



# ■ Eye Safety At-a-Glance

Protecting Your Child's Vision in Sports



THE VISION COUNCIL



National Association for  
Sport and Physical Education

an association of the American Alliance for Health,  
Physical Education, Recreation and Dance

**NASPE Sets the Standard**



# Eye Safety At-A-Glance

## Protecting Your Child's Vision in Sports

Sports-related eye injuries are quite common, yet the number of children who use protective eyewear (safety glasses or goggles) is extremely low. More than 600,000 eye injuries related to sports occur each year, and approximately one-third of these injuries occur in children<sup>1</sup>.

When children participate in sports they not only increase their physical fitness and self esteem but they also learn about teamwork and self-discipline. However, not taking the proper safety precautions can be hazardous to a child's health.

Only 15 percent of children reported wearing eye protection "always" or "most of the time" when participating in sports, hobbies, or other activities that could cause eye injuries<sup>2</sup>. Yet, the majority of the eye injuries that occur in school-aged children are sports-related<sup>3</sup>.

This issue brief, published by The Vision Council, offers information on sports activities that have the potential for eye injury as well as helpful tips on how to protect children's eyes and adults'.

### INCIDENCE

Eye injuries are the leading cause of blindness in children<sup>4</sup> and most eye injuries among kids aged 11-14 occur while playing sports. Children's sports eye injuries can range from abrasions of the cornea and bruises of the lid to internal eye injuries, such as retinal detachments and internal bleeding. Nearly 43 percent of sports-related eye injuries involve children under the age of 15,<sup>5</sup> and boys between the ages of 11 and 15 are up to five times

more likely to sustain eye injuries requiring hospital treatment than girls of the same age<sup>6</sup>.

Every 13 minutes an emergency room in the U.S. treats a sports-related eye injury<sup>7</sup> for children and adults. It is also estimated that sports-related eye injuries in the U.S. account for more than 100,000 physician visits per year at a cost of more than \$175 million<sup>8</sup>. Of the 1.6 to 2.4 million Americans who sustain eye injuries each year, an estimated 40,000 will be legally blinded in the injured eye.





## SPORTS ACTIVITIES THAT POSE A DANGER TO OUR EYES

When participating in sports, many parents do not consider the potential for eye injuries. Many do not realize how much damage a stray ball, puck or bat can do if it hits the eye.

Eye injuries most often occur in baseball, basketball, ice hockey and racquet sports, yet few parents encourage their children to wear protective eyewear when playing these sports. In fact, the American Academy of Ophthalmology recommends protective eyewear for any sport even for children who don't wear glasses or contacts. Studies show that protective eyewear does not hinder the player's sight, and some athletes even play better because they are less afraid of getting injured or hit in the eye.



For children 14 and under, baseball is a leading cause of sports-related eye injury. Batted baseballs are 3.5 times more likely to cause eye damage than a pitched ball, yet most players do not use protective eyewear when they are not at bat<sup>9</sup>.

Basketball is the leading cause of sports-related eye injury among 15 to 24 year olds.<sup>10</sup> One in 18 college athletes will sustain an eye injury, the odds increase to 1 in 10 for basketball players.<sup>11</sup>

## PREVENTING SPORTS EYE INJURIES IS EASIER THAN YOU THINK

As an eye care professional I see so many eye injuries, from black eyes to blindness, which are attributed to sports and recreational activities.

Even though more than 90 percent of these eye injuries are preventable, many people don't take action to wear appropriate protective eyewear.

It is amazing to me that some states and sport organizations have requirements for shin guards but not for sports protective eyewear. Parents are quick to equip their children with helmets, knee and elbow pads and even mouth guards. Eye protection should be a must for all players, but especially for those who wear eyeglasses or contact lenses because this eyewear poses a more severe risk of eye injury than participants using no eye protection at all.

I encourage all of my physically active patients to consider protective eyewear to substantially reduce the number of avoidable eye injuries that occur in today's sports and recreational environment.

Children participating in any activity that uses a ball or racket, involves rough contact with other players, or requires moving at high speed – whether on a school team, in gym class or even just playing with friends – should wear protective eyewear including safety glasses, goggles, safety shields and eyeguards.

**Dr. Paul Berman, OD, FAAO,  
Chairman of the Coalition to  
Prevent Sports Eye Injuries**



## PREVENTING SPORTS-RELATED EYE INJURIES

The best way to prevent a sports-related eye injury is to wear appropriate, sport-specific protective eyewear that is properly fitted. The American Academy of Pediatrics, American Academy of Ophthalmology and American Optometric Association all strongly recommend protective eyewear for all participants in sports in which there is a risk of eye injury.

Many youth and children's teams don't require eye protection, so parents must insist that their children wear safety glasses or goggles whenever they play. Parents can set a good example by wearing protective eyewear themselves.

Here are some helpful tips to protect the eyes while playing sports:

- ▶ All children need protective eyewear regardless of whether or not they wear glasses or contacts.
- ▶ All sports protective eyewear should meet the impact standards of the American Standards for Testing and Materials (ASTM). An optometrist can make sure that glasses and or goggles are fitted properly. There are also a wide range of polycarbonate face masks and guards that can be attached to helmets or worn by themselves.
- ▶ Everyday fashion eyewear is not held to the same protective standards as eyewear products labeled as protective eyewear for sport use. The lens in a child's regular eyeglasses could easily pop out and puncture or cut the eye. A frame mangled from impact could also injure the eyes and ocular region of the face.
- ▶ Lenses should be made from polycarbonate materials because they provide the highest level of impact protection; they can withstand a ball or other projectiles travelling at 90-miles per hour. Polycarbonate lenses are available in both eyeglasses and sunglasses.
- ▶ Just because a sport requires a helmet or face guard, it doesn't mean that your child's eyes are protected from injuries. They are still exposed to danger from sports equipment or an opponent's fingers penetrating the openings of a face mask.
- ▶ Protective eyewear can be purchased at sporting goods stores as well as eye care professionals' offices.





Basketball, football, hockey and baseball aren't the only sports that contribute to the thousands of eye injuries suffered each year. Soccer, tennis, golf and water sports also are dangerous to the eyes. Eye protection is available for many sports activities including:

SPORT	Protection Needed	SPORT	Protection Needed
BADMINTON	Sports goggles	LACROSSE (MALE)	Helmet and full face protection
BASEBALL	Batting: Face guard attached to helmet	LACROSSE (FEMALE)	Minimum: Sports goggles
	Fielding: Sports goggles		Max: Helmet and full face protection
BASKETBALL	Sports goggles	RACQUETBALL	Sports goggles
CYCLING	Cycling eyewear	SOCCER	Sports goggles
FENCING	Full face cage	SQUASH	Sports goggles
FIELD HOCKEY	Goalie: Face mask	STREET HOCKEY	Goalie: Full face cage
	Others: Sports goggles	SWIMMING	Others: Sports goggles
FOOTBALL	Face shield attached to helmet		Swim goggles recommended
HANDBALL	Sports goggles	TENNIS (DOUBLES)	Sports goggles
ICE HOCKEY	Helmet with full face protection	TENNIS (SINGLES)	Sports goggles
		WATER POLO	Swim goggles recommended

## DO'S AND DON'TS OF EMERGENCY EYE CARE

If an eye injury does occur, it's important to see a medical doctor or an eye care professional as soon as possible since an injury may not be immediately obvious. The following steps can be taken until a medical professional can be seen.

### DO:

- ▶ Protect the eye from further damage by holding a folded cloth over the eye, having it act as a shield.
- ▶ Bandage any cuts around the eye to prevent contamination or infection.
- ▶ Flush the eye with water if there is small debris in the eye.
- ▶ Use a cold compress to treat a blunt trauma injury such as a black eye, but be careful not to apply additional pressure.

### DON'T:

- ▶ Do not remove any objects that are stuck in the eye as this could cause vital eye fluids to leak out.
- ▶ Do not wash out the eye when dealing with cuts or punctures to the eye.
- ▶ Do not attempt to self-medicate. Stay away from applying ointments or taking any medications, including over-the-counter drugs.
- ▶ Do not rub the eye. Doing so could cause more damage.



## PROTECT YOUR EYES, PROTECT YOUR BODY

As students head back to school and prepare to participate in physical education class, sport and physical activity programs, it is important to ensure safe and effective practice occurs. Proper instruction and practice can improve children's skills and confidence while the use of proper safety equipment can keep them safe.

Teaching kids to utilize and take care of their physical activity and sport equipment and safety gear can prevent injuries. Equipment should always include proper eye protection which can save players from an eye injury that could have long term effects.

**Dr. Lynn Couturier**

Chair of the Physical Education Department at SUNY Cortland and President of the National Association for Sport and Physical Education

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