

Safety Tips from Saferparks

Safety Tips for Riders of All Ages

- **Read and obey all posted rules and restrictions.** Follow all height/age restrictions and verbal instructions issued by ride operators. If a child is smaller or larger than the design parameters but rides anyway, the restraint system may not protect him. If you have any pre-existing medical conditions, check with your doctor before riding thrill rides.
- **Make sure the ride is appropriate for the rider.**
 - When choosing rides for children, older riders, or people with disabilities, be conservative and realistic. Most thrill rides are, by their very nature, physically demanding and emotionally intense.
 - Make sure the restraints fit well and the rider is secured. Small, thin riders and obese riders are at higher risk of ejection in rides that rely on lap restraints.
 - If a child or developmentally-disabled rider seems frightened for any reason, alert the operator before the ride starts so you can get off safely and find another ride.
 - Ride with your child until you're absolutely sure he or she can understand and follow all of the safety rules. Slower rides aren't required to have child restraints, so manufacturers and owner/operators often rely on children to keep themselves safely contained inside the vehicle.
 - If you question whether a child or disabled person in your charge should be on a particular ride, err on the side of caution. If someone lacks the capacity to fully understand what they may be subjected to and the results of their actions, they shouldn't be placed on a ride which can induce great fear and panic.
- **Securely latch all restraints and use grab bars.** Double-check seat belts, shoulder harnesses, and lap bars. Hold onto handrails, when provided. They're part of the safety equipment, designed to keep you safely in place.
- **Stay in the "locked and loaded" position for the entire ride cycle.** The attendant will make sure you're properly positioned and secured before the ride is launched. It's your job to maintain that safe position until the ride comes to a final stop at the unloading point.
 - Keep all body parts and belongings inside the ride at all times. This includes hands, arms, fingers, legs, feet, toes, long hair, etc. Items dropped or thrown from a ride can cause serious accidents.
 - Never stand up on a roller coaster to get a "bigger thrill", or rock a vehicle that's not designed to be controlled by riders.
 - If a ride stops temporarily, due to breakdown or other reason, stay seated and wait for the ride to start up again or for an operator to give your further instructions. Make sure kids know this before they're allowed to ride alone.
 - Ride eyes-front to protect your neck. If you've got your head turned when a sudden change in acceleration occurs, injuries can result.
- **Take frequent breaks if you're riding high-g rides.** Repeated rides on high-g rides can lead to loss of consciousness. Loss of consciousness results in loss of postural control, which can lead to serious injury on a high-acceleration ride. Patrons are warned to rest 20-30 minutes between rides.
- **Stop riding before you get excessively tired.** Tired riders are more likely to make a mistake or skip a safety procedure, and might not have the strength needed to hold their head up or brace themselves around curves.
- **Drink plenty of fluids throughout your stay at an amusement park or carnival.** Dehydration can increase your risk of injury or illness on some rides.
- **Never ride while under the influence of alcohol or drugs.**
- **Don't board a ride if it looks poorly-maintained or the operator is inattentive.** While most parks and carnivals pay close attention to ride safety, there are unfortunate exceptions - just as in any industry. Follow your instincts. If something about a ride seems out of whack, don't ride it.
- **Report any accidents, problems, or safety concerns to:**
 - Park or carnival management.

Tips for Parents of Children 1 – 6 Years

What Parents Should Know About Ride Safety for Young Children

1. Be a cautious consumer when choosing amusement rides for your child.

Amusement rides are no different than any other kind of product targeted at children. They offer benefits and risks. Use the same good judgment when picking amusement rides that you do when deciding which foods or TV shows or toys are safe for your kids. Just because a ride attendant says it's okay with them if your toddler rides alone on a kiddie train, that doesn't mean he won't fall off and be seriously hurt.

- **Don't assume** that your child will be safe on a ride simply because the ride operator says it's okay, or the child meets the posted height requirement.
- **Learn to judge for yourself** whether the ride is safe for your child. Be conservative in your judgments.
- **Understand that amusement rides are not child safe or childproof.** There are no mandatory federal safety standards for amusement rides, or regulatory oversight of amusement ride design. Height guidelines are set by the manufacturers, and do not always take the developmental stages of childhood into account.

2. Watch the ride with your child before boarding.

- Read warning signs aloud.
- Point out the ride attendants and the loading/unloading locations.
- Explain that rides sometimes stop temporarily, but that riders must never get off until the attendant tells them to.
- Talk about what to do if your child gets frightened while the ride is moving. Tell her NOT to get out of the car. Explain that amusement rides might seem scary, but they're not dangerous as long as riders hold on tight, stay seated, and keep their hands and feet inside.
- Tell children to hold on tightly with both hands. Solid metal lap bars and handholds are part of the safety equipment. Teach your children to use them. Many kids raised in the era of five-point car seat restraint systems don't know that holding on is important.

3. Always obey minimum height, age, weight, and health restrictions.

- Never sneak children onto rides they're too small or too young for. Ride manufacturers' restrictions take into account the forces exerted by the ride and (sometimes) the intellectual maturity required to ride safely. A smaller/younger child may not be physically or developmentally able to stay safely seated.
- Use the posted height and age limits as suggestions, not pass/fail criteria. Manufacturers base their guidelines on developmental timelines and height/weight ratios of children in the 50th percentile. Kids who are tall for their age may not be developmentally ready for a particular ride. Kids who are more impulsive than average need closer parental supervision.
- Don't put your child on a ride he's outgrown. Maximum height and weight limits are just as important as minimum limits.
- **If you can't count on your child to stay seated with hands and feet inside, don't let him or her ride.**

4. Don't put children on rides they're afraid of.

- When a child gets scared, her first impulse is to get away from whatever frightened her. When asked what they should do if they get scared while a ride is moving, a class of 20 preschoolers answered *"get off the ride"*. Children are hurt every year doing exactly that.

5. Seat small children to the inside, away from open sides.

6. Always use the safety equipment provided, but be aware of its limitations.

Ride manufacturers provide seatbelts, lap bars, and other safety equipment to reduce the risk of injury. However, many safety devices used on children's amusement rides aren't designed to keep young children in their seats if they want to get out.

- **Do not rely on lap bars and ropes to restrain children.** They're designed as "psychological barriers", an incentive to stay seated. Unfortunately parents understand psychology better than kids, so Mom sees a "restraint" and her clever child sees "a piece of metal to climb under".
- Solid metal lap bars only fit closely against the largest passenger in the car, often leaving young children with room to slide around. If a lap bar doesn't fit closely, a fast-moving ride can cause a child to slip

completely out from underneath the bar. Loose-fitting lap bars also allow young children to stand up on their own while a ride is moving.

- **There are no mandatory federal standards for the design of amusement rides. Amusement rides are neither childproof nor child-safe.** Use good judgment when deciding whether your kids should ride

7. Watch all extremities - including feet if the ride has open sides.

- Excited children often stick hands, arms, feet or even their heads out the sides of amusement rides. Load children to the inside, away from open doorways, or on the side closest to the ride operator.
- Pay special attention as the ride slows to a stop. Children who are in a rush to be the first one off, or in a hurry to get to the next ride, may try to exit while the ride is still moving.

8. Teach small children what to do if they get separated from you.

- Point out uniformed park employees, so they know who's in charge of finding lost parents. Choose an obvious landmark as a meeting place.

9. Don't abdicate your parental responsibility or your judgment to any business.

- Parents often feel overly-confident about putting their children on attended amusement rides, especially those operated by successful, well-respected corporations. Don't confuse profitability with protection. Your children need your protection, whether they're in your back yard or Disneyland.

10. Remember that amusement rides aren't really magic.

- Never forget that you're loading very young children onto heavy machinery at amusement parks and exposing them to water hazards at water parks.

Summary

Most kiddie rides are safe for most kids most of the time, but amusement rides present serious risks for young children.

- When deciding whether a ride is safe for your child, **base the decision on what you know about your child**, not on what a teenage ride operator says or what you see other parents doing.
 - Can she follow directions and stay seated?
 - How familiar is he with amusement rides?
 - Is she easily frightened?
 - Is he a risk-taker?
 - How well does she fit within the restraint system?
- **Treat amusement ride safety seriously** as you do traffic safety, water safety, bike safety, etc. Teach your children how to be safe riders, but don't rely on verbal instructions to keep young child safe around heavy machinery. Pay close attention to their actions when you visit amusement parks and carnivals.

**Kids are quick and clever and endlessly imaginative.
Watch them carefully.**

Safety Tips for Parents for Children 7 – 12 Years

- **Understand the limitations of ride design.** Amusement ride manufacturers are not subject to federal standards for child safe design. Parents and children should understand what the restraint systems will and will not do to protect riders. Visit the following pages of www.Saferparks.com for more information:
 - [Child Safety Section of Saferparks Website](#)
 - [What Parents Should Know About Ride Safety for Young Children](#)
- **Talk with your children before they visit amusement parks or carnivals.**
 - Discuss the different kinds of rides: roller coasters, spinning rides, Ferris wheels, etc. Explain the motion of each ride, and why it's important to follow the safety rules. Kids this age love to learn how things work. Let them search the library or the internet for information on amusement rides.
 - If your children are going off with a group of children, talk about group issues. What should your children do if one of the kids they're with starts fooling around on a ride? What if one child doesn't want to go on a ride and the others start teasing or pressuring him?
- **Help children make thoughtful decisions about which rides to try.**
 - Watch the ride with your child before getting on board. Ask questions that help them to imagine what it might feel like to ride. Point out riders the same age as your child getting off the ride. Do they look happy? Scared? Dizzy? Bored? What do their expressions tell your child about the ride?
 - Point out safety features such as seatbelts, grab bars, and warning signs. Point out the ride operator and watch him as he loads and unloads riders. Is he paying attention? Make sure your child knows to raise his hand and call out to the operator if he's in trouble and needs help while the ride is going.
 - Explain why it's important to obey height and weight limits, both maximums and minimums. Children who are younger or smaller than the posted limit might slip out of the restraints. Children who are older or bigger might overload the ride.
 - Point out riders who are following the rules and those who aren't. Ask questions to get your child thinking about the consequences of foolish behavior. What could happen if you unhooked your seatbelt on a roller coaster? What could happen if you stuck your foot out when the car was approaching the platform?
- **Share stories you hear about amusement ride accidents.**
 - It's important for children to see that people sometimes get hurt on amusement rides, otherwise they have no reason to take the safety rules seriously.
 - Try to find a lesson in the story. If the accident was caused by a mechanical failure, explain that the inspectors and ride engineers will work very hard to fix the problem so that other people aren't hurt in the same way.
 - If the accident is caused by a rider's mistake or misbehavior, point that out. Help your child to understand that misbehavior and inattention can have tragic consequences.

Developmental Factors

- Horseplay, peer pressure, and drug/alcohol abuse are probably the biggest risk factors for this age group. This is the age where kids are out to prove themselves.
- Younger teens are the second most likely age group (after preschoolers) to disconnect the safety equipment or stand up in mid-ride, just for the thrill of it.

Safety Tips for Parents

- **Talk with your children before they visit amusement parks or carnivals.**
 - Discuss the different kinds of rides: roller coasters, spinning rides, Ferris wheels, etc. Talk about the motion of each ride, and what might happen if riders don't follow the safety rules. Challenge your children to find out about the forces induced on the body during a roller coaster ride. The library, the internet, amusement safety officials, or roller coaster enthusiast organizations are good sources of information on amusement rides.

- Explain why it's important to obey height and weight limits, both maximums and minimums. Children who are younger or smaller than the posted limit might slip out of the restraints. Children who are older or bigger might overload the ride.
- If your children are going off with a group of children, talk about group issues. What should your children do if one of the kids they're with starts fooling around on a ride? What if one child doesn't want to go on a ride and the others start teasing or pressuring him?
- Ask questions to get your child thinking about the consequences of foolish behavior. What could happen if you unhooked your seatbelt on a roller coaster? What could happen if you stuck your foot out when the car was approaching the platform? What could happen if you try to jump out before the ride stops?
- **Share stories you hear about amusement ride accidents.**
 - It's important for children to see that people sometimes get hurt on amusement rides, otherwise they have no reason to take the safety rules seriously.
 - Try to find a lesson in the story. If the accident was caused by a mechanical failure, explain that the inspectors and ride engineers will work very hard to fix the problem so that other people aren't hurt in the same way.
 - If the accident is caused by a rider's mistake or misbehavior, point that out. Help your child to understand that misbehavior and inattention can have tragic consequences.
 - Explain that playing games on amusement rides can also hurt other riders. A case in point (excerpted from www.rideaccidents.com):

In 1994 a 6-year-old boy was killed after being struck by a car on the Twister kiddie ride. The ride operator had left the controls unattended while helping the young boy out of the car. One of several teenagers standing near the ride decided to play a prank on the 18-year-old operator, and turned the ride back on. The 6-year-old boy was crushed underneath the ride and died later at a local hospital.

Accident Data Summary

- ../database/qr_byage.php?age=19,99
../database/qr_byage.php?age=19,99Adults (over age 18) accounted for 38% of the amusement ride-related injuries reports obtained by Saferparks from state safety agencies.
- According to the CPSC's NEISS data, this age group showed an increase in complaints of being "tossed around" by amusement rides and spraining ankles coming off rides.
- Neck and back injuries were cited most often, with roller coasters accounting for the lion's share. Many patients said they "felt a pop" while riding.
- Reports included an assortment of bumps, bruises, cuts, sprains, broken bones. Shoulder, ankle, and abdominal/rib injuries showed up as well.

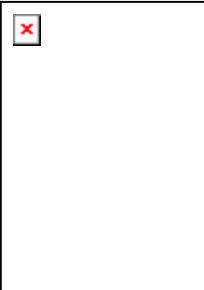
Developmental Factors

Sadly enough, we're all aging. Older bodies are more vulnerable to injury and less able to withstand the forces exerted by a roller coaster or a whirling ride. And while we're getting older, the rides are getting wilder. According to the *Wall Street Journal* :

"Experts say the biggest problem is a jump in mundane but painful motion-related injuries, from bad bruises and sprained muscles to herniated disks. A key reason is a combination of rougher rides and aging riders who underestimate the impact on their bodies."

Safety Tips

- **Understand the risks before you ride.** Amusement rides are designed to shake people up. That's why they're called "thrill" rides. Although ride designers try to reduce the amount of force transferred to your



aging body, they can't get around the laws of physics. If the roller coaster car you're riding in makes loop-de-loops, so will you. All that motion can hurt your back or bruise your ribs or make you dizzy.

- **Use good judgment.** If you haven't been on an amusement ride in a few years, or a few decades, start slowly. Try some of the tamer rides before heading for the super coasters.
- **Ability to tolerate high accelerations declines with age** as adults age and blood vessels in the brain lose strength. Older patrons and patrons who suffer from hardening of the arteries should avoid high-g rides.
- **Obey all posted rules and verbal instructions from ride operators.** Yes, the rules and restrictions apply to you. If you weigh more than the posted limit, and you ride anyway, you're likely to hurt yourself or somebody else. If you don't wear your seatbelt, you just might be thrown out or up or sideways. If you've got a little sciatica or some disk trouble, a trip on the Indiana Jones Adventure just might end with a trip to the hospital for spinal surgery. And I promise you, the park isn't likely to pay your medical bills.
- **Keep your head on straight.** Some research indicates that there may be a connection between rider's head position and rare, yet serious, brain and/or neck injuries on high-acceleration rides. Pay attention to **all** signs, no matter how unimportant the instructions might sound to you -- especially on extreme rides. If ride owner has posted a sign instructing riders to keep their head against the headrest and their eyes straight ahead, take that as a serious warning.
- **Never drink and ride.** Alcohol and amusement rides are a deadly combination. Alcohol impairs your judgment, balance, and muscular control - all of the qualities that protect you from injury on amusement rides. Ditto for drugs.

Safety Tips for High-G Rides

Are Monster Rides Right for You?

Written by:

Steve Elliott, President
Ride Actions Limited
(608)278-9932
saelliott9@aol.com

Questions about those New Big Rides? Maybe some of these questions and answers can help you decide if that new ride is for you and your family.

Is the Biggest, Tallest, Fastest, Wildest ride at the park or carnival safe?

The answer is simple and hard. The simple part is rides are made safe by the manufacture for specific types of guests. First of all, you should be in normal to good health and not have any of the customary medical concerns, like being pregnant, have or have had broken bones within the last year, heart or respiratory problems, or taking any drugs or alcohol. Second, most rides have a height requirement, which is used to "classify" guests into a size range that allows for safe enjoyment of the ride.

The hard part is whether you "fit" the classification the ride requires. Many people meet the height requirement, but find the seat difficult to "fit" into, due to size, weight, or build of their body. The question you as a guest should ask yourself is, "Do I fit comfortably in the seat and the restraint?" Remember that enjoyment comes with comfort and safety. If you do not fit into the seat properly, either too big or too small, you will not enjoy the ride. And if you do not fit properly, the seat's safety restraint may not function properly. These are all choices you as the guest can make before the ride leaves the station. You are a part of the safety system of the ride. If you follow the directions and act responsibly, these rides are safe for you and your friends.

And please remember, the ride attendant is only enforcing the Park's rules, if you have questions about the policy, you should go to the Guest Relations location and discuss it with an appropriate Park manager.

What questions should I ask before I ride the ride?

It is important you understand the limits of your own body. If you get car sick when sitting in the back seat of a car, do not sit in the back seat of a ride, sit in the front. Have you just eaten a large lunch or lots of snacks? If so, it might be best to wait an hour before you go "swimming" on the ride. It is best to drink a fair amount of water during your day at the park or carnival. Good hydration is important in keeping your body healthy and your internal systems functioning, and it will reduce your chances of getting sick or having a headache while enjoying the rides. But don't drink a large soda, the amount of liquid, just like the content, can also add to your discomfort. Also, small amounts of food will keep your stomach happy and make the ride an enjoyable event in your fun-filled day.

What if I want to know more about a ride?

This is a good question to ask, especially when you are not sure about the actions or motions of a ride and where it will be appropriate for you or your children. If you are unsure, go to the guest relations office or window at the park or carnival. Ask for assistance in learning more about the ride, its motions, and what the requirements are for riders enjoying the ride. If you are already in a queue-line and have questions, wait till the ride comes to a stop and then ask an attendant for assistance. It is important not to bother the attendant while the ride is moving in the station, since they are required to watch and observe the ride during that time. The important thing to remember is you have to feel comfortable about the ride and its motions, and with that you can enjoy the ride.



What if my child is too small to ride, but I would like to ride?

Many parks and carnivals have a "child pass" policy. This works with two adults and the undersize children. What usually occurs (check at the Guest Relations office for more information) is one adult stays with the children on the load side while the first adult rides the ride. Once the ride goes around and has stopped to unload, the children are transferred to the exiting first adult and the second adult rides the ride. In this manner, the children are happy because they are with a parent or familiar person, and the adults have a chance to add that ride to their ride list.

It is very important not to force a child onto a ride, even if they are big enough to ride. Children under these situations are more likely to become sick and/or attempt to get out of the safety restraints. It is important for their safety that they are willing to experience the ride and control their actions while on the ride. Parents cannot and should not plan on holding their children during these ride experiences because this may put them in danger also. Larger rides are safe, but it requires a level of maturity and understanding of all riders for it to be a safe and enjoyable experience.

Steve "the g-man" Elliott is an expert in the fields of amusement ride design and biomedical engineering. His education and experience combine to make him one of the leading experts on high-g rides. Steve earned his nickname while working as a Disney Imagineer, where he designed the Space Mountain roller coaster at Disneyland Paris.

Riders With Disabilities

Think Safety First

Amusement parks are making more of an effort to address the needs of riders with disabilities, but it's not always possible to include everybody and also keep riders safe.

- **When choosing rides for people with disabilities, be conservative and realistic.** Make sure the ride is appropriate for the rider. Most thrill rides are, by their very nature, physically demanding and emotionally intense.
- **Ask the park or carnival management for advice** on which rides are right for you or the disabled person you're responsible for. Some parks or carnivals have brochures which discuss the abilities required on each ride.
- **The ride operators and managers understand more about the ride machinery and potential hazards it might pose to disabled riders than you do.** Never fight or bully a ride operator into bending rules or ignoring safety restrictions that are intended to protect the physical safety of riders.
- **Make sure the restraints fit well and the rider is secured.** Small, thin riders and obese riders are at higher risk of ejection in rides that rely on lap restraints.
- **If a developmentally-disabled rider seems frightened for any reason, alert the operator before the ride starts so you can get off safely and find a more appropriate ride.** A strong person who is deliberately trying to escape can defeat many ride restraints. If you are chaperoning a developmentally disabled person and you think this is a possibility, don't put him or her on an amusement ride.
- **If you question whether a disabled person in your charge should be on a particular ride, err on the side of caution.** If someone lacks the capacity to fully understand what they may be subjected to and the results of their actions, they shouldn't be placed on a ride which can induce great fear and panic.

Physically-Challenged Patrons

- The strong forces created by some amusement rides can be dangerous to a rider who cannot maintain his balance, hold his head steady, and/or hold onto safety bars.

Mentally- or Emotionally-Challenged Patrons

- **Start slowly with gentle rides, and watch carefully for signs of over-stimulation.** The thrill of adult amusement rides is based on surprise, fear, and strong forces. The extreme emotional and physical stimulation may be too much for a mentally- or emotionally-challenged rider.
- **A rider who panics and tries to get off in mid-ride can endanger himself and others.** Most restraint systems are not designed to stop an adult or large child who is determined to exit the ride.
- **If you are supervising a special-needs patron, make sure he or she is seated properly with the restraint system fully latched before the ride starts.** Ask the ride operator for help if you need it.
- **Always supervise special needs patrons carefully.** Don't take a rider on board if you can't control their physical actions.

Seizure-prone Patrons

- Carnivals and amusement parks often use rapidly flashing lights that can trigger seizures in susceptible people.