

NZPCA CONCUSSION

CONCUSSION STATEMENT AND PROCEDURE

INTRODUCTION

Over recent years there has been elevated public awareness of sport-related concussion and increased focus on the importance of diagnosing and managing the condition promptly, safely and appropriately.

“Falling from horse” are one of NZPCA biggest hazards; falls also represent a large percentage of the 350 cases of head injuries reported to ACC last year in relation to horse riding. It is also suspected that only about half of concussion cases are reported and with the potentially serious and long-term consequences of concussion, it is imperative that we take some action.

DEFINITION

Concussion is a type of brain injury, induced by a force to the head or anywhere on the body, which transmits an impulsive force to the head. It commonly causes short-lived neurological impairment and the symptoms may evolve over the hours and days following the injury. (4)

CONSEQUENCES OF CONCUSSION

Short term

Short term consequences can include physical, physiological and mental issues. Patients with a concussion can have headaches, poor cognition, poor coordination, reduced physical performance and alteration of mood (more specifically depression). People who have had a concussion in other sports are 8 times as likely to suffer a significant musculoskeletal injury within that game if they continue to play, and over the next six months have a 40% increased risk of musculoskeletal injury compared to a non-concussed cohort.(5)

Long term

There is no direct evidence of long term deficits following exposure to concussion in cricket. However, recent research into the long term consequence of Traumatic Brain Injury (TBI) has suggested that profound neurodegenerative changes may be a consequence of repeated moderate TBI such as those seen in boxing and traumatic / contact sports including Rugby, often referred to as Chronic Traumatic Encephalopathy.(5)

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WHY WE NEED CONCUSSION GUIDELINES

- Concussion is a serious injury that occurs frequently and can have serious both short and long term consequences.
- Estimated 35,000 head injuries in New Zealand per year.
- 21% (7,350 injuries per year) of all head injuries in New Zealand are sustained through sport related activity. ACC only receive claims for 6,250 of those sports related concussion injuries suggesting that 1,100 currently go untreated. (1)
- 2009-2013 sports related concussion claims cost ACC \$76 million.
- 46% (3,381 injuries per year) of sports head injuries are classified as 'mild with a high risk of complications'. Injuries are most frequently sustained during rugby, cycling and equestrian activities.(1)
- 11% of sports related concussion claimants had multiple concussions within a 2-year period (2009-2013). (1)
- Evidence shows that with repeat concussions people may experience a decline in general health and quality of life up to 10 years following injury. (2)

AIM:

The welfare of riders, volunteers, contractors and spectators at NZPCA events is of the utmost importance to us. We want to ensure that all head knocks received at NZPCA events are treated in a knowledgeable way to reduce the incidents of a serious brain injury being missed.

RECOGNITION OF CONCUSSION

Recognising concussion is crucial for the correct management and prevention of further injury. It can present with a range of signs and/or symptoms that may or may not include loss of consciousness (3). It is important to remember that not every sign and symptom will be present in every case and signs and symptoms may have delayed onset.

Physical Signs (what you see) If any of the following symptoms appear, concussion may be present.

- Loss of consciousness or non-responsive
- Loss of balance/coordination
- Disorientation/Confusion
- Vomiting
- Lying on the ground not moving or slow to get up
- Visible injury to face or head (especially in combination with any other signs)
- Seizure or convulsion

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Clinical signs (What they feel) If any of the following symptoms appear, concussion may be present.

- Blurred vision
- Neck pain
- Nausea
- Dizziness
- Confusion
- Headache/pressure in the head
- Sensitivity to light &/or noise
- Generally feeling “not quite right”
- Fatigue
- More emotional
- Irritability
- Problems with memory
- Reduced ability to think/concentration

Memory (what they say) Failure to answer any of these questions correctly may suggest a concussion

- What venue are we at today?
- What activity were you doing?
- Is it before or after lunch?
- When was your last competition/rally?
- What is your pony's name?
- What month of the year are we in?

RED FLAGS (WHAT REQUIRES HOSPITALISATION)

If no qualified medical professional is available, consider transporting by ambulance for urgent medical assessment.

- Rider complains of neck pain
- Increasing confusion or irritability
- Repeated vomiting
- Seizure or convulsion
- Weakness or tingling/burning in arms or legs
- Deteriorating conscious state
- Severe or increasing headache
- Double vision
- Unusual behaviour change

A rider must not be allowed to remount after a fall if there is any element of doubt as to their fitness, irrespective of the wishes of their parents or coach. Any rider with a

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suspected concussion should be IMMEDIATELY REMOVED from participating in the activity and should not return until they are assessed medically. A rider must not compete or participate in mounted Pony Club events or activities for a minimum of twenty - one (21) days following a concussion, without a doctor's written clearance.

Ensure they are monitored and have a 'buddy' who will make sure they are not left alone or drive for four hours post incident and to assist them home safely for family to monitor.

Within the first 24hrs any concussed rider must get urgent medical treatment if they show signs of:

- Worsening headache.
- Increased drowsiness or can't be woken up.
- Vomiting
- Increased confusion or agitation
- Weakness in any limbs
- Slurred speech
- Loss of consciousness or seizure

PROCEDURE: 4Rs

If a rider has a fall or suspected head injury they should be removed from the activity and assessed using the concussion card. These should be held by all first aiders at competitions and rallies.

Recognise: Both the immediate and delayed presentation of concussion can be difficult to assess and symptoms can be subtle, so a conservative approach should be taken.

If any one of the physical or clinical signs are present, if they get one of the memory questions incorrect or a Red Flag, then the rider must be removed from the activity and a Green Card must be given. If no physical, clinical or red flags are present and all memory questions answered correctly then rider can resume activity.

Resuscitate: Any red flags or immediate concerns regarding the level of consciousness and/or severity of injury, demands immediate resuscitation with appropriate first aid, emergency care and request for assistance. Remember in all cases, the basic principles of first aid (danger, response, airway, breathing, circulation) should be followed. Do not attempt to move the rider (other than required for airway support) unless trained to do so and do not remove helmet unless trained to do so.

Remove: If concussion is suspected, a "Green Card" must be given. A Green Card means that a rider is stood down from all riding and other Pony Club activities until clearance from a suitable qualified medical person can be obtained. This along with concussion advice must be relayed personally to the Parent / Guardian of the competitor in a verbal form. This must accompany the "Green Card" and care must be taken to ensure that the Parent / Guardian fully understands.

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A rider is not to be left alone for four hours post incident; a buddy must be found to stay with them until a parent/guardian found.

Replace: Any fall that sustains a head injury or concussion requires the riders helmet to be replaced.

Responsibilities:

Event/Rally convenor: To ensure that Concussion Procedure is understood and “Concussion Cards” and “Green Cards” are available and easily accessible by all that may require them such as Coaches and first aiders. Record the fall on an NZPCA fall report and send to NZPCA Head Office so that the rider’s injury can be recorded and the rider tracked.

Coaches/First Aiders: Understand the concussion procedure and where to access “Concussion Cards” and “Green Cards”

Riders/caregivers: If you have received a head knock it is your responsibility to let officials know. If you have received a “Green Card” it is in your best interest and your responsibility to seek medical clearance.

“Maddocks score” is a set of questions that are widely recognised as a reliable side-line diagnosis of concussion.

Maddock questions (modified for equestrian) have been used for the memory part of the recognising concussion.

ACC provide pocket concussion cards and other useful information at the website below:

<https://accsportsmart.co.nz/home/resources/>

References

- (1) ACC National Guidelines: Sport Concussion in New Zealand, May 2016
- (2) Zumstein MA, et al. Long-term outcome in patients with mild TBI: A prospective observational study. Journal of Trauma and Acute Care Surgery. 2011
- (3) McCrory P, Meeuwisse WH, Aubry M et al. Consensus statement on concussion in sport: The 4th International Conference on Concussion in Sport held in Zurich, November 2012. British Journal of Sports Medicine. 2013
- (4) Elkington Lisa DR, Hughs David DR. Australian Institute of sport and Australian medical association concussion in sports statement, December 2016
- (5) ECB UK health and safety Science and medicine department, Head Injury & Concussion Guidelines 2015
- (6) pcuk.org/uploads/dcs/Health_Safety_Safeguarding_Rules.