 2000; despite some reported economic slowdown-related softness at long-distance attractions like Disneyworld, the average park does its business with folks who travel less than 150 miles to get there, and is doing just fine.

Park operators credit those big, bad, headliner roller coaster with some of that — 50 new coasters opened in 2000, most of them the so-called "hypercoasters," standing more than 200 feet tall. Most people board the ride to get the daylight scared out of them, and they usually don't think too much about mundane details like engineering or loose bolts. (After all, that last group that just got off looked pretty happy, if woozy.)

## **Advice to the rider**

If you're worried about going on a ride, or if something about plunging headlong through space protected only by a steel cage strikes you as unnatural, you're certainly not alone — stick to the cotton candy. And if you've got kids who are determined to climb aboard a ride that gives you the willies, do your homework. Check the park's safety records and the incident reports (which parks are required to file in case of accidents that require first aid). Smell the breath of the kid operating the ride. Kick the proverbial tires (for in only a few rides, like Coney Island's legendary Cyclone, is apparent dilapidation part of the appeal).

If that doesn't seem like much in the way of due diligence, that's because there isn't much you can do except trust in the park's self-interest in safety — no company thinks a brain hemorrhage is good publicity — and play the (extremely good) odds of your little ones' walking away dazed, panting, chock-full of adrenaline — and squealing the immortal words, "I wanna go again."

Then strap the kids in and tell them to hang on and have fun. Chances are the worst thing that will happen is one of them will vomit on your shoes.