

Tracking injuries on roller coasters and other theme park rides

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The GhostRider roller coaster at Knott's Berry Farm in Buena Park, Calif., ranked second for reported incidents in the region. Photo: Mark Boster/Los Angeles Times/MCT

In 2009, a cable broke on the Xcelerator roller coaster at Knott's Berry Farm in Buena Vista, Calif. The cable ripped through the ride's car and slashed the leg of a 12-year-old boy.

The roller coaster ranks among the park's fastest, with a top speed of 82 miles per hour.

Injuries on Southern California amusement park rides are rare. But when they do occur, the most common ones actually are fainting, nausea and dizziness.

People are more likely to get sick or hurt on older rides than on newer ones. And about 1 in 8 accident reports, as they are called, are about riders who were hurt while getting on or off.

Those are some of the findings of a Los Angeles Times analysis of six years' worth of injury data from 57 theme parks across Southern California. In all, the newspaper looked at 2,089 injury reports filed in 2007 through 2012 with the state Department of Industrial Relations. The department oversees the safety of theme park rides.

Annual Average Of 350 Injuries

The largest category of reports, about 18 percent, was related to motion sickness, including fainting, nausea and dizziness. Back and neck pain ranked second, at 16 percent, followed by head injuries at 12 percent.

Together, the parks reported an average of about 350 injuries a year during the six-year period. The total attendance at Southern California's largest parks was estimated to exceed 40 million visitors a year.

Other findings include:

More women reported injuries than men. Most injuries came from roller coasters and water slides.

Nearly 20 percent of injured theme park visitors reported having previous health problems, like heart problems and asthma.

Three men died after riding attractions at Southern California theme parks. Serious, already existing medical conditions likely caused two of the deaths. The cause of the third death was unknown, but the man had a heart condition and had suffered a brain hemorrhage.

Operators of permanent theme park rides must file an accident report when a visitor is injured or feels sick and then receives outside medical help.

Among those riders listed in the records is Adrienne Sacks of Rockville, Md. She became ill after riding Disneyland's Space Mountain in the summer of 2012.

The 59-year-old teacher said she was sweating and vomiting at the park's first aid station, and was treated by paramedics who were called to the park.

"I got really violently ill, like I've never been before," Sacks said.

Space Mountain And GhostRider

In 2000, the California Legislature began requiring amusement parks to report injuries. This came in response to several

accidents, including the 1998 death of a Disneyland visitor who was struck on the head by a metal cleat that pulled free from a ship. His wife and a Disneyland employee were seriously injured in the accident.

Parks are not required to report data on the number of riders per attraction, which makes it impossible to calculate the injury rate.

Of the incidents reported, the leader was Space Mountain, with 120 reports. The GhostRider roller coaster at Knott's Berry Farm was second with 92 reports.

Of the 10 rides with the most reported incidents, nine were at Disneyland or Disney California Adventure Park. They are the region's most popular theme parks, with combined attendance of 23.7 million visitors in 2012.

Disneyland officials say their attractions are safe. They say they are the most injury prone because they are the most popular.

Disney officials said 44 million people rode Space Mountain over the six-year period and 120 people were injured, meaning one injury for every 367,000 riders.

By comparison, the odds of being injured in the bathroom — and requiring a visit to the hospital — are about 1 in 1,037 in a given year.

“We are at the top of the (injury) list because we are the top of the list for attendance,” said Greg Hale. He is the chief safety officer for Disney's theme parks.

Older Rides Cause More Injuries

Space Mountain attracts a variety of people, including older people and people with health problems.

After riding Space Mountain on May 13, 2012, with her husband and two children, Joan Brown said she suffered memory loss and headaches.

When she got off the ride, she kept asking, “Where are we going?” said her husband, Scott Bell. Brown was diagnosed with global amnesia, which is a form of temporary memory loss.

The age of Space Mountain, which opened in 1977, may also be a factor in its injury rate. The state's injury reports suggest that older rides cause more injuries than newer ones. Among the 10 attractions with the most injuries, six are at least 20 years old. Only one was built in the last decade.

“Harnesses, security and safety on rides are much more advanced today than they were 30 or 40 years ago,” said Dennis Speigel. He is president of International Theme Park Services and an expert on amusement park safety.

The state Department of Industrial Relations investigated about half of the injuries. In most of those cases, the state ordered minor repairs or extra staff training.

The most severe injuries occurred when theme park rides weren't working properly.

In 2007, a family of five from Illinois was sprayed with battery acid at Universal Studios Hollywood after their Studio Tour tram ride struck a guardrail.

Theme parks and water parks post signs making it clear that people ride at their own risk.

Daniel D. Geoulla is an attorney in California. He represents a man who says he was hurt when a Disneyland railroad train derailed.

“There is an assumption of risk when you get on them,” he said.