

POLICY NAME | **Equestrian Sports New Zealand Concussion Awareness Policy – 2024
Version 3**

BACKGROUND

The purpose of this document is to provide:

1. an increased awareness of concussion in of those involved in equestrian sports – riders, officials, coaches, supporters and their families
2. guidance on the identification and management of concussion to those involved in Equestrian Sports in New Zealand.

The guideline applies to those involved in community, non-elite or grassroots sport, where there is minimal and often delayed access to medical support. This will be applicable to the majority of riders.

For elite sport – refer to HPSNZ Standard Operating Procedures for the Clinical Management of Concussion.

This summary is prepared specifically for the New Zealand Equestrian Sports public and is not a medical document. It reflects the Sport Concussion in New Zealand ACC National Guideline (2023) which was developed by an ACC led expert advisory group (including membership from ACC Sport Injury prevention and Principle clinical advice, NZ Football, Netball NZ, NZ Rugby League, NZ Rugby and Equestrian NZ) and is based on the best practice guidelines developed at the 6th International Conference in Concussion in Sport held in Amsterdam in 2022 . Refer Appendix 1.

This guideline primarily pertains to adults and whilst the principles of the document may be applied to children and adolescents, we would advise that all riders of this age group with suspected concussion be assessed by a medical professional (doctor).

Concussion (and rider welfare in general) is everyone’s responsibility. Riders, parents, coaches and officials need to act in the best interest of rider safety and welfare by taking responsibility for the **recognition, removal** and **referral** of riders to a medical doctor. They should then ensure that concussion is appropriately managed as per these guidelines.

It is acknowledged that concussion knowledge is evolving, and more research is required to identify both the short and long term consequences of this brain injury. This policy is based on the current best practice guidelines and will be reviewed every year in line with international consensus statements.

Guideline Summary:

- **Recognise and Remove.** If concussion is suspected, remove the rider from activity immediately.
- **Refer** the rider for assessment by the on-site event designated First Aider and seek an urgent assessment by a medical professional (from general practice or primary care team).
- Concussions often occur without loss of consciousness (‘knocked out’).
- Extra caution is required for child, adolescent and female athletes.
- It may take several hours (or even days) post injury for some or all of the symptoms of concussion to emerge



- Non-medical personnel have an important role to play in recognising the signs and symptoms of concussion
- Concussion can present in a similar manner to other catastrophic conditions with delayed onset of symptoms
- A medical professional (from general practice or primary care team) must provide assessment for confirmation or exclusion of a concussion and consideration of other diagnoses.
- No rider should return to sport/activity on the day of a suspected or confirmed concussive injury.
- The effects of concussion can interfere with the rider's ability to learn in the classroom or to function well at work. Return to school/work may need to be graduated and demands altered to reflect level of function, guided by a medical practitioner experienced in this area. Return to school/work and social activities should be achieved before return to riding.
- Stage 5 of the graduated return to sport summary can commence **only if the rider has been symptom free at rest for a minimum of 14 days** and has fully reintegrated back into work/education.
- **Full return to sports competition should be no earlier than Day 21 post-injury** (Day 0 = day of the injury) AND it is strongly recommended that the rider has been medically cleared to return to riding during that final week AND has remained asymptomatic during a graduated return to education/work and sports/riding training process.
- Refer Appendix 4 for graduated return education/work and sport summary.

PURPOSE

The purpose of this Equestrian Sports New Zealand (ESNZ) Concussion Awareness Policy is to:

- a) Increase awareness of concussion within the equestrian community and its supporters
- b) Provide guiding principles and general advice regarding the management of concussion in competitions; and
- c) Increase awareness and behaviour change for the process by which a rider may continue to participate or return to riding, following involvement in an incident which requires assessment as to whether a suspected concussion has occurred. This process is the responsibility of everyone, not just ESNZ.

Equestrian Sports New Zealand (ESNZ) has adopted the ACC National Sports Concussion guidance on safe return to Sport. This has been informed by the Consensus Statement on Concussion in Sport: The 6th International Conference on Concussion in Sport, held in Amsterdam, October 2022. Refer Appendix 1.

"With respect to the assessment of concussion, the advice contained within this Concussion Policy is of a general nature only. Individual treatment will depend on the facts and circumstances specific to each individual case. This Concussion Policy is not intended as a standard of care and should not be interpreted as such."

POLICY

This Concussion Policy will be reviewed annually by ESNZ and will be modified according to the development of new knowledge.

The Equestrian Sports New Zealand (ESNZ) Concussion Awareness Policy

The Equestrian Sports New Zealand (ESNZ) Concussion & Awareness Policy:

- a) Applies to; Area Groups, Clubs, Riders, Coaches and Officials;
- b) Applies to all Events;
- c) Forms part of the ESNZ statutes to which all competition participants are bound;
- d) Does not limit or restrict the application of ESNZ Statutes and, in particular, the code of conduct for behaviour or conduct of a club, rider or official; and
- e) May be supplemented or varied from time to time by ESNZ.

Riders should be educated on the signs and symptoms of concussion and encouraged to be honest with medical staff and report any new symptoms as they develop.

Definition

Concussion is a brain injury and is defined as “a traumatic brain injury caused by a direct blow to the head, neck or body resulting in an impulsive force being transmitted to the brain that occurs in sports and exercise-related activities. This initiates a neurotransmitter and metabolic cascade, with possible axonal injury, blood flow change and inflammation affecting the brain. Symptoms and signs may present immediately, or evolve over minutes or hours, and commonly resolve within days, by may be prolonged”

Patricios, JS et al. (2023) Consensus statement on concussion in sport: The 6th International Conference on Concussion in Sport held in Amsterdam, October 2022. British Journal of Sports Medicine, 57(5), 695-711.

More simply, a concussion may be defined as a transient alteration in the mental state of the rider that may, or may not, result in a loss of consciousness and which may or may not be clear to the person and their whanau.

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There are several features that are important to highlight. These are:

- a) A concussion is not always caused by a blow to the head. It may be caused by a direct blow to the head, face, neck, or elsewhere on the body with an ‘impulsive’ force transmitted to the head.
- b) A rider does not need to be knocked out to have sustained a concussion. Only approximately 10% of concussions present with a loss of consciousness.
- c) A concussion typically results in the rapid onset of short-lived impairment of neurological function that resolves spontaneously.
- d) Concussion can be difficult to diagnose. Whenever a rider has an injury to the head and becomes confused or acts abnormally or they lose consciousness, even for a few seconds, they have been concussed.



SIGNS OF CONCUSSION

Recognise, Remove & Refer

When a concussion, or possible concussion, occurs it is important to take action and to get help. The most important steps in the early identification of concussion are to recognise a possible injury and remove the participant from the sport/activity.

Non-medical personnel have an important role in observing possible concussion and its effects (e.g. behaviour/symptoms) and should take responsibility for removing the injured rider from the sport/activity.

Immediate Visual Indicators of Concussion Include:

- a) Loss of consciousness or responsiveness;
- b) Lying motionless on the ground/slow to get up;
- c) A dazed, stunned, blank or vacant expression;
- d) Appears confused or disorientated
- e) Appearing unsteady on feet, balance problems or falling over;
- f) Grabbing or clutching of the head; or
- g) Impact seizure or convulsion.

Concussion Can Include One or More of the Following Symptoms:

- a) Symptoms; Headache, dizziness, 'feeling in a fog', noise or light sensitive, nausea +/- vomiting
- b) Behavioural changes; Inappropriate emotions, irritability, feeling nervous or anxious.
- c) Cognitive impairment; Slowed reaction times, confusion/disorientation - not aware of location or event, poor attention and concentration, loss of memory for events up to and/or after the concussion.
- d) Balance problems including dizziness, light headedness or vertigo
- e) Blurred or double vision

The Concussion Recognition Tool 6 (CRT 6) or the ACC SportSmart Concussion Card (Appendix 2) may be used to help identify a suspected concussion. These tools are for non- medical personnel to assist with recognition of a suspected concussion and should not be used to 'clear' people to return to riding that day.

The Unconscious Athlete

If the rider is injured and / or unconscious apply first aid principles.

- DRSABC (Danger, Response, Send for Help, Airway, Breathing, Circulation).
- Treat all unconscious riders as though they have a spinal injury
- An unconscious rider must ONLY be moved by personnel trained in spinal immobilisation techniques.
- Do not remove the rider's helmet until trained personnel are present.
- Urgent hospital care is necessary if there is concern regarding the risk of structural head or neck injury – call 111.

Red Flags – Seek urgent medical help

Seek URGENT medical help (either go to A&E or call 111 for an ambulance) if a rider has any of the following:

- Loss of consciousness or seizures
- Increasing confusion or irritability
- Severe or increasing headache
- Repeated vomiting
- Unusual behaviour change
- Double vision
- Deterioration after being injured – increased drowsiness, headache or vomiting
- Report of neck pain or spinal cord symptoms – numbness, tingling, muscle weakness.
- If the injured person is under the age of 20.
- Personal medical history of bleeding disorder / clotting disorder
- Personal history of regular medication use that could result in prolonged bleeding (e.g. Warfarin, Aspirin)
- Anyone who has inadequate supervision post-injury
- Visible skull deformity

If at any time there is any doubt the rider should be referred to hospital for an immediate assessment.

All other riders who have been withdrawn from competition due to a suspected concussion are advised to seek medical review by a qualified medical professional (from general practice or primary care team) as soon as possible to confirm diagnosis.

Remove From Further Competition/Riding

A rider should never return to riding on the day of a suspected or confirmed concussive injury.

It is the policy of Equestrian Sports NZ (ESNZ) that all riders whom are suspected of having sustained a concussion during an event be assessed by the on-site First Aider. Those whom should be assessed include:

1. Falls from the horse where the rider DOES NOT land on his or her feet
2. Symptoms consistent with a possible concussion (see above)
3. Physical signs consistent with a possible concussion (see above)

The on-site First Aider will complete an Incident Report Form for any suspected or confirmed concussion and will lodge this with Equestrian Sports NZ (ESNZ). All riders whom have such a form lodged to Equestrian Sports NZ (ESNZ) will need to provide medical evidence prior to being eligible to ride in future competitions of either:

1. A confirmed clinical recovery after completing a graduated return to riding (see below) from their concussion
2. Or no concussion from the initial injury

Should a disagreement arise between the rider and First Aider regarding whether a concussion has occurred or not, and therefore the ability to

continue to ride in the event, the Ground Jury will provide an independent opinion as to the suitability of continued participation as per Equestrian Sports NZ (ESNZ) General Regulation Article 150.7 listed below.

“The Ground Jury may, at any time, exclude from further participation in a Competition or an entire Event any Athlete who is unfit to continue by reason of a serious or potentially serious injury, impairment, or health condition. Medical clearance, to compete again, must be given by a registered GP or registered medical specialist.”

A rider with a suspected or confirmed concussion should be immediately removed from training or an event, and should not be returned to activity until they are assessed by a qualified medical doctor.

Riders with a suspected concussion should not be left alone, should not drive a motor vehicle and should not consume alcohol. The rider **MUST** also be in the care of a responsible person who is aware of the concussion.

Only qualified medical practitioners (from general practice or primary care) should diagnose whether a concussion has occurred, or provide advice as to whether the rider can return to riding. All riders should be referred for a medical assessment.

It is suggested that all clubs/events have a list of local medical doctors, concussion clinics and emergency departments close to where the event is being held.

A pre-activity checklist of the appropriate services could include:

- Local doctors or medical centre
- Local hospital emergency department
- Ambulance services (111).

Medical Assessment

Any rider who is suspected of having sustained a concussion should be reviewed by the designated on-site First Aider at the event initially. The rider will then be referred for immediate medical review (as per the Red Flags above) or have an assessment from a medical professional (from general practice or primary care team) post-event.

A qualified medical professional (from general practice or primary care team) should:

- a) Diagnose whether a concussion has occurred – based on clinical judgement;
- b) Evaluate the injured rider for concussion using SCAT5 (or SCAT5 Child for those under the age of 12 years) or similar tool;
- c) Advise the rider as to medical management;
- d) Advise the rider as to when it is appropriate to begin a Graduated Return to Riding Program (refer Appendix 1 of this Concussion Policy for Graduated Return to Riding Guidelines);
- e) Clear the rider to return to play following the Graduated Return to Riding Program, as detailed in this Concussion Policy.

The Sport Concussion Assessment Tool Version 6 (SCAT-6) and the Child-SCAT 6 (ages 8 – 12yrs) are the most up to date tools for health care professionals in assessing a

potential sports related concussion. These are most valid for use up to 3 days post injury. The Sport Concussion Office Assessment Tool Version 6 (SCOAT-6) is a further tool for evaluating concussion in a controlled clinic environment by healthcare professionals used between 3 – 30 days following a sports related concussion. Refer Appendix four.

It is recommended that riders, coaches and officials become familiar with the symptoms outlined in the CRT 6, they are very similar to those symptoms evaluated in the SCAT-6.

The SCAT-6 is NOT to be used for diagnosis of concussion alone. It provides a standardised assessment to aid diagnosis by a medical professional (doctor).

The Brain Injury Screening Tool (BIST) is another concussion tool that can be used on initial presentation after injury and to monitor symptoms and recovery over time (Refer Appendix four).

Recovery

The majority (80%) of concussions resolve within 4 weeks. Some riders will have more long-lasting symptoms. The recovery time frame may be longer in children and adolescents. As a result the return to riding process should be more conservative for children and adolescents. It should be stressed that there is no arbitrary time for recovery and that decisions regarding a return to riding need to be individualised.

When symptoms are prolonged (eg. >4 weeks) or graduated activity has not been tolerated, the rider should have further evaluation by a medical professional and/or a concussion specialist.

It is suggested that any rider who has sustained multiple concussions (defined as ≥ 3 in one season or >5 during their riding career) have a review from a clinician with expertise in managing sports-related concussion (for example a Sport and Exercise Medicine Physician, Neurologist, or Neuropsychologist) before returning to riding.

Return to education/work and Riding

Following clearance from a qualified medical professional (from general practice or primary care team), the rider should commence and progress through a **Graduated Return To Riding Program (Appendix 5)** under the supervision of an appropriately qualified healthcare professional (e.g. physiotherapist, occupational therapist).

A conservative approach to return to sport is recommended for adoption across sports codes in New Zealand and return to activity should be more cautious with children and adolescents.

Recovery times are difficult to predict from an initial presentation.

Typical management involves the following process, with a minimum of 24 hours between stages before progressing, providing symptoms are not exacerbated with



each increasing level. The rider should generally be improving symptomatically as they progress through the recovery Stages 2-4 and if not then progression should be at a slower rate:

- Stage 1: physical and cognitive rest for 48 hours (including reduced electronic screen use).
- Stage 2-4: initiating a graduated programme of controlled physical and cognitive activity (which does not worsen existing symptoms). This should form part of a treatment plan under supervision.
- Stage 5: commence return to full training. The following factors must be satisfied for a return to full return to training:
 - i. The rider has returned to full time work or learning
 - ii. The rider is symptom free at rest for a minimum of 14 days
 - iii. The rider has completed up to and including Stage 4
- Stage 6: return to competitive sport – the following factors must be satisfied for a return to competitive sport:
 - i. The rider remains symptom free at rest during Stage 5
 - ii. A minimum of 21 days post-injury has occurred
 - iii. The rider has received medical clearance from a qualified medical professional (from general practice or primary care team).
- If symptoms occur or worsen during any stage, then the rider should rest for 24hrs and then recommence the process starting at the stage below the one that caused or worsened symptoms.

Stage 5 cannot be commenced prior to being symptom free at rest for a minimum of 14 days

Symptoms are the single best determinant for monitoring concussion throughout the recovery process.

The following points are important considerations:

- Symptoms are the single best determinant for monitoring concussion. Riders should be encouraged to report symptoms.
- Team-mates, coaches, supporters and parents should all be encouraged to report if a rider has symptoms. This is everyone's responsibility.
- If concussion symptoms return or are exacerbated at any stage of the rider's return to riding/competing, the rider must inform the managing medical professional of their symptoms and rest a minimum of 24 hours before resuming the level of activity where symptoms worsened.
- Return to activity should be particularly cautious where children and adolescents are concerned.
- The safety of the rider is the priority and must NOT be compromised.
- The decision regarding the timing of return to riding should always be made by a qualified medical professional (from general practice or primary care team doctor).

NOTE that ALL riders must be wearing a helmet when riding. Helmets do not prevent concussions, they help minimize head fractures or abrasions.

Clearance by a medical professional (from general practice or primary care team) is required before return to equestrian sports.

Enforcement

These guidelines reflect best practice in the management of concussion in an equestrian sports context. It is everyone's responsibility to ensure that they are applied. Riders, coaches, officials and clubs are encouraged to promote these guidelines and to ensure that they are applied appropriately.

Legal Disclaimer

The information presented is of a general nature and is not a substitute for professional, medical or legal advice. Equestrian Sports New Zealand (ESNZ) and its Federations, Clubs and their employees, agents and other associates (including riders and officials) disclaim all liability or responsibility for any actions undertaken by any person on reliance on any information provided herein.

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Appendices

The following resources provide useful further information regarding sports concussion. It is suggested that they are used and referred to.

Appendix One

Recommended reading:

Feigin, V, Theadom, A. et al (2013). Incidence of traumatic brain injury in New Zealand: A population-based study. *The Lancet Neurology*, 12(1), 53-64.

Theadom, A, Starkey, N, Dowell, A, Hume, P, Kahan, M, McPherson, K, & Feigin, V. (2014). Sports related brain injury in the general population: An epidemiological study. *Journal of Science and Medicine in Sport*, 17(6), 591-596. doi: 10.1016/j.jsams.2014.02.001.

Patricios, JS. et al. (2023) Consensus statement on concussion in sport: The 6th International Conference on Concussion in Sport held in Amsterdam, October 2022. *British Journal of Sports Medicine*, 57(5), 695-711.

Theadom, A, Parag, V, Dowell, T, McPherson, K, Starkey, N. & et al. (2014). Persistent problems one year following traumatic brain injury within a population based incidence and outcomes study.

Kara, S, Crosswell, H, Forch, K, Cavadino, A, McGeown, J and Fulcher, M. (2020), Less than half of patients recover within 2 weeks of injury after a sports related mild traumatic brain injury: A 2 year prospective study. *Clinical Journal of Sports Medicine*, 30(2), 96-101.

UK Government (April 2023) *UK Concussion Guidelines for Non-Elite (Grassroots) Sport*.

Appendix Two

Consensus Statement on Concussion in Sport:

Patricios, JS et al. (2023) Consensus statement on concussion in sport: The 6th International Conference on Concussion in Sport held in Amsterdam, October 2022. British Journal of Sports Medicine, 57(5), 695-711.

This article can be found here - <https://bjsm.bmj.com/content/57/11/695>

Sport Concussion in New Zealand. ACC National Guidelines 2023:

Found here:

http://www.acc.co.nz/PRD_EXT_CSMP/groups/external_communications/documents/reference_tools/wpc136118.pdf

Appendix Three

1. The Concussion Recognition Tool 6 (CRT 6). A printable PDF of the pocket CRT can be downloaded at:

<https://bjsm.bmj.com/content/57/11/692>

2. The ACC SportSmart Concussion Wallet Card:

<https://accsportsmart.co.nz/assets/Uploads/files/Sportsmart-Concussion-card.pdf>

Appendix Four

1. SCAT6 – Sport Concussion Assessment Tool – 6th Edition, found here:

<https://bjsm.bmj.com/content/57/11/622>

2. Child-SCAT6- Sport Concussion Assessment Tool (for children ages 5-12 years), found here:

<https://dx.doi.org/10.1136/bjsports-2023-106982>

3. SCOAT6 – Sport Concussion Office Assessment Tool

<https://dx.doi.org/10.1136/bjsports-2023-106859>

4. BIST – Brain Injury Screening Tool

<https://tbin.aut.ac.nz/support-and-resources/brain-injury-screening-tool-bist>

https://tbin.aut.ac.nz/data/assets/pdf_file/0006/448593/37827_AUT-TBI-Network-BIST-Tool_v2.pdf

Appendix Five

Day 0 = Day of the injury/concussion

GRADUATED RETURN TO EDUCATION/WORK & SPORT PROTOCOL

STAGE 1	Days 1 - 2		Relative Rest for 24-48 hours (i.e light activities of daily living that do not provoke symptoms are ok) <ul style="list-style-type: none"> Minimize screen time Gentle exercise (i.e. walking around the house)
STAGE 2		<p><i>Minimum of 24 hours between stages before progressing</i></p> <p>Symptoms should be progressively <i>improving</i>.</p> <p>If symptoms worsen drop back a stage.</p>	Gradually introduce daily activities <ul style="list-style-type: none"> Activities away from school/work (introduce TV, increase reading, games etc) Exercise – light physical activity (e.g. short walks outside)
STAGE 3	Days 2 – 13		Increase tolerance for mental & exercise activities <ul style="list-style-type: none"> Increase study/work-related activities with rest periods Increase intensity of exercise guided by symptoms
STAGE 4			Return to work/study & sport training <ul style="list-style-type: none"> Part time return to work/education Start training activity without risk of head impact
STAGE 5	Earliest Day 14		Return to normal work/study & sport-specific training <ul style="list-style-type: none"> Completion of Stages 1- 4 AND Fully reintegrated into work or school AND Symptom free at rest AND ≥ Day 14 post-injury → reintegration into full sport-specific training can occur
STAGE 6	Earliest Day 21		Return to sports competition <ul style="list-style-type: none"> Completion of Stage 5 AND Symptom free during sports training AND ≥ Day 21 post-injury AND it is strongly recommended that the rider has received medical clearance from a qualified medical professional (from general practice or primary care team).