



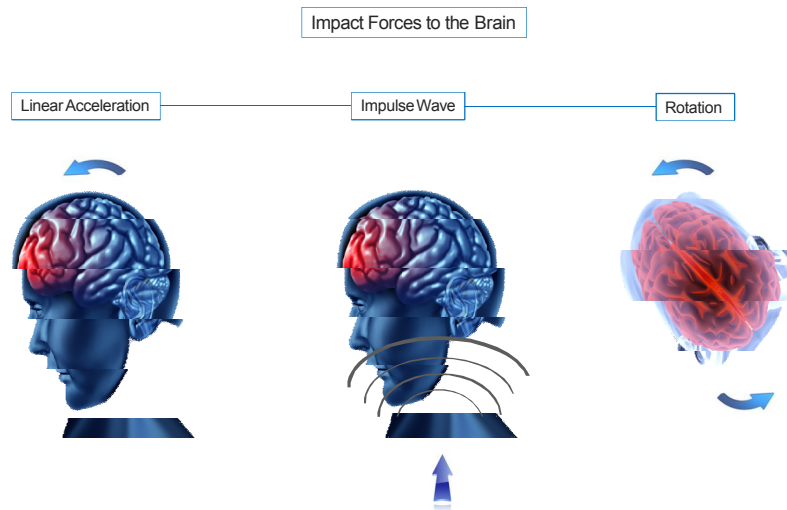
## Concussion Policy 2013

The Australian Lacrosse Association (ALA) Concussion Policy is based on current international concussion opinion <sup>1-3</sup>. The welfare of all lacrosse players in Australia depends on concussion being recognised and correctly managed by a medical doctor. These policy guidelines should be adhered to at all times.



### What is it:

Concussion is a disturbance in the brain's ability to acquire and process information. The reduced function of the brain represents damage to nerve cells (neurons). The neurons can be damaged by a direct blow to the head, which cause the brain to rotate and/or move forward and backward. Indirect impact to the body can transfer an impulsive force to the brain which damages neurons.



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The effect that this has on the athlete can vary from person to person, depending on which part of the brain is affected. The impact can cause concussion signs visible to those who witnessed the collision.

Concussion should be suspected if these **signs** are observed <sup>4</sup>:

- Unresponsiveness
- Upper limb muscle rigidity
- Upper limb spontaneous movement
- A fit / seizure soon after contacting the surface
- Balance difficulty
- Slow responses
- Vacant stare
- Confusion
- Disorientation
- Holding the head
- Facial injury
- Speech slurring



**Minutes to hours** after the impact injury the player may complain of <sup>4</sup>:

- Headache
- Nausea / Vomiting
- Blurred vision
- Memory loss / difficulty
- Dizziness
- Tiredness
- Not feeling right
- Sensitive to bright light & loud noise

**Days to weeks** after the impact the player could have/feel <sup>4</sup>:

- Sleep difficulty
- Persistent low grade headache
- Poor attention & concentration
- Sad or irritable or frustrated
- Tired easily
- Lethargic, low motivation

#### Take Home Message

A player does not have to lose consciousness to have a concussion.

Symptoms can evolve over time – keep monitoring the athlete for at least 72 hours.

#### How common is concussion in Lacrosse:

The epidemiological data on concussion rates in lacrosse are published on United States High school studies. In boy's college lacrosse concussion occurs at a rate of 0.30 / 1000 games, practices <sup>5</sup> In girl's college lacrosse concussion occurs at a rate of 0.20 / 1000 games, practices <sup>5,6</sup> The concussion rate is higher in boys despite the fact that they wear helmets and girls wear mouthguards and eye protection.



### **Why worry about it:**

It is recognised that most concussions get better in 7 to 10 days.<sup>7</sup> However, ignoring concussion signs and symptoms or not recognising them, can result in potential catastrophic consequences. Acute brain swelling, traditionally referred to as “Second Impact Syndrome” is usually fatal. Prolonged symptoms, recurrent concussion, learning difficulties, personality problems have also been reported.<sup>7</sup>



### **What should parents, coaches and other support staff do before the season:**

Prepare for the sports season by studying up on concussion. Have the resources with you that allow easy recognition of possible concussion. Have easy access to a check list of the warning signs of structural brain injury. Know where the closest medical help is in relation to the current location. Find the closest emergency department or medical practice.

Complications can occur if the player is returned to play before they have recovered from their concussion. Consider baseline computerised brain function testing (Axon, ImPACT) for the following reasons:

- Detects when impaired brain function lasts longer than the athlete has symptoms.<sup>2</sup>



- Provides precise measures of reaction time are provided for repeated testing over time.<sup>2</sup>
- Provides extra information in players with previous concussions.<sup>2</sup>
- Helps to find those players with delayed brain function recovery who need more detailed testing with a neuropsychologist.<sup>2</sup>
- Is a useful add-on to clinical assessment and judgement.<sup>2</sup>
- Of medicolegal benefit to show that all available resources were used in a concussion case.
- The test is easy to administer and takes a short time.<sup>2</sup>
- Athletes can under report their symptoms in order to keep playing.<sup>8</sup>
- Younger players may not recognise the symptoms of concussion.<sup>8</sup>
- Athletes may be overly anxious.<sup>8</sup>
- Need added assurance for aggressive return to play decisions in professional sport.<sup>8</sup>

### **What should parents, coaches and other support staff do at the sideline:**

Identify suspected concussion. Any player with suspected concussion must be withdrawn from playing or training immediately. Furthermore, no player with concussion should be return to play in the same game or practice/game later that day. ALL players with concussion or suspected of concussion need an urgent medical assessment. In the days or weeks following concussion, a player should not be allowed to return to play or train until they have had a formal medical clearance.

#### **Take Home Message**

Any player with suspected concussion should be removed from play and not return to sport or training that day.

All players with suspected concussion should see a medical doctor as soon as possible.



### **How to manage the unconscious player:**

Basic first aid principles apply. Protect the player's neck and secure an open airway. Urgent hospital referral is necessary for any player who has lost consciousness as a result of a blow to the head or body. Indications for urgent referral to hospital include:

- Fractured skull
- Penetrating skull trauma
- Loss of consciousness
- Deterioration in conscious state following injury
- Increasing confusion
- Worsening headache post injury
- Persistent vomiting
- Any convulsive movements
- Focal neurological signs
- More than one episode of concussive injury in a match or training session
- All children with head injuries
- High-risk patients (eg hemophilia, anticoagulant use)
- High-risk injury mechanism (eg high velocity impact, missile injury)
- Inadequate post injury supervision

### **See a medical doctor:**

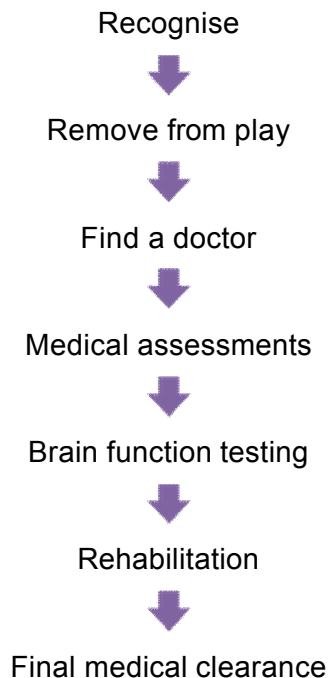
A concussed player should be followed up by a medical doctor with experience in managing concussion. The medical doctor should see the player on a number of occasions, performing serial assessments. <sup>3</sup>At the first visit, the doctor will do a full neurological examination and document current symptoms. It is recommended that balance testing and computerised neuropsychological testing document the recovery process. Recovery from concussion may take longer in younger players (under 18), therefore a conservative approach to playing sport again should be followed.



### **How does the athlete get back to playing lacrosse:**

Players should return to activity only after symptoms have gone away. Initial balance and visual training can start within days of concussion. Once the player feels well, exercise can begin and be made more challenging every 24 hours. If players start to feel unwell during or after exercise, they should rest for 24 hours and then attempt the same exercise challenge. Only when a player has written medical clearance from a medical doctor who has been handed onto their coach, can that player start contact training / practice session.

### **Lacrosse Action Plan**





### **Available resources for parents and coaches:**

[AFL](#)

[Sports Concussion Australasia™](#)

[Mayo Health](#)

[Axon Sports](#)

[Sports Concussion South Africa](#)

[Sports Medicine Australia](#)

### **Concussion Tools**

[Concussion Recognition Tool \(CRT\)](#)

[SCAT3](#)

[FirstResponder™](#)





## References

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- (4) Kelly JP, Rosenberg JH. The development of guidelines for the management of concussion in sports. *J Head Trauma Rehabil* 1998; 13(2):53-65.
- (5) Lincoln AE, Caswell SV, Almquist JL, Dunn RE, Norris JB, Hinton RY. Trends in concussion incidence in high school sports: a prospective 11-year study. *Am J Sports Med* 2011; 39(5):958-963.
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