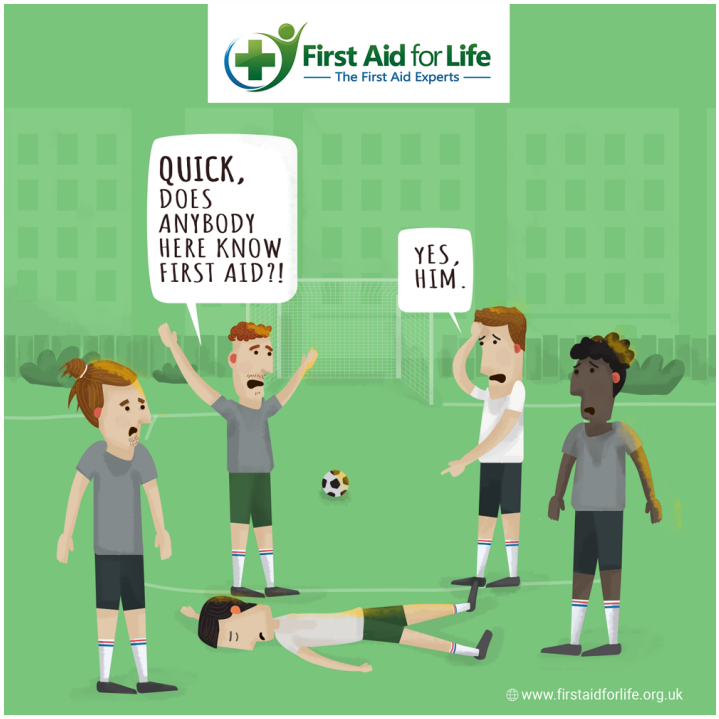
First Aid for Life™
The First Aid Experts

Head Injuries & Sport

Emma Hammett
First Aid for Life

Contents



The debate around head injuries in sport

There has been ongoing debate as to whether repeated impact to the head, such as when heading the ball in football, can contribute to serious brain injury and dementia in later life. There have been continuous calls for professionals to investigate the cause and effect properly and appreciate the extent of brain damage that can occur following repeated head injuries.

Former England captain Alan Shearer, 50, has expressed his concern that repeatedly heading balls in training may have resulted in damage to his brain. Many players, particularly from England's 1966 World Cup squad have been diagnosed with dementia. For instance, Nobby Stiles, whose family believe continually heading the ball attributed to the disease.

Current heading guidelines

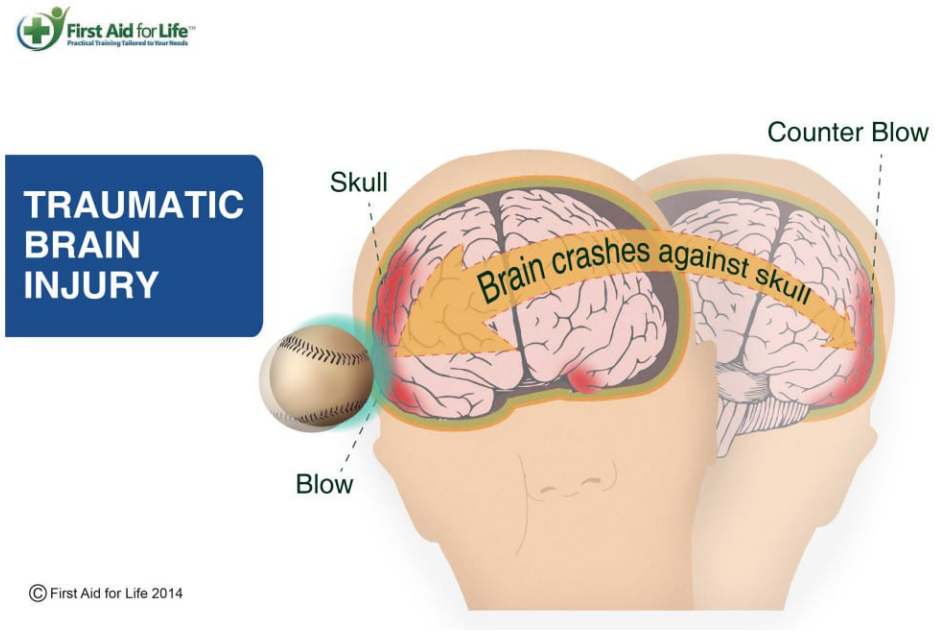
A 2019 study at the University of Glasgow found that former professional footballers were 3.5 times more likely to die from dementia and other serious neurological diseases. Following this study the Football Association announced changes to heading coaching. The up-to-date guidelines state that:

> - There should be no heading in training for **primary school** children
> - Graduated approach to heading for children in the development phase **U12-U16**
> - **U18** heading drills should be reduced, to take into consideration the heading exposure in matches
> - **Don't over-inflate** the footballs: use the lowest pressure authorised by the Laws of the Game

Footballs used nowadays are heavier than those used in the past. Some people fear that todays footballers are at greater risk of head injury and of developing dementia. Although the footballs are engineered for precision and appear more stream lined they are actually 40g heavier than the leather balls used before the 1990s. Issues arise when considering the old footballs on a rainy day. When wet, these balls become significantly heavier and thus more dangerous when headed. Research suggests that this is the time when severe head injuries will have been inflicted.

What is a concussion?

Concussion is the disturbance to the normal working of the brain usually resulting from a blow to the head. Repeated concussions are linked to serious long-term brain conditions.



Initial symptoms of concussion

In football and rugby the most common symptoms are:

- Headache
- Confusion
- Blurred vision
- Nausea
- Difficulty concentrating
- Fatigue
- Drowsiness
- Dizziness
- Memory impairment

The FA have a campaign: If in doubt, sit them out!

First Aid for Life™
The First Aid Experts

Posters

SIGNS AND SYMPTOMS TO LOOK OUT FOR FOLLOWING A HEAD INJURY

The following signs and symptoms can appear immediately or over the next couple of days.
Keep a close eye on the casualty and get medical advice if at all concerned.

First Aid for Life
The First Aid Experts

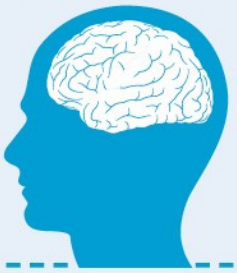
Observed by others

- Appears stunned or dazed
- Loses consciousness (even briefly)
- Is confused about events
- Trouble thinking or concentrating
- Can't recall events prior or after event
- Shows behaviour or personality changes
- Answer questions slowly and repeats questions
- Has difficulty remembering things and organising themselves

Experienced by Casualty

- Headache or pressure in the head
- Balance problems or dizziness
- Nausea/Vomiting
- Sensitivity to light or noise
- Does not feel right
- Blurred vision or double vision
- Feel "Dazed", sluggish, foggy or groggy
- Difficulty concentrating or remembering
- Feeling irritable, sad,nervous or more emotional
- Sleep disturbances

A concussion is an injury to the brain



While injury to the brain can be fatal, most concussions recover completely with correct management

All concussions should be regarded as potentially serious and should be managed in accordance with the appropriate guidelines

Loss of consciousness does not occur in the majority of concussions

Incorrect management of concussion can lead to further injury

Anyone with any concussion symptoms following a head injury **must** be removed from playing or training

There must be no return to play on the day of any suspected concussion

Return to education or work must take priority over return to play

A progressive exercise program that introduces an individual back to sport in a step-wise fashion is recommended after a concussion

An injury to the cervical spine (neck) may occur at the same time as a concussion and normal principles of cervical spine care should also be followed

First Aid for Life™
The First Aid Experts

What to do in the case of a concussion

The poster above gives clear guidance that coaches should remove someone with a suspected concussion from the pitch immediately and they should not resume play that day.

Currently in rugby, they operate according to extremely similar guidelines:

- Club doctors have 13 minutes to decide if a player is fit to return to the field if there is a suspected concussion
- All Premiership grounds and Twickenham have medical teams with access to replays to help with this crucial decision.
- Any player with confirmed or suspected concussion will be permanently removed and will not be permitted to return to training until deemed fit by medics.

Concussion can also affect someone's mood, balance, sleep, thinking, concentration and senses. Most symptoms resolve in 7-10 days and many much sooner. Concussions are an injury to the brain and they need to rest to fully recover, in a similar way to that of a sprain or strain. The brain in shaken within the skull in the collision, which results in an injury. If someone rests appropriately following a concussion they will nearly always make a full recovery.

First Aid for Life™
The First Aid Experts

The most important advice following a head injury

- Don't make things worse – it is important to take it seriously and rest
- Do not risk injury again
- Rest your brain
  - Get lots of sleep
  - Avoid reading, screens and sports for at least 24/48 hours

Children and adolescents may need one or two days off school and a gradual return to academic study. They can start light reading and small amounts of screen time, but this should be monitored and stopped if there are signs of any recurrence of symptoms.

Athletes should have at least 2 weeks with no training to give the brain a chance to fully recover. If there are no symptoms then players can start a gradual return to play (GRTP). This entails spending 24 hours on each stage (48 hours for children and adolescents). Go back a stage if symptoms occur:

1. Light aerobic exercise
2. Sport specific exercise
3. Non-contact training
4. Full contact practice

19 days is the earliest that an adult can return to play.
23 days is the earliest that a child or adolescent can return to play.
Repeated concussions, particularly in children are associated with long term consequences and serious conditions including second impact syndrome and post-concussion syndrome.

First Aid for Life™
The First Aid Experts

Coaches and first aiders should be confident & able to:

REMOVE. Any player who has experienced a head injury and shows any symptoms (see p.3) should be removed from play immediately.

RECOGNISE. Learn the signs of concussion. Only about 10% of people experiencing concussion will actually be unconscious, therefore the other 90% of people who have experienced concussion will remain conscious. Look out for the more obvious signs such as a dazed or blank expression or tonic arm extension following the blow to the head; along with the symptoms listed above.

Applying a wrapped ice pack will reduce superficial bruising and swelling, but has no effect on any brain recovery.

Someone appropriately trained to do so should remove a casualty from the field if a severe head injury has been sustained and you are concerned about the casualty's spine. If you are worried and there is no one appropriate to help, reassure the casualty, support their head in a neutral position and stop the game or move to another pitch and await removal of the casualty by paramedics.

REST for at least 24 hours (adult) and 48 (child or adolescent).

RECOVER. Ensure the player remains completely symptom free before contemplating any form of return to play.

RETURN to play using the gradual return to play GRTP method as outlined above.

It may take 4-6 weeks before a player is fully fit and back to competitive play. This may seem a long time away from the game. However, it is incomparable to the recovery time following a soft tissue injury and your brain is so important to every aspect of life, that it is vital we take head injuries seriously.

First Aid for Life™
The First Aid Experts

Resources

The RFU have a superb online training course specific to parents, players, teachers and coaches.

Click here to read the Football Association's guidance.

New pitchside saliva test to immediately diagnose concussion

The University of Birmingham, in association with the Rugby Football Union (RFU), Premiership Rugby and the Rugby Players' Association have developed a new pitch-side test to quickly diagnose concussion and brain injuries. During matches in 2017-19, players with suspected or confirmed concussion were asked to provide samples of saliva immediately following the injury. The samples were then compared to samples taken from other players who did not sustain injuries. The test uses microscopic DNA markers in saliva to diagnose a concussion and it has a 94% accuracy.

This test may start being used for elite players in a few months and a pitchside test that gives immediate results could be several years away. However, due to a lack of data this test cannot be used for women yet.

For more information click here.

Take our online first aid for sports course by clicking here. A first aid course (ideally a practical one) is the best way to feel confident and ready to help in an emergency.

First Aid for Life™
The First Aid Experts