

## NEW ZEALAND THOROUGHBRED RACING

# POLICY ON CONCUSSION MANAGEMENT, NEUROPSYCHOLOGY TESTING AND THE RETURN TO RIDING FOLLOWING A CONCUSSION.

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Approved by: NZTR Medical Officer

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This Policy has been developed for NZTR in consultation with the following concussion specialists:

**Proactive Rehab Concussion Service**

**Dr Margaret Parle NZTR Medical Officer**

*Note:*

*Medical Doctors/Nurse Practitioners at Te Whatu Ora or Accident and Medical Clinics have significantly more experience than a GP in diagnosis and management of Concussion/mTBI or Traumatic Brain Injury. GPs are excluded from the acute assessment of Concussion in this policy.*

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## **1. Introduction**

NZTR recognises the importance of and has responsibilities for the health, safety and wellbeing of the jockeys who ride under its jurisdiction. It recognises concussion as an important risk in the sport and this Policy provides the framework for how this will be managed.

## **2. What is Concussion**

Concussion is a term used to describe a mild traumatic brain injury (mTBI) that is caused by forces transmitted to the brain following a direct blow to the head, or a blow to another part of the body that results in rapid movement of the head such as with a whiplash effect. This results in a disturbance of brain function via a number of potential mechanisms.

These mechanisms include a temporary disturbance of brain physiology and possibly blood flow mismatch causing an energy crisis, abnormal neuronal depolarization with or without microscopic damage to neurons, and a post-injury inflammatory reaction. There can also be associated injuries to other parts of the head and neck that cause concussion-like symptoms

## **3. Baseline Neurocognitive Testing**

3.1. Applications for the following licences shall not be granted unless the applicant has successfully completed a baseline neurocognitive test:

3.1.1. Probationer's Licence.

3.1.2. Apprentice Jockey's Licence.

3.1.3. Jockey's Licence.

3.1.4. Amateur Rider's Licence.

3.1.5. Jumps Rider's Licence.

A holder of any of the above Licences is referred to as a "Rider" in this document.

3.2. The baseline neurocognitive test must be performed by the person making the application for a licence.

3.3. The baseline neurocognitive test must be performed to the person's best ability at the time of the test.

3.4. The baseline neurocognitive test will be performed under controlled and supervised conditions, limiting high noise levels and distractions.

3.5. It is an offence for any person to submit a baseline neurocognitive test which they did not perform themselves or which was not performed to their best ability.

3.6. Baseline neurocognitive tests must be performed by holders of all licences referred to in 3.1.1 to 3.1.5 at intervals as determined by NZTR, but not within 6 months of each test.

## **4. Management of Suspected Concussions.**

4.1. All suspected concussions suffered by a person who holds any Rider's Licence are to be managed in accordance with this Policy irrespective of how or where they occurred.

4.2. A Rider who experiences any incident which could cause concussion must be assessed by a suitably trained person (as determined by NZTR) before riding in any further races.

- 4.3. The Stewards may, at any time and on reasonable grounds, prohibit a Rider from mounting or riding any horse, or participating in a Trial or a Race, until the Rider has been assessed for concussion.
- 4.4. Incidents which could cause concussion include (but are not limited to) any blow to the head, a fall whilst riding a horse, sudden acceleration or deceleration of the head, being kicked or stood on by a horse, hitting head in the starting gates, horse striking riders head with its head, vehicle accidents, falls from a height or blows to the head whilst participating on other sports.
- 4.5. Where a Rider is assessed to have a concussion, or suspected concussion, the Rider is automatically prohibited from riding and must immediately go to a Medical Emergency Department (Local A&M, Te Whatu Ora Emergency Department) to be reviewed by an Emergency Trauma Doctor.
- 4.6. A Rider who attends a Medical Emergency Department as a result being assessed with a concussion or suspected concussion, must comply with all advice, instructions and recommendations made by the attending doctor.
- 4.7. The Rider must ensure that the attending doctor at the Medical Emergency Department completes and signs the NZTR Brain Injury/Concussion Assessment Form (M2). A copy of the form must be provided to the NZTR Medical Officer.
- 4.8. Where a concussion is confirmed by a Medical Emergency Department, the Rider is automatically prohibited from riding in races for a minimum of 12 days and thereafter, until they have been cleared to ride by the NZTR Medical Officer.
- 4.9. A Rider who fails to attend a Medical Emergency Department within 12 hours of the incident must comply with the Recovery and return to Riding process set out in section 7.
- 4.10. A Rider who is diagnosed with a concussion must manage their concussion in accordance with this Policy.

## **5. Falls at Racemeetings and Trials.**

- 5.1. A Rider who falls from a horse during a Race or Trial or any time after the finish of the Race or Trial until the horse has been pulled up, is automatically stood down from riding in the following race if they were carded to ride in it, and thereafter until they have been assessed by the paramedic on duty.
- 5.2. The Stewards may order any Rider who suffers any incident which, in the opinion of the Stewards may have caused a concussion, to be assessed for concussion by the paramedic on duty. The Rider must not participate in any further races until the assessment has been completed.
- 5.3. A Rider who is taken to hospital because of a fall during or after, a Race or Trial, must be assessed for concussion by a medical doctor as soon as is practicable. The Rider must ensure that the doctor conducting the assessment completes and signs the NZTR Brain Injury/Concussion Assessment Form (M2). A copy of the form must be provided to the NZTR Medical Officer.
- 5.4. Where a Rider is assessed by the paramedic to have a concussion, or suspected concussion, the Rider is automatically prohibited from riding in any further races on that day and **must immediately go to a Medical Emergency Department.****
- 5.5. A Rider who attends a Medical Emergency Department as a result being assessed with a concussion or suspected concussion, must comply with all advice, instructions and recommendations made by the attending doctor.

- 5.6. The Rider must ensure that the attending doctor at the Medical Emergency Department completes and signs the NZTR Brain Injury/Concussion Assessment Form (M2). A copy of the form must be provided to the NZTR Medical Officer.
- 5.7. Where a concussion is confirmed by a Medical Emergency Department, the Rider is automatically prohibited from riding in races for a minimum of 12 days and thereafter, until cleared to ride by the NZTR Medical Officer.
- 5.8. A Rider who fails to attend a Medical Emergency Department within 12 hours of the fall is automatically stood down for 12 days and thereafter until cleared by the NZTR Medical Officer. The Rider must comply with the Recovery and return to Riding process set out in section 7.
- 5.9. A Rider who fails to obtain a Brain Injury/Concussion Assessment Form as required in 5.3, must not ride a horse for 12 days and thereafter until having completed the relevant neurocognitive and physiotherapy assessments and cleared by a Medical Physician, at their own expense.

## **6. Reporting of Confirmed or Suspected Concussions.**

- 6.1. All Riders who are assessed by a paramedic after a fall must obtain a completed “St John On-site Concussion Screening Form” which must be presented to the Stewards.
- 6.2. The Stewards must send a copy of the “St John On-site Concussion Screening Form” to the NZTR Medical Officer and to the NZTR Licensing department.
- 6.3. The NZTR Medical Officer will review the “St John On-site Concussion Form” and may, if satisfied that a concussion may have been sustained, issue the necessary ACC 883 forms .
- 6.4. Riders who attend a Medical Emergency Department as required by this policy must send a copy of the NZTR Brain Injury/Concussion Assessment Form (M2) to the NZTR Medical Officer.
- 6.5. If a concussion is suspected but not confirmed, the injury will be assessed and treated as though a concussion has been sustained.

## **7. Recovery and Return to Riding**

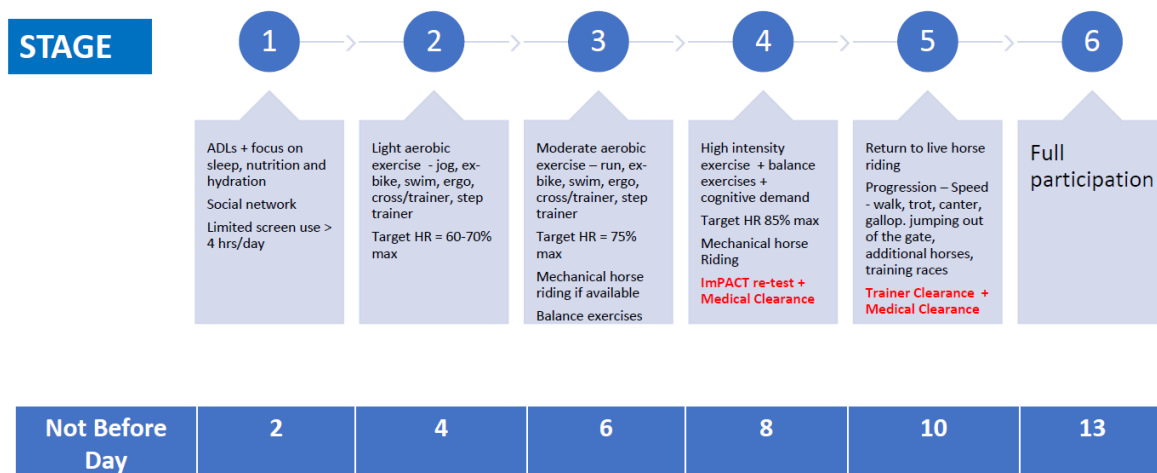
- 7.1. A Rider who is diagnosed with a concussion, must not ride in Races or Trials for at least 12 days and thereafter until cleared fit to ride by the NZTR Medical Officer.
- 7.2. A Rider who is assessed to have a concussion must:
  - 7.2.1. Not do any strenuous activity or exert themselves physically for at least 48 hours following the concussion incident.
  - 7.2.2. Engage with the NZTR concussion management provider. You will be contacted to arrange an appointment.
  - 7.2.3. Complete an initial assessment by an ACC concussion keyworker between the second and fourth day after the concussion incident.
  - 7.2.4. Complete a physiotherapy assessment, including a VOMS test, Balance test and a Buffalo Treadmill test, after the 9<sup>th</sup> day following the concussion incident.

- 7.2.5. Complete neurocognitive test after the 9<sup>th</sup> day following the concussion incident. This test data will be compared to the Rider's baseline.
  - 7.2.6. Not mount or ride a horse until completing the relevant neurocognitive and physiotherapy screens, and until cleared by a doctor. (See Stage 4 of return-to-ride process.
  - 7.2.7. Follow the Graduated Return to Riding as set out in Section 8 below.
- 7.3. The Rider must repeat steps 7.2.5 and 7.2.6 and/or engage in active rehabilitation interventions under the ACC Concussion Service until the test results demonstrate that they have recovered sufficiently from the concussion.
  - 7.4. Riders with Persistent Post-Concussion Symptoms or abnormal neurocognitive testing will be assessed by an independent neuropsychologist provided by the NZTR concussion management provider. This will be organised by the NZTR Medical Officer through the concussion service provider.
  - 7.5. Any further referral for specialist neurology opinion on a Rider's ongoing fitness to ride will be arranged in consultation between the Rider's GP and the NZTR Medical Officer.
  - 7.6. Once the test results show that the Rider has recovered from the concussion, an integrated report will be sent to the NZTR Medical Officer.
  - 7.7. After the NZTR Medical Officer has considered the integrated report and is satisfied that the Rider has recovered from the concussion and all other injuries that were sustained during the fall, the NZ Medical Officer will clear the Rider to ride in Trials and Races.

## **8. Graduated Return to Riding.**

- 8.1. All Riders who are assessed to have a concussion must follow the Graduated Return to Riding procedure. The Stages of the procedure are:
  - 8.1.1. Stage 1 – Normal daily tasks, focus on sleep, nutrition and hydration.
  - 8.1.2. Stage 2 – Light aerobic exercise.
  - 8.1.3. Stage 3 – Moderate aerobic exercise, balance exercises and mechanical horse.
  - 8.1.4. Stage 4 – High intensity exercise, mechanical horse.
  - 8.1.5. Stage 5 – Riding horses: slow progression through walk, trot, canter, gallop.
  - 8.1.6. Stage 6 – full participation.

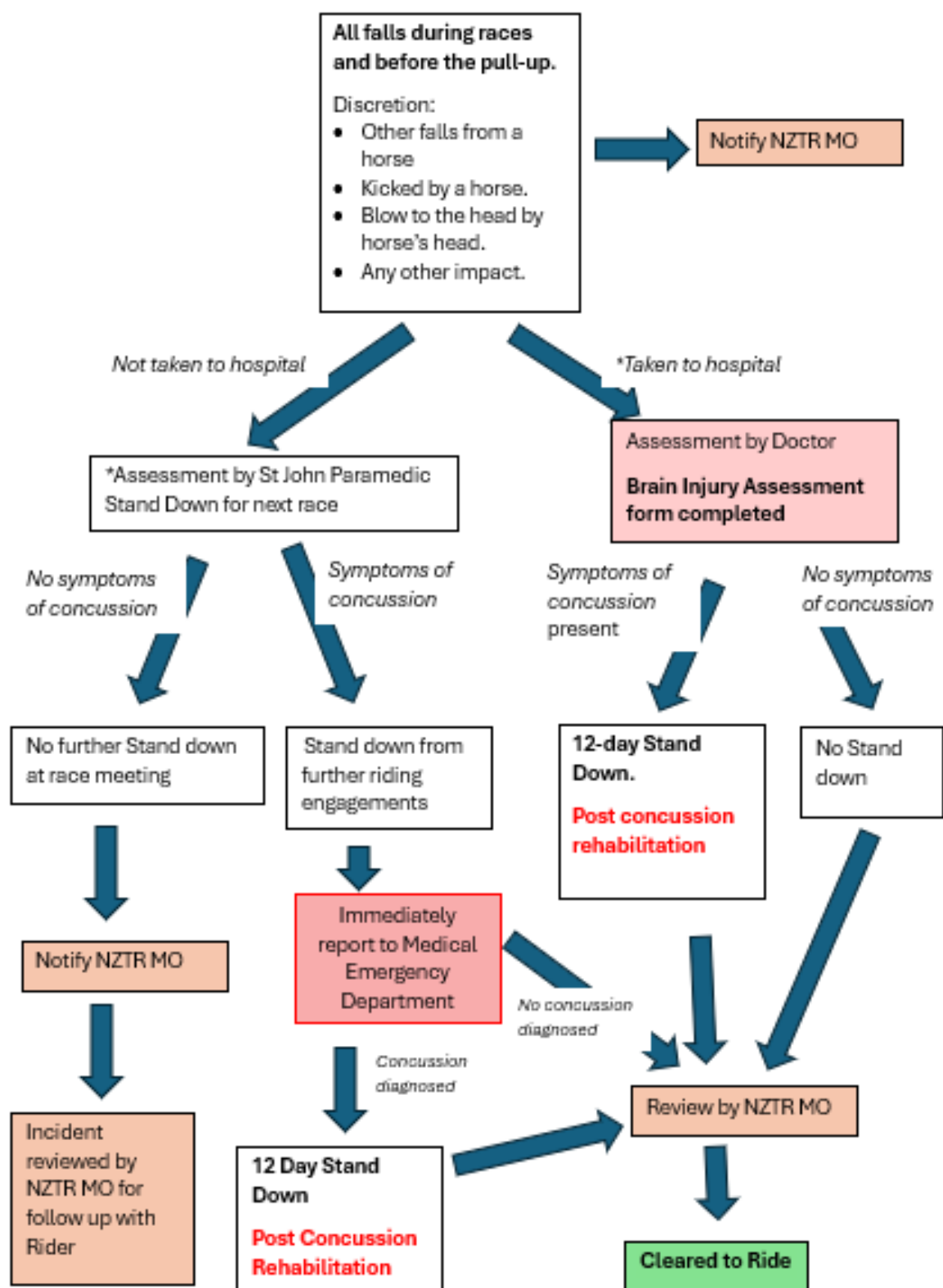
8.2. An overview of the NZTR Graduated Return to Riding protocol is shown below.



## 9. Final Clearance to Ride.

Riders must not ride in Races or Trials unless and until the NZTR Medical Officer has approved the Rider's return to race riding.

## Overview of the Raceday Fall Procedure



\* Notification & copies of St John Concussion Assessment form and Injury Form to be sent to Dr Parle and to NZTR.

## Summary:

1. All Riders who fall during a Trial or Race, or before the pull-up, must be assessed for concussion by a St John paramedic.
2. A rider who suffers a fall during a race must not ride in the following race if they are engaged to do so and must not ride again until they have been assessed by a paramedic.
3. Riders who suffer a blow to the head or any other impact may be referred to the St John Hato Hoane paramedic to be assessed for concussion.
4. A rider who is assessed by a paramedic to have signs of concussion must immediately go to a Medical Emergency Department to be assessed by Medical Doctor (not General Practitioner).
5. A rider who is taken to hospital following an incident at the racecourse must be assessed for concussion by a doctor at Hospital.
6. The Stewards must send a copy of the St John concussion assessment form (whether there are symptoms of concussion or not) and a copy of the NZTR Injury form to both Dr Parle and NZTR, preferably by no later than the next working day.
7. The NZTR Medical Officer will assess all information arising out of all falls and take any steps deemed necessary.
8. Riders who are diagnosed with concussion, will automatically be stood down for 12 days and will enter the concussion rehabilitation programme.

NB: Medical Doctors/Nurse Practitioners at Te Whatu Ora or Accident and Medical Clinics have significantly more experience than a GP in diagnosis and management of Concussion/mTBI or Traumatic Brain Injury. GPs are excluded from the acute assessment of Concussion in this policy.

## An overview of the Recovery and Return to Riding Process:

