



## INFLATABLE ATTRACTIONS

Inflatable attractions have become more and more popular in recent years. They can be seen at backyard birthday parties, church outings, theme parks and even at large stadiums and arenas across the country. There is no denying the popularity of inflatable attractions amongst children. What's not to like? They are colorful, soft, and bouncy. In fact, inflatable attractions are often the most popular attraction at a carnival or theme park; many times outdrawing their large, expensive iron ride counterparts. They have also become more and more popular with parents, party organizers and many businesses because they are relatively inexpensive to purchase or rent, involve little overhead, and appear to require very little expertise or training to set-up and operate. This perception is as much of a facade as their soft and cushiony appearance.

# INFLATABLE ATTRACTIONS

While inflatables may appear to be innocuous, the fact is that inflatable attractions are the least regulated and may very well be the most dangerous device on the amusement scene.

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## *INFLATABLE INJURIES*

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A report published in 2015 by the U.S. Consumer Product Safety Commission (CPSC), stated that there were an estimated 113,272 emergency department-treated injuries associated with inflatable attractions in the years 2003 – 2013, with a significant increasing linear trend from year to year during that time frame (see table below). Inflatable attractions account for 42% of all ER hospital visits for amusement rides, more than doubling roller coasters. Additionally, from 2003 – 2013, there were 12 deaths reported to the CPSC involving inflatable attractions. Of the 12 inflatable attraction deaths, four were linked to moon bounce-style inflatables, five were on inflatable slides, one involved an inflatable rock climbing wall, and two were unspecified inflatable attractions. These studies came from records produced by the National Electronic Injury Surveillance System (NEISS), which is operated by the Consumer Product Safety Commission.

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## *CAUSES OF ACCIDENTS*

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When looking at past incidents that have occurred on inflatable attractions, specific trends become apparent. Most significant accidents can be broken down into five categories of contributing factors, which most of the time occur in combination to trigger the accident.

### *Lack of Trained Supervision*

This category definitely encompasses the other factors listed below and is the number one cause of injuries.

### *Overloaded Inflatables*

Allowing more than the manufacturer's maximum occupant load can result in serious accidents whether they are on inflatable bouncers or large inflatable slides.

### *Not Tethered Properly*

By not strictly following the manufacturers' specifications with regard to tethering the attraction, the risk greatly increases of the inflatable tipping over or being blown into the air.

### *Operating in Windy Conditions*

The most shocking inflatable-related incidents occur when inflatables with children on the attraction are sent sailing through the air; in some cases, out into open water or onto a freeway. Inflatable operation should cease before winds or wind gusts reach 15 mph.

### *Loss of Power to Blower*

A loss of power to the blower generally occurs when a circuit blows, someone trips over a power cord, or someone turns off the blower as a prank (a surprisingly common occurrence) and will result in a sudden and relatively rapid deflation of the inflatable.

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## *INFLATABLE RISK MANAGEMENT*

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The only way to eliminate injuries on inflatable attractions is through risk avoidance. Simply put, if you don't want your customers getting hurt on inflatable attractions at your facility, then don't use them. However, if organizations insist on having inflatable attractions as a part of the guest experience at their facilities, then the first priority should be to assign the appropriate individual within the organization to become intimately familiar with inflatable operations. This should be done to ensure that the proper safety and risk management practices are being adhered to at all times and should be done even if the organization chooses to hire an outside company to set-up and operate the inflatables. At a minimum, this individual should be well versed in ASTM F2374 – 10 standards (Standard Practice for Design, Manufacture, Operation, and Maintenance of Inflatable Amusement Devices) as well as with the manufacturers' specifications regarding the set-up, operation and maintenance of each inflatable attraction that is operated by the organization or rental company. The importance of having a trusted individual within the organization with a "hands-on" approach with this exposure cannot be stressed enough.

If the organization chooses to use a rental company to supply and operate inflatable attractions at the facility, then the following risk management strategies should be in place:

- Do your due diligence when selecting an inflatable rental company. A reputable company should: 1) rent only commercial grade inflatable attractions; 2) be members of AIRCO (Association of Inflatable Rental Company Operators); 3) have a thorough understanding of ASTM F2374 – 10 standards (Standard Practice for Design, Manufacture, Operation, and Maintenance of Inflatable Amusement Devices); 4) meet the organization's minimum insurance requirements; and 5) be able to provide written documentation of their attendant training programs and maintenance inspections.
- Ensure that the proper contractual and indemnification agreements are in place and that the rental company names your facility as an Additional Insured on their policy.

- Insist on having a third party inspection of the inflatable attractions from a qualified amusement ride inspector once they are set up. Inspectors should at a minimum be level one NAARSO (National Association of Amusement Ride Safety Officials) certified.

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## *INFLATABLE SAFETY STANDARDS AND PRECAUTIONS*

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The standards and precautions listed below are not intended to be an all-inclusive list. The manufacturers' guidelines relative to the set-up, operation, inspection and on-going maintenance procedures for each inflatable attraction should always be strictly adhered to. Be sure to have a comprehensive weather monitoring program in place when operating any inflatable attraction. Most inflatables must not be operated when winds or wind gusts reach 15 Mph. Some inflatables specify a 20 mph limit.

- Make sure that all anchor points are used and that they are secured by following the manufacturers' exact instructions. Modifications different from the manufacturers' specifications should never be made.
- Make sure that all attendants are properly trained in the standard operating procedures as well as the emergency procedures for each inflatable attraction. All training sessions should be documented.
- Make sure documented inspections occur prior to operation on all inflatable attractions.
- Proper supervision for each attraction is key to reducing injury exposures. Always ensure that each inflatable attraction is properly staffed at all times. Not only do attendants need to be vigilant, but they also need to be able to enforce the safety rules in a consistent, professional, and convincing manner to excited children or overbearing and persuasive parents.

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## *CONCLUSION*

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Inflatable attractions present significant risk exposures that should not be taken lightly. Organizations that choose to operate them at their facilities need to be familiar with the risks involved, take the appropriate risk management precautions, and ensure that all inflatable attractions are set-up, operated and inspected in accordance with the manufacturers' specifications and industry standards.

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If you or your staff have any questions concerning this important Safety Bulletin, please contact us today.



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