

KEY ADVICE REGARDING SPORTS EYE PROTECTION

THE AMERICAN SOCIETY OF OPHTHALMIC TRAUMA



WHO NEEDS EYE PROTECTION & WHY?

An eye injury can be very traumatic, both for the individual and their carers. The eyes have more nerves than any other part of the body, making an injury to the eye very painful and distressing. Injuries to the eye and its surrounds can result in visual and functional loss which has life- long implications to social, physical, mental and financial well-being. It is important to consider using eye protection for anyone considered at risk or who is playing sports considered hazardous to the eyes.

WHICH PATIENTS ARE AT RISK?

Certain conditions mean a patient is at higher risk of injury when exposed to hazards, like a ball or racquet hitting their face and eyes. Patients who have had previous eye surgery, an injury or trauma to the eye and those with diseases that make them more susceptible e.g. keratoconus, high myopia. Children are particularly vulnerable because of their developing visual and learning systems. Patients with amblyopia and/ or limited vision in one or both eyes risk losing vision in their 'good eye' and therefore blindness, which would be even more devastating.

WHICH SPORTS ARE "RISKY"?

Playing sport can present a range of potential hazards to the eyes and face, these include the racquet/ bat or ball, as well as impact with another player or playing surfaces. Several factors can influence how hazardous than others, depending on the weight and speed of the ball, size of the ball, likelihood of collision/ contact with another player and the size of the court/ field on which the sport is played. Taking into account the hazard associated with the sport alone, they can be categorised into Low, Medium and High Impact sports.

WHAT TO LOOK FOR IN EYE PROTECTION?

When choosing eye protection, it is important to select something that has the right fit to ensure comfort for the wearer and stability during play. Also important is the coverage provided – particularly critical is the need to ensure that hazards can't enter from the sides, underneath or on top of the eye protector. Look for products that meet the relevant standards. If a product is certified – this is additional guarantee that the eye protection not only meets the standard but also has been manufactured with the highest quality controls.

Smaller Court = Higher Hazard

Ball size: if it's the same size or smaller than your eye e.g. squash or golf ball, racquet shuttlecock its particularly dangerous to your eyes, jumping/ leaping e.g. volleyball



Broad category	Examples of sports/ activities	Relevant standards	Eye & Face protection complying with the relevant standard
Low	Cycling, running,	ANSI Z80.3; ISO 12312-3	Polycarbonate sunglasses with good lateral protection.
	Skiing	ASTM F659, ISO 18527-1	Sport specific goggles
	Floorball		
Medium	Racquet sports (incl. Badminton, Tennis, Squash, Pickleball), Volleyball, Netball, Basketball Baseball Field Hockey Woman's Lacrosse Softball	ISO 18527-2; ASTM F803 ASTM F803, NOCSAE 072-21 ASTM F2713 ASTM F3077 NOCSAE 072-21	Eye protection meeting the relevant sport specific standard
High	Ice hockey, Cricket, Lacrosse goalkeeper American Football	ASTM F513-22, NOCSAE035-11m16 NOCSAE 087-18m21	Face shield/ Guard (incorporated into helmet)
Combat/ Contact sports	Mixed martial arts, Karate, Boxing	See below	
All sports played outdoors	Ensure adequate UV protection		

Other factors to be considered that will change the risk profile of a sport include a player's strength and age and therefore the speed of the ball, or method of play e.g. immature or young players 'playing outside the rule', can increase how hazardous a sport is to your eyes. It is therefore important to consider not only what is being played but also who is playing to ensure the right level of protection is provided.

For some sports, eye protection cannot provide adequate protection, because of the extreme hazard to the eyes. This includes combat sports, like boxing or mixed martial arts. For these sports patients at high risk should be encouraged not to participate as there is no eye protection adequate enough to ensure their eyes are protected.

WHAT IS NOT EYE PROTECTION?

It is important to remember that regular spectacles DO NOT provide eye protection. Regular spectacles can present a hazard to the wearer when exposed to trauma e.g. glass spectacle lenses can shatter on impact and should NOT be worn where impact hazards exist.

A NOTE ABOUT SUPERVISING AND TRAINING:

Not all sporting activities are organized! Children playing at home or outside the home may be involved in a range of activities that might expose them to hazards e.g. backyard cricket with a tennis ball. It is important to consider the need for supervision when children are playing, to help reduce the likelihood of exposing them to hazards. When participating in organized amateur sports, it is important to ensure children are well versed in the rules. In many cases, these rules protect them and other players e.g. field hockey high sticks and balls are illegal. Sporting clubs help provide valuable guidance in help ensure children play safely.



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