

Paintballs can cause 'devastating' eye injuries

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Paintballs can cause severe and 'visually devastating' eye injuries, especially when used in unsupervised settings without proper eye protection, reports a study in the February issue of the *American Journal of Ophthalmology* (www.AJO.com), published by Elsevier.

"Eye injuries secondary to high-velocity paintballs can cause tremendous damage to vital ocular structures often requiring extensive surgical intervention," comments Dr. Kyle J. Alliman of Bascom Palmer Eye Institute, University of Miami Miller School of Medicine.

"Unfortunately, visual loss is often permanent."

Dr. Alliman and colleagues analyzed the characteristics and outcomes of 36 patients treated for paintball injuries to the eye at Bascom Palmer Eye Institute between 1998 and 2005. The patients were mainly young men, average age 21 years.

The injuries were often quite severe, including rupture of the eyeball in 28 percent of patients and detached retina in 19 percent. Surgery was required in 81 percent of patients—including eventual removal of the eye (enucleation) in 22 percent. Even when the eye was saved, many patients had permanent visual loss. Overall, near-normal vision (20/40 or better) was restored in only 36 percent of eyes.

All of the patients were injured when using paintballs in a "non-recreational, uncontrolled setting," according to Dr. Alliman. None of the injuries occurred in formal, sponsored event. In all but one of the 36

cases, the patient was not wearing any type of eye protection when the injury occurred.

Paintball has become a popular recreational activity, with an estimated 10 million participants in the United States alone. The risk of paintball-related eye injuries has long been recognized. Organizers of formal paintball games require eye protection and education, which has significantly reduced the risk of severe eye injuries.

The researchers hope their study will draw attention to the alarming frequency of serious eye injuries related to paintballs, including the potential for permanent visual loss. "Awareness of the severe nature of paintball-related eye injury is paramount," says Dr. Alliman.

The new analysis suggests that severe paintball-related eye injuries are most likely to occur when paintballs are used in informal, uncontrolled settings. "Both the consumer and distributor alike must realize the seriousness of injury caused by the improper use of paintballs in order to implement effective precautionary strategies," Dr. Alliman adds. "Eye protection can prevent over 97 percent of injuries."

Source: Elsevier

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