

# SPORTS INJURY FACT SHEET

## EYE INJURIES

Sports injuries to the eye can range from minor (such as external bruising) to catastrophic (such as permanent loss of vision). With vigilance and proper preventive measures, the number of sports-related eye injuries can be dramatically reduced.

The eyeball and its lens focus light from an image onto the retina. The amount of light entering the eye is controlled by the pupil, which opens and closes. Light-sensitive cells on the retina detect electrical impulses, which then travel to the brain. Anatomy of the eye includes the lacrimal gland, cornea, conjunctiva, uvea (iris, choroid and ciliary body), lens, blood supply, retina, vitreous and optic nerve. External structures include the bony orbital walls and the eyelids.

### Risk factors

While the incidence of sports-related eye injuries is relatively low, their severity can be high, with some resulting in permanent damage or vision loss. Research shows that 30% of sports-related eye injuries in children have the potential to cause permanent vision loss.

A blow to the eye from sporting equipment, fingers or balls can cause injuries ranging from lid haemorrhages or lacerations, corneal abrasions, retinal detachments and hyphaema (bleeding inside the eye) to permanent loss of sight.

Beginners are more prone to eye injuries than intermediate or advanced players, as they may not have developed the skills needed to play safely.

Sports can be grouped into high-risk, moderate-risk and low-risk categories for eye injury.

Note: The sports listed below are in alphabetical order and do not indicate relative risk levels.

### High-risk sports

Involve small, high-speed, dense projectiles or close contact with fingers, bats or sticks. E.g. cricket, tennis, Lacrosse, fencing, paintball.

### Moderate-risk sports

Involve high-speed balls or pucks, sticks or bats, and frequent body contact or collisions. E.g. rugby league, rugby union, volleyball, soccer, AFL.

### Low-risk sports

Do not involve thrown or hit balls, bats, sticks, or aggressive contact. E.g. cycling, swimming/diving, skiing.

### Prevention

Most eye injuries in sport are preventable.

Prevention is based on three key principles:

1. Modifying rules in junior sport to reduce risk and encourage safe play
2. Developing coaching practices that promote safety
3. Wearing appropriate protective eyewear that meets Australian Standards (AS/NZS 4066 or AS/NZS 4499)

Other important considerations:

#### Functionally one-eyed players

Athletes with poor vision in one or both eyes should wear appropriate eye protection. Consultation with an ophthalmologist or optometrist is essential.

#### Contact lenses

Contact lenses provide no eye protection. Players who wear contacts must also use proper eye protection.

#### Obeying the rules

Fair play and good sportsmanship should be emphasised. Coaches should establish clear rules for training and discourage dangerous techniques or violence.

#### Wearing protective equipment

Protective eyewear is proven to prevent eye injuries. Regular prescription glasses do not provide adequate protection.

Key steps in choosing protective eyewear:

- Use eye protectors recognised under Australian Standards (AS/NZS 4066 – sports eye guards, or AS/NZS 4499 – sports helmet).
- Have an ophthalmologist or optometrist assist in selecting and fitting protective eyewear.

### Signs and symptoms

- Tenderness
- Swelling
- Bleeding
- Bruising
- Double or blurred vision
- Loss of vision lasting more than 30 seconds without resolution / Amaurosis must be seen urgently by ophthalmology / optometry
- Flashes of light, floaters or subjective loss of visual field on confrontational visual fields must be seen urgently by ophthalmologist to ensure there is no vitreous haemorrhage, retinal tear or detachment, or traumatic optic neuropathy.

Different injuries present with specific symptoms:

#### Cuts or scrapes to the eyelids

Usually caused by fingernails or fingers. These result in redness and pain, generally resolving within a few days without long-term issues. Any eyelid laceration involving the eyelid margin needs to be reviewed by an ophthalmologist within 24 hours to ensure lacrimal apparatus are in tact and the lid is repaired with preserved anatomical alignment.

#### Blunt trauma

Caused by fast-moving objects like balls, racquets, sticks or fists. These can result in external bruising (black eye), internal bleeding, or even fractures around the eye socket.

#### Penetrating injuries

Occur when a foreign object enters the eyeball. This is more likely with ordinary spectacle lenses, which can shatter on impact and drive fragments into the eye.

### Management

- Do not physically examine or touch the eye.
- Do not forcibly remove foreign objects. Gentle flushing with saline to remove dirt or grit is reasonable.
- Do not apply creams or drops before medical assessment.
- Pad the eye and gently tape or firmly bandage a sterile dressing. If tolerated, cover both eyes to reduce movement (Do not put pressure on the eye with any protective cover).
- Apply minimal pressure to the injured area.
- Keep the athlete comfortable (and ensure appropriate anti-emesis to prevent any potential increased intra-ocular pressure / expulsion of intra ocular contents).
- Consult a doctor, eye specialist or attend the emergency department.

### Rehabilitation and return to play

Athletes with serious eye injuries should be assessed by an ophthalmologist and return to sport only when deemed safe. The eye must feel comfortable, and vision must be sufficient. Protective eyewear should be worn upon return.

For minor injuries, a sports medicine professional can usually make the return-to-play decision based on the type of injury and the athlete's comfort. Topical anaesthetic eye drops must never be used to allow an athlete to keep playing.

### Always consult a trained professional

The information above is general in nature and is only intended to provide a summary of the subject matter covered. It is not a substitute for medical advice, and you should always consult a trained professional practising in the area of sports medicine in relation to any injury. You use or rely on the information in this fact sheet at your own risk, and no party involved in the production of this resource accepts any responsibility for the information contained within it or your use of that information.

### Need a sports medicine practitioner?

Visit SMA's *Find a Sports Doctor* [online directory](#) to connect with a qualified Sports Doctor near you.

### Looking for more information?

Sports Medicine Australia (SMA) is the peak national body for sports medicine, sports science and injury prevention education, dedicated to keeping Australians active, healthy and safe.

The SMA website is packed with practical resources, fact sheets and tools to support you, your team and your community to perform at their best while reducing the risk of injury.

You can explore nationally recognised training courses, including Provide First Aid and Provide Cardiopulmonary Resuscitation (CPR), as well as our industry-leading sideline support courses such as Sports Trainer Level 1 and 2, Introduction to Sports Taping, Introduction to Sports Massage and more.

Everything you need is at [sma.org.au](https://sma.org.au).

### Acknowledgements

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