The purpose of this document is to provide guidance on concussion to those involved in rugby union in Australia. It incorporates the recent changes to the IRB document entitled “IRB Concussion Guidance for the General Public” which was published on the IRB website on 22 May 2014.

This summary is prepared specifically for the rugby public and is not a medical document.

Players, parents, coaches and officials need to act in the best interest of player safety and welfare by taking responsibility for the recognition, removal and referral of players to a medical doctor and then ensuring concussion is appropriately managed as per these guidelines.

CONCUSSION FACTS

- A concussion is a brain injury.
- All concussions are serious.
- Concussion causes a disturbance of brain function.
- Children and adolescents are more susceptible to concussion, take longer to recover, have more significant memory and mental processing issues and are more susceptible to rare and dangerous neurological complications, including death caused by a single or second impact.
- Children and adolescents should therefore be treated more conservatively than adults.
- Concussion usually follows a head collision, but can occur with a collision to other parts of the body.
- Symptoms can come on at any time, but usually within 24-48 hours after a collision.
- Concussion can occur without the player being “knocked out” i.e. losing consciousness.
- If a player is “knocked out”, they have a concussion.
- All players with suspected or recognised concussion must be removed from the field immediately.
- Return to play or training on the same day is not permitted for any suspected or recognised concussion.
- Concussion that is not recognised or ignored can prove fatal.
- Most concussions recover with physical and mental rest.

The management of concussion involves the following steps; each step must be followed and completed before moving to the next step.

- RECOGNISE
- REMOVE
- REFER
- REST
- RECOVER
- RETURN
**RECOGNISE**

Concussion must be suspected or recognised if a player has any of the following signs, symptoms or fails to answer any of the memory questions after a head or body collision.

<table>
<thead>
<tr>
<th>Signs (what you may see)</th>
<th>Symptoms (player may report)</th>
<th>Memory (questions to ask)</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Dazed, blank or vacant look</td>
<td>• Headache</td>
<td>• “What venue are we at today?”</td>
</tr>
<tr>
<td>• Lying motionless on ground / Slow to get up</td>
<td>• Dizziness</td>
<td>• “Which half is it now?”</td>
</tr>
<tr>
<td>• Unsteady on feet / Balance problems or falling over / Incoordination</td>
<td>• Mental clouding, confusion, or feeling slowed down</td>
<td>• “Who scored last in this game?”</td>
</tr>
<tr>
<td>• Loss of consciousness or unresponsive</td>
<td>• Visual problems</td>
<td>• “What team did you play last week / game?”</td>
</tr>
<tr>
<td>• Confused / Not aware of plays or events</td>
<td>• Nausea or vomiting</td>
<td>• “Did your team win the last game?”</td>
</tr>
<tr>
<td>• Grabbing / Clutching of head</td>
<td>• Fatigue</td>
<td></td>
</tr>
<tr>
<td>• Seizure (fits)</td>
<td>• Drowsiness / Feeling like “in a fog” / Difficulty concentrating</td>
<td></td>
</tr>
<tr>
<td>• More emotional / Irritable than normal for that person</td>
<td>• “Pressure in head”</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Sensitivity to light or noise</td>
<td></td>
</tr>
</tbody>
</table>

**REMOVE**

- Any player with a suspected or recognised concussion must be removed from the rugby field immediately.
- The player must not take further part in any rugby training or games (including other sports) on this day.
- Any player with a head injury may also have a neck injury. If a neck injury is suspected, the player must only be removed by experienced health care providers with spinal care training.

**RECOGNISE AND REMOVE**

**IF IN DOUBT, SIT THEM OUT.**

**REFER**

- All players with suspected or recognised concussion must be referred to a medical doctor or emergency department as soon as possible.
- This referral must happen even if symptoms or signs have disappeared.
- Ideally, the medical doctor who reviews the player should have experience in the diagnosis and management of sports concussion.
- The player must at all times;
  - Be in the care of a responsible adult.
  - Must not consume alcohol.
  - Must not drive a motor vehicle.
If any of the following warning signs (“red flags”) of head injury appear, the player must be taken to the closest emergency department immediately or a responsible adult must call an ambulance (000):

- Severe neck pain
- Deteriorating consciousness
- Increasing confusion or irritability
- Worsening headache
- Vomiting more than once
- Unusual or uncharacteristic behaviour
- Seizure (fitting)
- Double vision
- Weakness or tingling or burning in arms or legs

If any player is diagnosed as having concussion, the following stepwise process must be followed;

REST

- REST IS THE CORNERSTONE OF CONCUSSION MANAGEMENT.
- THE PLAYER SHOULD REST COMPLETELY UNTIL ALL SYMPTOMS AND SIGNS OF CONCUSSION HAVE DISAPPEARED.

What does complete rest mean?

- Resting quietly at home until symptoms and signs are settled.
- It may mean missing a day or two from school, study or work.
- The body needs to rest; limit any physical exercise to short periods of low level activities eg walking around the house.
- The brain needs to rest; limit any tasks that require prolonged or focused memory and/or concentration.
- Avoid excessive TV, use of mobile devices, electronic games, computers and phones as these can aggravate symptoms.

How long should the player rest completely?

- Players must rest until all their signs and symptoms have disappeared AND they have stopped all medication required for treatment for their concussion symptoms (e.g. pain killers for headaches).
- The minimum complete rest period is **24 hours for adults**.
- **Children and adolescents** need a longer complete rest period.
- The required period of complete rest varies from player to player so a medical doctor will specify the minimum time of complete rest for each case.

RECOVER

- Once symptoms and signs are settled and medications are stopped, the player then returns to activities of normal daily living (school, study or work).
- They must not perform any exercise during school (recess, breaks) or any organised sport during or after school.
- If any symptoms re-occur during recovery, the player may need more complete rest time.
- If symptoms re-occur they should be reviewed by their medical doctor.
RETURN

- Exercise can only start after a player has returned to activities of normal daily living without signs or symptoms of concussion and does not require medication for their symptoms.
- The best way to return to sport is to follow a gradual re-introduction of exercise in a step wise progression known as a graduated return to play programme (GRTP) as per the following;

<table>
<thead>
<tr>
<th>Stage</th>
<th>Exercise Mode</th>
<th>Example of Exercise Activity</th>
<th>Progression</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Rest</td>
<td>Complete rest of the brain and body</td>
<td>Medical doctor decides on amount of time needed.</td>
</tr>
<tr>
<td>2</td>
<td>Light cardiovascular exercise</td>
<td>Light jogging for 10-15 minutes, swimming or stationary cycling at low to moderate intensity. No weights training</td>
<td>If no symptoms, start Stage 3 after minimum of 24 hours. If symptoms occur, rest 24 hours &amp; repeat Stage 2.</td>
</tr>
<tr>
<td>3</td>
<td>Rugby specific exercise</td>
<td>Individual running drills and skills without contact No weights training</td>
<td>If no symptoms, start Stage 4 after minimum of 24 hours. If symptoms occur, rest 24 hours &amp; repeat Stage 2, then progress</td>
</tr>
<tr>
<td>4</td>
<td>Rugby specific non-contact training</td>
<td>More complex training drills e.g. passing drills May start progressive (low level) weights training</td>
<td>If no symptoms, medical certificate required before Stage 5. If symptoms occur, rest 24 hours &amp; repeat Stage 3, then progress</td>
</tr>
<tr>
<td>5</td>
<td>Rugby practice</td>
<td>Full contact practice following medical clearance certificate being handed to the club or school sport master</td>
<td>Player, coach, parent to report any symptoms to medical doctor. If symptoms occur, then medical doctor to review</td>
</tr>
<tr>
<td>6</td>
<td>Rugby game</td>
<td>Full contact game</td>
<td>Monitor for recurring symptoms or signs</td>
</tr>
</tbody>
</table>

Return to exercise (GRTP Stage 1 – 4)

- Stage 1 is the complete rest and recovery period.
- A player should be cleared by a medical doctor to commence light exercise (Stage 2).
- A player can only proceed to the next stage of the GRTP if they have no signs or symptoms of concussion at the time of exercise, later that day (after exercise) and on waking the following day.
- The minimum time between stages is 24 hours, although children and adolescents may require a longer period of time between stages.
- If there is a recurrence of symptoms at any time during the GRTP the player must;
  - Rest for a minimum of 24 hours until all symptoms and signs have settled.
  - Return to the previous stage at which they had no symptoms.
  - Recomence the progression of the GRTP.
  - If a player has a recurrence of severe symptoms (e.g. requiring them to miss school, study or work) or repeatedly (more than once) during the GRTP, or if the recurrent symptoms are prolonged (more than 24 hours), the player should be reviewed by their medical doctor.
Return to contact training (GRTP Stage 5 IRB Guidance Recommendation)

- The player **must** have a medical **certificate** from a medical doctor to start contact training (Stage 5).
- This certificate must be given to the **club** or **school sport master**.
- Players 18 years and under **cannot** return to **contact** training (Stage 5) or playing for at least 2 weeks (14 days) after all symptoms and signs have disappeared.

This restriction to return to contact training and playing applies to all players aged 18 years and under including those playing adult rugby.

Return to play (GRTP Stage 6)

A player should only return to play when they have fully recovered from concussion. This means the player **must**:

- Not have any signs or symptoms of concussion at rest or in normal daily activities (school, study or work).
- Have followed the IRB guidance recommendation for the mandatory rest from contact training.
- Have successfully completed the GRTP without any symptoms or signs of concussion (during or after training and contact training).

Multiple and more complex concussions

This guidance applies **only to players** who have suffered their **first** concussion in a **12 month period**. The guidance **does not** apply to players with potentially more complex injuries. The following players **must** see a medical doctor experienced in sports concussion management;

- ≥ 2 concussions in 12 months.
- Multiple concussions over their playing career.
- Concussions occurring with less collision force.
- Concussion symptoms lasting longer than expected i.e. a few days.

ARU CONCUSSION GUIDANCE SUMMARY

**RECOGNISE and REMOVE**

Any player suspected or recognised with concussion **must** be removed from training and playing and **not** return to rugby or other sport or physical activity on the same day.

**REFER**

Any player suspected or recognised with concussion **must** see a medical doctor as soon as possible.

**REST**

Players diagnosed with concussion **must** rest completely until all signs and symptoms of concussion have disappeared.
RECOVER
The concussed player must first recover from all concussion signs and symptoms at rest and return to activities of normal daily living before starting exercise.

RETURN
Follow the graduated return to play (GRTP) protocol

✓ Start light exercise (Stage 2) when given clearance by a medical doctor.
✓ Progress through the GRTP without any symptoms or signs recurring.
✓ Start contact training (Stage 5) after receiving a medical certificate from a medical doctor.
✓ This should be in accordance with the IRB guidance recommendation around return to contact training i.e. players 18 years and under diagnosed with concussion cannot return to contact training or playing for at least 2 weeks (14 days) after all concussion signs and symptoms have disappeared.
✓ Return to playing rugby only when you have followed the IRB guidance recommendation around contact training AND fully recovered from concussion (no concussion signs or symptoms at rest, in your normal daily activities, during exercise and contact training).

For more information and resources visit www.rugby.com.au/concussion.