BHA MEDICAL DEPARTMENT

CONCUSSION STANDARD OPERATING PROCEDURE

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CONCUSSION STANDARD OPERATING PROCEDURE (SOP)
JOCKEYS AND RIDERS WITH A CURRENT GB LICENCE

EXECUTIVE SUMMARY

1. Introduction

- Concussion is a mild traumatic brain injury (mTBI).
- Riders and staff working with or near horses are at risk of sustaining a concussion from a fall or injury that involves an impact to the head or body.
- This SOP covers the multi-modal Rider-centred management of concussion in **jockeys and riders with a current GB licence (Riders).**

2. Definition

- The diagnosis of concussion is based on clinical reasoning informed by multi-modal assessment.
- This SOP was informed by the Concussion in Sport Group[5] definition of sport-related concussion and the American Congress of Rehabilitation Medicine's diagnostic criteria[6].

3. Prevention

- The principal prevention strategy is to increase awareness through the online Racing Industry Concussion Awareness Course and resources.
- Helmets protect riders from serious head injuries, but current materials/designs do not provide protection against concussion.
- It is essential that helmets are professionally fitted, well-maintained, and replaced immediately in the case of any damage (see Bounty Scheme).
- There is increasing evidence in support of other prevention strategies including warm up and movement preparation strategies, mouthguards and baseline assessment.

4. Injury

4.1 Racecourse concussion protocol

- At all scheduled racing and point-to-point fixtures, all fallers and Riders who sustain any other injury that involves an impact to the head or body should be considered to be concussed. They must be screened by the Racecourse Medical Team on return to the Weighing Room complex/JMR in accordance with the Racecourse Concussion Protocol [ANNEX 5.]
- The concussion screen includes checking for signs/symptoms/red flags, Turner questions, dual task gait and where available video review.
- The concussion screen should be recorded on the EMR and be used to identify Riders who might require more detailed assessment.
- Where **concussion is NOT suspected**, provided there are no other injuries of concern, the Rider's status can remain as Green Entry and they can return to racing.
- Where **concussion is suspected or confirmed,** it should be recorded as concussion on the EMR and the Rider should be stood-down immediately. The SRMO/RMO should update the Rider's status to Red Entry and inform the CMA.
- Indications to perform the more detailed SCAT6 assessment include best practice, diagnostic uncertainty and to establish a baseline for rehabilitation.

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- The SCAT6 provides an opportunity to observe the Rider and examine multiple factors that might assist in the diagnosis of concussion.
- All Rider's with suspected or confirmed concussion should be given the Jockey Head Injury Advice leaflet and the advice about not driving reinforced by the Racecourse Medical team.

4.2 Non-Racecourse Recognise and Remove Concussion Protocol

- Non-racecourse (eg: on the yard) fallers and Riders who sustain any other injury that involves an impact to the head or body should be considered to be concussed and screened using the Non-Racecourse Recognise & Remove Concussion Protocol ANNEX 6, using CRT6[1].
- The presence of **ANY ONE** sign or symptom could suggest a suspected concussion.
- Any Rider with suspected or confirmed concussion should be stood-down immediately, removed from danger (ie: the horse) and follow the Do's & Don'ts list below.
- All suspected and confirmed concussions in Riders should be reported to the CMA immediately.

4.3 Delayed or transient symptoms

- Concussion symptoms can come on later or can come and go.
- In cases where concussion symptoms in a Rider are suspected later, the CMA should be informed and should follow up with the Rider within 24 hours of being informed.

4.4 Third party reporting of concerns in relation to possible concussion

- In the first instance, the Rider should be encouraged to report their own symptoms.
- If concerns remain, a third party can report their concerns in confidence to the CMA directly or to a member of the BHA Racecourse Medical team or IJF rehabilitation team.
- Racing organisations should develop and disseminate their organisation's processes in relation to reporting possible concussion. Support is available through the online Concussion Awareness course and suite of resources ANNEX 2.

5. **Gradual Return to Racing Guidelines (GRTRacing)**
   - Concussed Riders should be managed according to the six stages of the GRTRacing Guidelines ANNEX 2.4, which is only accessible to jockeys and riders with a current GB licence and is delivered under the supervision of the IJF and BHA Medical Rehabilitation teams.
   - **CONCUSSED RIDERS SHOULD NOT RIDE OR PARTICIPATE IN ANY ACTIVITIES WITH A RISK OF HEAD INJURY, BEFORE THEIR BRAIN HAS RECOVERED. THIS INCLUDES NOT RIDING OR BEING WITHIN KICKING DISTANCE FROM A HORSE BEFORE THEY HAVE REACHED STAGE 5.**

5.1 BHA and IJF Gradual Return to Racing Assessment Guidelines

- **Riders should undergo a multi-modal assessment over the course of their recovery, including the considerations detailed below.**
- The rehabilitation of concussion should follow the GRTRacing stages and should be delivered under the supervision of the IJF and BHA Medical Rehabilitation team.

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- When Riders meet the criteria to progress to stage 6, (not before a minimum of 7 days after the injury; Day 0 = day of injury) the IJF Rehabilitation team should refer them to the CMA for the Return to Racing Assessment.
    - For example, a Rider sustaining a concussion on Saturday 1st March = day 0, the earliest day they would be able to undergo the Return to Racing assessment would be a minimum of 7 days later, which would be Sunday 8th March.
- Riders who have completed the GRTRacing and Return to Racing Assessment to the satisfaction of the CMA, can be cleared by the CMA to return to race riding. The CMA should record the results on the EMR and update the Riders status accordingly.

6. Long term effects of concussion

- In the short-term concussion can reduce performance and there is some evidence that repeated concussions may lead to long term impairment of brain function.

7. Medical team training

- All BHA and IJF Medical and Rehabilitation team staff are expected to ensure that they are following the most recent BHAGI and Concussion SOP and have completed appropriate training to manage concussion in line with emerging evidence.
- In addition, baseline assessors are required to attend biannual training and in the case of any updates to the assessment protocol within a two-year cycle, to attend supplementary training.

8. Medical indemnity

- The medical indemnity policy for the racecourse medical team specifies that cover for claims in connection to a brain trauma or alleged brain trauma will be excluded in cases where the insured has not complied with the most recent Concussion in Sport Group Consensus Statement together with any BHA concussion guidelines/protocols/tools.
- It is the responsibility of the medical team to stay up to date with future revisions of this BHA Concussion SOP and to ensure that they have completed the appropriate training to administer the tests/protocols required in their respective roles.

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Abbreviations:

BHA – British Horseracing Authority
CRT6 – Concussion Recognition Tool 6
EMR – BHA Electronic Medical Records system (Smartabase)
GRTRacing – Gradual Return to Racing Guidelines (Jockeys and riders with a current GB licence)
GRTRiding – Gradual Return to Riding Guidelines (Riders without a current GB licence)
IJF – Injured Jockey's Fund
JMR – Jockey's Medical Room (Racecourse)
mTBI – Mild traumatic brain injury / Concussion
PPA – Point to Point Authority
Rider (in context of this document) – Jockey or Rider with a current GB licence
SCAT6 – Sport Concussion Assessment Tool 6
SCOAT6 – Sport Concussion Office Assessment Tool 6

1. Introduction

Concussion is a mild traumatic brain injury (mTBI). Within the racing industry, riders and staff working with or near horses are at risk of sustaining a concussion from a fall or injury that involves an impact to the head or body. This SOP covers the multi-modal Rider-centred management of concussion in jockeys and riders with a current GB licence (Rider) under the supervision of the BHA and IJF Medical Rehabilitation team. For all other groups, please refer to the Concussion SOP for racing staff and riders without a current GB jockey or rider licence.

This SOP has been written in line with current evidence and will remain under review as new evidence emerges.

2. Definition

The diagnosis of concussion is based on clinical reasoning informed by multi-modal assessment. The current proposed conceptual definition of SRC from the Concussion in Sport Group is,

Sport-related concussion is 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 a 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, but may be prolonged. No abnormality is seen on standard structural neuroimaging studies (computed tomogrophy or magnetic resonance imaging T1- and T2-weighted images), but in the research setting, abnormalities may be present on functional, blood flow or metabolic imaging studies. Sports-related concussion results in a range of clinical symptoms and signs that may or may not involve loss of consciousness. The clinical symptoms and signs of concussion cannot be explained solely by (but may occur concomitantly with) drug, alcohol, or medication use, other injuries (such as cervical injuries, peripheral vestibular dysfunction) or other comorbidities (such as psychological factors or coexisting medical conditions) [5].

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The American Congress of Rehabilitation Medicine offers diagnostic criteria to aid in decision making. The diagram below is based on this model as relevant to the context of the concussion screening process of the Racecourse Concussion Protocol, (for example, imaging not included as not available at the point of decision making). The medical team are advised to familiarise themselves with the full version[6].

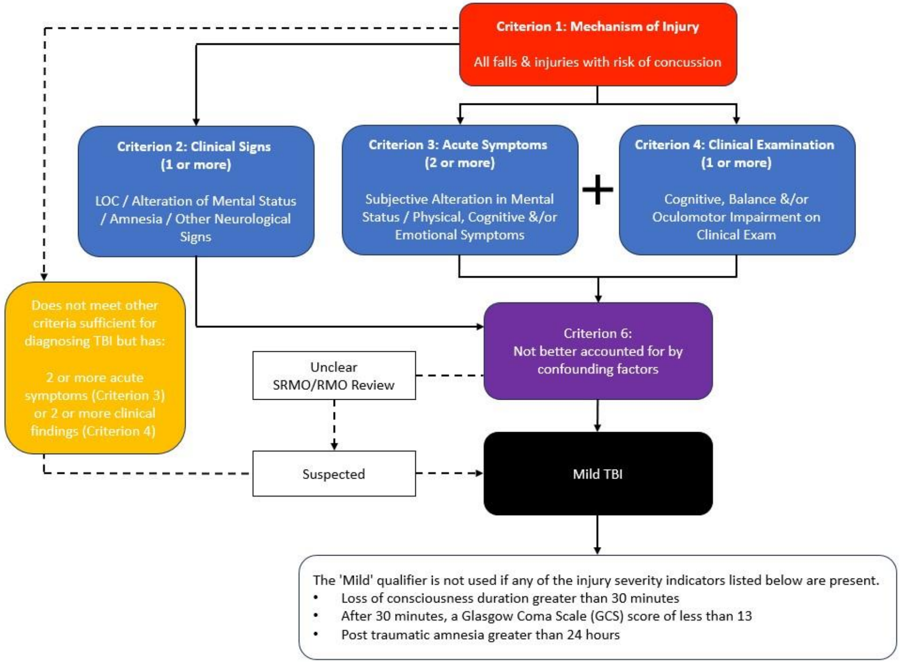

Figure 1- (Adapted for Racecourse) Visual Representation of American Congress of Rehabilitation Medicine Diagnostic Criteria for Mild Traumatic Brain Injury.

In racing, the most common mechanism of injury for concussion is a fall from a horse and can occur as a result of an impact to the head or body. Other mechanisms include (but not limited to) impacts from the head of the horse (Rider mounted or leading horse) and being kicked.

3. Prevention

The principal prevention strategy to reduce the impact of concussion within the racing industry is to increase awareness of the condition through the online Concussion Awareness Course and resources. The course is available on Racing2Learn at no cost to the learner. All Riders, medical staff and personnel within the industry working with or around horses are strongly advised to complete the course. This includes administrative personnel who might experience or witness a possible concussion injury within their role.

It is mandatory for jockeys to wear a helmet (see Rules of Racing) for any riding or horse facing activities. Helmets protect riders from serious head injuries, but current materials/designs do not provide protection against concussion. It is essential that helmets are professionally fitted, well-maintained, and replaced immediately in the case of any damage.

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Riders who sustain a concussion (which involves a Red Entry) are eligible to receive a BETA voucher from the BHA or PPA , currently £80.00, towards the purchase of a replacement helmet via the Bounty Scheme. The damaged helmet must be sent to BETA (depending on where the concussion occurred) before the voucher can be issued.

There is increasing evidence in support of other prevention strategies to potentially reduce the incidence and/or severity of concussion in sport. All Riders are strongly recommended to incorporate the following strategies into their practice:

3.1. IJF/BHA - Warm up and Movement Preparation Strategies for Race Riding:

Neuromuscular activation, neck strengthening, and readiness drills have been shown to reduce the risk of concussion in other sports [ANNEX 3].

3.2. Fitted mouthguards:

There is some evidence suggesting that mouthguards might reduce the risk of concussion.

It is unclear whether the potential benefits of these strategies are transferable to the mechanisms of injury experienced in equestrian sport, but the potential for benefit warrants inclusion.

3.3. Baseline Assessments:

All Riders must undergo a baseline assessment every two years as a condition of renewing their licence. When medically indicated, the CMA might require a Rider to undergo more frequent baseline assessments on a case-by-case basis.

The baseline assessments should be administered by BHA trained assessors (see BHA Concussion Baseline Centres [ANNEX 4] list for details.

The baseline assessment includes as a minimum:

Neuropsychology pen and paper tests
Sport Concussion Assessment Tool (SCAT6)[2]
Neurocognitive computer test (ImPACT)

Where available:

Objective vestibular-oculomotor assessment (head-eye coordination assessment)

Baseline assessments should be subsequently reviewed by a BHA approved neuropsychologist and a report sent to the CMA with any clinical concerns highlighted and followed up appropriately. This may include a repeat baseline assessment and/or a more detailed face-to-face assessment.

4. Injury

At all scheduled racing and point-to-point fixtures, all injuries with a risk of concussion to Riders (jockeys and riders with a GB licence only) should be managed by the Racecourse Medical Team according to the Racecourse Concussion Protocol [ANNEX 5]. Non-racecourse injuries (eg: on the yard) with a risk of concussion should be managed according to the Non-Racecourse Recognise and Remove Concussion Protocol [ANNEX 6], which uses the Concussion Recognition Tool 6 (CRT6)[1]. The CRT6 is

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designed to be used by non-medically trained individuals to identify suspected concussion and manage the initial stages appropriately.

All suspected and confirmed concussions sustained by Riders, irrespective of where they occurred, must be reported to the BHA CMA, (as per the Rules of Racing (D) Part 2, 13).

4.1. Racecourse Concussion Protocol

On race days, the arrangement (personnel/location) of concussion screening for all fallers should be confirmed by the SRMO during their pre-racing briefing of the Racecourse Medical team, (BHAGI 11.2).

The Racecourse Medical team should follow the Racecourse Concussion Protocol [ANNEX 5]. All fallers and Riders who sustain any other injury that involves an impact to the head or body (eg: impact from horse's head hitting the Rider) should be considered to be concussed and must be screened by the racecourse medical team on return to the Weighing Room complex/JMR. This interval allows their heart rate to begin to settle*. Concussion screening should be used to identify Riders who might require more detailed assessment. This includes checking for signs/symptoms/red flags, Turner questions and dual task gait**. Consideration should be given to the mechanism of injury and video footage reviewed by the racecourse medical team, facilitated by the Stewards, as appropriate.

For the purpose of this document a broad definition of fallers should be applied that includes all Riders who dismount or fall from their horse. It is acknowledged that this will encompass Riders who voluntarily dismount in a controlled manner with no apparent mechanism of concern. In such cases, the SRMO/RMO should apply clinical judgement as to whether a concussion screen is indicated provided,

1. The SRMO/RMO witnessed the Rider dismount, including the events leading up to and following the dismount.
2. The horse was stationary, eg: pulled up, when the Rider dismounted.
3. In cases of uncertainty, the concussion screen should be administered as a precaution.

All members of the racecourse medical team can administer the concussion screen. The adapted ACRM diagnostic criteria can be used to aid clinical judgement, (Figure 1). In ideal circumstances, a collaborative approach should be taken by the racecourse medical team. In the following circumstances, the SRMO/RMO should review and/or monitor the Rider to inform clinical decision making,

1. Where the findings are considered to be better accounted for by confounding factors or if this is unclear, eg: Rider reports having a headache before the fall.
2. Where there is a mechanism of concern, irrespective of whether the clinical impression is concussion is or is not suspected.

**In cases where there is a sustained tachycardia and there is no evidence of significant underlying pathology, and the Rider's concussion screen is negative, the SRMO/RMO should consider rescreening after an interval. It is a matter of clinical judgment as to whether SRMO/RMO allows the Rider to ride prior to reassessment in such cases.*

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***Dual task gait ANNEX 7 is the most complex version of a stepwise approach to screening coordination and balance. The stepwise approach, in decreasing order of complexity, is Dual task gait > Tandem gait > Tandem stance errors in 20 seconds. The SRMO/RMO should select the most appropriate starting point and scale up to the most complex version. It should be noted that, in the absence of an alternative medical or practical reason, the inability to perform dual task gait should be considered as concussion in the context of concussion screening and managed accordingly until proven otherwise.*

4.1.1. Video footage review for observed signs of possible concussion:

Reviewing the video footage can provide more information on the mechanism of injury and the presence of any possible signs of concussion immediately after the injury, as detailed in Table 1.

*Table 1 - Summary of observed signs of possible concussion. * >2s for removal and assessment of the jockey. Significantly longer periods of lying motionless may necessitate immediate and permanent removal from play, depending on the circumstances[3].*

Observed signs of possible concussion:	
Lying motionless	Lying without purposeful movement on the racetrack for >2s*. Does not appear to move or react purposefully, respond or reply appropriately to the race situation.
Motor incoordination	Appears unsteady on feet (including losing balance, staggering/stumbling, struggling to get up, falling) or in the upper limbs (including fumbling). May occur in rising from the racetrack surface or in the motion of walking/running/skating.
Impact seizure	Involuntary clonic movements that comprise periods of asymmetric and irregular rhythmic jerking of axial or limb muscles.
Tonic posturing	Involuntary sustained contraction of one or more limbs (typically upper limbs), so that the limb is held stiff despite the influence of gravity or the position of the jockey. The tonic posturing could involve other muscles, such as the cervical, axial and lower limb muscles. Tonic posturing may also be observed while the jockey is on the racetrack surface or in the motion of falling, where the jockey may also demonstrate no protective action* (*this was previously known as no protective action-stiff).
No protective action – floppy	Falls to the playing surface in an unprotected manner (ie: without stretching out hands or arms to lessen or minimize the fall) after direct or indirect contact with the head. The jockey demonstrates a loss of motor tone (which may be observed in the limbs and/or neck before landing on the racetrack surface.
Blank/vacant look	The jockey exhibits no facial expression or apparent emotion in response to the environment* (*may include a lack of focus/attention of vision; blank/vacant look is best appreciated in reference to the jockey's normal or expected facial expressions).

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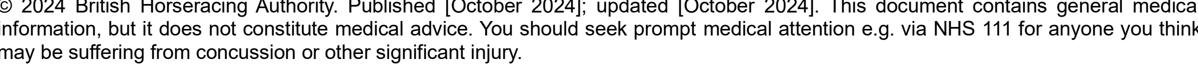
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4.1.2. In cases where the clinical impression is 'Concussion NOT suspected':

The results of the concussion screen should be recorded on the Concussion Screen form on the EMR. If the clinical impression is 'Concussion NOT suspected', then provided there are no other injuries of concern, the Rider's status can remain as Green Entry and they can return to racing. The Concussion Screen form should be linked to the No Apparent Injury Record for that case (or to the Injury Record form for that case if there were concomitant injuries of concern. In such cases, the Riders status should be updated appropriately).

The SRMO/RMO can decide to temporarily stand-down the Rider for the next race on the race card to administer a concussion assessment or to monitor the Rider, whilst retaining the option of a clinical impression of 'Concussion NOT suspected', if clinically appropriate for the following race.

In cases where there is a mechanism of concern, but otherwise the concussion screen results in a clinical impression of 'Concussion NOT suspected', the SRMO/RMO can decide to clear the Rider to return to racing and require them to undergo a repeat concussion screen within 30-60 minutes after the injury as a precaution to check for delayed presentation of concussion. If the clinical impression is still 'Concussion NOT suspected', the Rider's status can remain as Green Entry and they can return to racing. If the repeat concussion screen result is 'Concussion suspected or confirmed', this should be recorded as an updated clinical impression on the Concussion Screen form, the Rider should be stood-down immediately, their status updated to Red Entry and the CMA should be informed. The concussion screen can only be repeated in this way ONCE then a clinical decision is required.

4.1.3. In cases where the clinical impression is 'Concussion suspected or confirmed' and/or there's a clinical uncertainty:

The results of the concussion screen should be recorded on the Concussion Screen form on the EMR. If the clinical impression is 'Concussion suspected or confirmed', this should also be recorded on the Injury Record form as Concussion. The Rider should be stood-down immediately. The SRMO/RMO should update the Rider's status to Red Entry and inform the CMA.

Indications to perform the more detailed SCAT6 assessment include, best practice, diagnostic uncertainty and to establish a baseline for rehabilitation. The SCAT6 provides an opportunity to observe the Rider and examine multiple factors that might assist in the diagnosis of concussion. Clinical judgement is required to interpret the results and determine whether concussion is suspected or confirmed. There are links to SCAT6 on the Concussion Screen, No Apparent Injury Record and Injury Record forms on the EMR. SCAT6 results should be recorded on the EMR SCAT6 form, selecting SUSPECTED/POST-INJURY as the SCAT6 Type. Paper versions of SCAT6 should only be used when access to the EMR is not available. The clinician should then upload the results on to the EMR as soon as EMR access is available, ideally within 24 hours of the event, as per the requirement for all medical records.

All Rider's with suspected or confirmed concussion should be given the Jockey Head Injury Advice leaflet and the advice about not driving reinforced by the Racecourse Medical team. The SRMO/RMO should liaise with the Rider (and Clerk of the Scales as required) to assist with the facilitation of alternative transport arrangements for the Rider (and horse if they travelled on their own). Riders travelling on their own should consider having alternative transport arrangements should they incur an injury that renders them unable to drive themselves.

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4.1.4. In cases where the Rider does not return to the JMR to undergo the concussion screen

Riders have been informed that they are required to return to the JMR to undergo the concussion screen following all falls and/or on request of the racecourse medical team. In cases where the Rider does not return to the JMR or refuses to undergo the concussion screen, SRMO/RMO's should:

1. Make reasonable efforts to locate the Rider and administer the concussion screen.
2. If the Rider has left the racecourse without returning to the JMR and undergoing the concussion screen, the Rider should be contacted and if they are not too far away, asked to return to the racecourse to undergo the concussion screen.
3. If 1 and 2 are not possible, the SRMO/RMO should update the Rider's status to Red Entry, inform the CMA and inform the Rider that the CMA will contact them the following morning if not sooner.
4. Record actions taken on the EMR.

Clinical judgement should be applied in cases where there might be a concern for the Riders safety, eg: Riders with possible concussion who are travelling alone and/or driving.

Consideration should be given to the Rider's behaviour in context of possible signs or symptoms of concussion, as well as the impact of concussion on the Rider's capacity to self-advocate and manage the Rider accordingly. For example, aggressive or difficulty following instructions might be indicative of concussion.

The CMA should then follow up with the Rider within 24 hours after the injury to assess them remotely having reviewed any information including video, as appropriate. The CMA should then make a clinical judgement with regards to concussion and update the Rider's status accordingly. In cases where the CMA decision is 'Concussion NOT suspected', the Rider can be required, at the discretion of the CMA, to undergo a formal assessment as a precautionary measure, eg: SCAT 6 (Selecting SUSPECTED/POST-INJURY as the SCAT6 Type), which can be administered by the racecourse medical team before their next race meeting.

Rider's requiring formal assessment can be downgraded to Amber Entry (by the CMA only) to enable the Rider to tentatively book future race rides on the understanding that this will be at the Riders risk and they will only be able to fulfil these bookings after they have undergone the SCAT6 and the SRMO/RMO has cleared them to return to racing and updated their status to Green Entry. The Rider will be responsible for any costs or consequences that this might incur, should there be any delay to them being cleared to return to racing.

In cases where SCAT6 is required, it should ideally be administered within 72 hours after the injury. The Rider will be responsible to ensure that they arrive at the JMR no later than 90 minutes before the first race of their next race meeting. The SRMO/RMO should review the Rider, including the SCAT6 results and make a clinical judgement with regards to concussion. The SRMO/RMO should then update the Rider's status accordingly.

Rider's requiring a SCAT6 who do not have any race rides booked within 72 after the injury will be managed on a case-by-case basis at the discretion of the CMA.

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4.2. Non-Racecourse Recognise and Remove Concussion Protocol

Suspected or confirmed concussion in Riders that occurs in a non-racecourse setting should be managed on a Recognise and Remove basis.

All fallers and Riders who sustain any other injury that involves an impact to the head or body (eg: impact from horse's head hitting Rider) should be considered to be concussed and screened using the Non-Racecourse Recognise & Remove Concussion Protocol [ANNEX 6], using CRT6[1].

Screening involves administering basic first aid, checking for red flags and calling for urgent medical care if required. With the exception of cases where urgent medical care takes precedent, the Rider should then be screened for signs and/or symptoms of concussion. The presence of ANY ONE sign or symptom could suggest a suspected concussion.

Any Rider with suspected or confirmed concussion should be stood-down immediately and removed from danger (ie: the horse) and follow the Do's & Don'ts list below. All suspected and confirmed concussions in Riders should be reported to the CMA immediately.

The CMA should follow up within 24 hours of being informed and make a clinical judgement on whether concussion is suspected or confirmed. The CMA should record the results of the follow up on the EMR and update the Rider's status on the EMR accordingly.

DO's:
Stay with a responsible adult for the first 24 hours
Stay within reach of a phone
Keep screen use to a minimum for the first 2 days, eg: phone, computer, TV
Rest as needed
Replace your helmet

DON'Ts:
DON'T RIDE A HORSE
Don't drive for the first day*
Don't do any activities with a risk of head injury, including horse facing yard duties or contact sports
Don't drink alcohol
Don't take any drugs unless advised by a doctor
*Seek medical advice from your IJF/BHA Medical Rehabilitation team before returning to driving or riding.

4.3. Delayed or transient symptoms

Concussion symptoms can come on later or can come and go. In cases where concussion symptoms in a Rider are suspected later, the CMA should be informed as a condition of the Rider's licence. The CMA should then follow up with the Rider within 24 hours of being informed and make a clinical judgement on whether concussion is suspected or confirmed. Where relevant, eg: in cases where further clarification might inform the clinical decision, the CMA should follow up with any observers who might be able to provide information on the mechanism of injury and any immediate signs or reported symptoms. This will be at the discretion of the CMA on a case-by-case basis. The CMA should record the results of the follow up on the EMR and update the Rider's status accordingly.

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4.4. Third party reporting of concerns in relation to possible concussion

In the first instance, anyone who has concerns that a Rider might have sustained a possible concussion that has not been recognised and/or reported, should encourage the Rider to report their own symptoms.

It is important that concussion is recognised early so that the Rider can be removed from danger (ie: the horse) and they should not ride or be within kicking distance of a horse until their brain has recovered. For this reason, if concerns remain, a third party can report their concerns in confidence to the CMA directly or to a member of the BHA Racecourse Medical team (doctors, nurses, JIM physiotherapy team) or IJF rehabilitation team, who will relay the concerns to the CMA and can do so without revealing the source of the information if requested. The CMA should then follow up with the Rider as described above in 'Delayed or transient symptoms'.

Racing organisations (eg: Racecourses, yards, member groups) with members/staff who are Riders or who work with Riders should develop and disseminate their organisations processes in relation to reporting possible concussion. This should include improving awareness of concussion within their organisation, the process by which a Rider can report their own symptoms and the process third parties can report their concerns in confidence. Organisations are reminded that they are responsible for providing a safe, supportive working environment where open reporting of injuries is encouraged, taken seriously and managed appropriately.

Support for organisations is available through the online Concussion Awareness course and suite of resources [ANNEX 2].

5. Gradual Return to Racing Guidelines (GRTRacing)

Concussed Riders should be managed according to the GRTRacing Guidelines[ANNEX 2.4]. The GRTRacing is only accessible to jockeys and riders with a current GB licence and is delivered under the supervision of the IJF and BHA Medical Rehabilitation teams. For all other groups, please refer to the Concussion Gradual Return to Riding (GRTRiding) for racing staff and riders without a current GB jockey or rider licence, available on the BHA website.

The guidelines provide details of the six stages of active rehabilitation following concussion, as summarised below, (Figure 2). More details of what each stage involves can be found on the GRTRacing.

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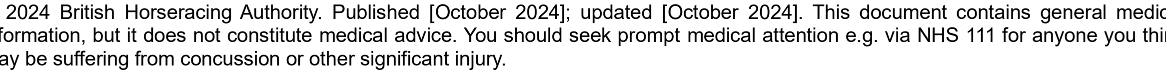

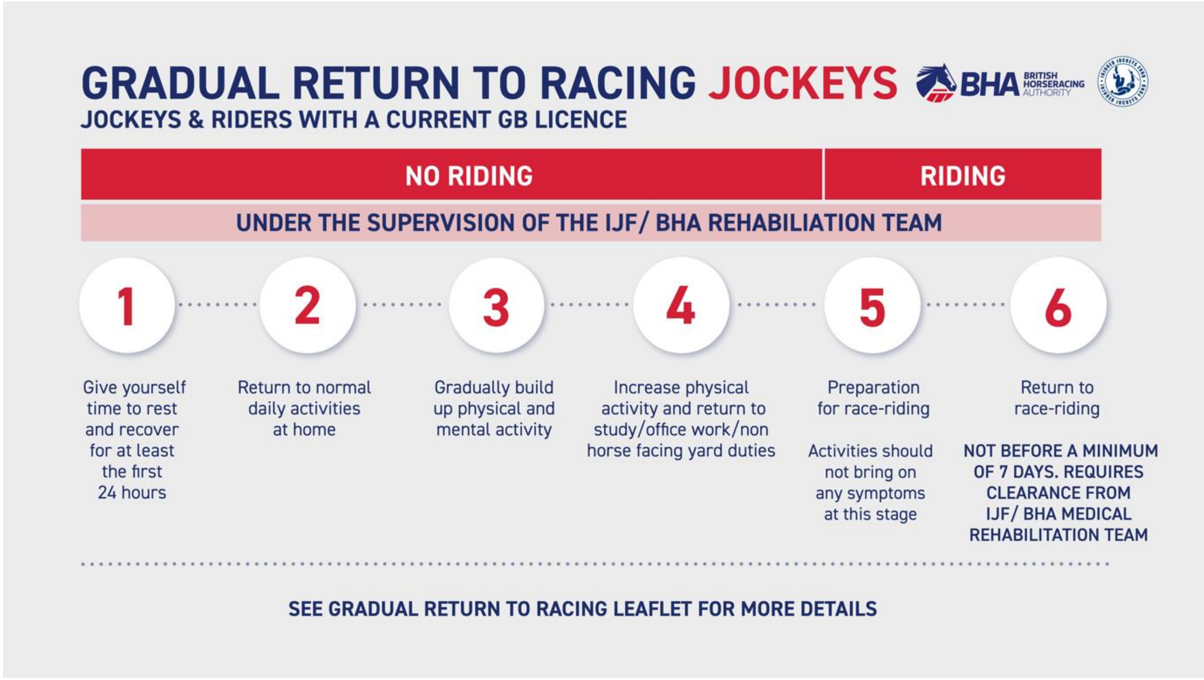

Figure 2 - Gradual Return to Racing - Jockeys & Riders with a Current GB Licence - Summary of Stages (as per 7.3.2024)

CONCUSSED RIDERS SHOULD NOT RIDE OR PARTICIPATE IN ANY ACTIVITIES WITH A RISK OF HEAD INJURY, BEFORE THEIR BRAIN HAS RECOVERED. THIS INCLUDES NOT RIDING OR BEING WITHIN KICKING DISTANCE FROM A HORSE BEFORE THEY HAVE REACHED STAGE 5.

On satisfactory completion of the GRTRacing stages, the Rider will be referred (not before a minimum of 7 complete days after the day of the injury; Day 0 = day of injury) to the CMA for the Return to Racing Assessment. For example, a Rider sustaining a concussion on Monday 1st March = day 0, the earliest day they would be able to undergo the Return to Racing assessment would be after a minimum of 7 complete days later, which would be Tuesday 9th March.

5.1. BHA and IJF Gradual Return to Racing Assessment Guidelines

All concussed Riders should be managed according to the GRTRacing guidelines under the supervision of the IJF and BHA Medical Rehabilitation team. The process involves three stages, the CMA Follow up, IJF Assessment & Rehabilitation and the Return to Racing Assessment.

Riders should undergo a multi-modal assessment over the course of their recovery, which should include consideration of the following:
Screening for potential complications
Sequential symptom review
Cognitive function and concentration testing
Vestibular-oculomotor function including BPPV screening (Where available, objective vestibular-oculomotor assessment)
Balance and dual task gait testing
Cervical spine assessment
Wellness screen (Consider anxiety, depression, and sleep screening)

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Exercise tolerance testing* and/or fitness testing as appropriate
Consider evaluation of orthostatic vital signs and/or neurological screening as appropriate

The Assessment results should be recorded on the EMR IJF Concussion Assessment form for review by the CMA during the Return to Racing assessment.

5.1.1. CMA Follow up

All concussed Riders should be followed up by the CMA, ideally within 24 hours after the injury. This can be administered over the phone/online or in-person. The purpose of this follow up is to screen for any potential complications, review whether further investigations might be indicated and to provide early management advice. The CMA should then refer the Rider to the IJF for a more detailed assessment and individualised rehabilitation as indicated.

5.1.2. IJF Assessment & Rehabilitation

5.1.2.1. IJF Triage Assessment

The IJF Triage assessment can be administered over the phone/online or in-person, ideally within 48 hours after injury. This assessment should include a further screen for potential complications, follow up on the trajectory of the injury and a wellness screen. It is an opportunity to identify areas for further multi-modal review, eg: clinical psychologist and to provide the Rider with information and reassurance as required. The IJF Triage should inform how much time to schedule for the IJF Initial Assessment, taking into account the severity of the Riders symptoms, any implications of other injuries and whether suitable transport options are available. In some cases, and at the discretion of the IJF, consideration should be given to whether travel and/or residential support might help facilitate in-person attendance for the IJF Initial Assessment and/or Rehabilitation.

5.1.2.2. Initial Assessment & Rehabilitation

The IJF Initial Assessment should be administered in-person, ideally within 72 hours after injury. The Initial Assessment should include a review of symptoms, cognitive function, concentration, vestibular-oculomotor function including BPPV screening (where available, objective vestibular-oculomotor assessment), balance and cervical spine assessment. Over the course of the rehabilitation process, dual task gait, exercise tolerance and/or fitness testing should be administered at a time when clinically appropriate. Consideration should be given to whether the inclusion orthostatic vital signs and/or neurological screening are indicated on a case-by-case basis.

In exceptional circumstances, eg: where the Rider is too symptomatic to travel, it might be possible to administer appropriate preliminary assessments via virtual video conferencing to inform management and early active rehabilitation as relevant. In such cases, the Rider should be advised that a responsible adult should be present throughout the assessment in case they experience any exacerbation of symptoms during or after the assessment, eg: dizziness. This should be followed up with an in-person assessment as appropriate.

Clinical judgement should be applied on a case-by-case basis and any concerns/contra-indications for certain tests or relating to the timing of tests should be discussed with the CMA as relevant and recorded appropriately.

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The rehabilitation of concussion should follow the GRTRacing stages, which provides details the type and intensity of activities suitable at each stage. Riders are required to meet specific criteria before progressing to the next stage. Rehabilitation and progression through the stages should be delivered under the supervision of the IJF and BHA Medical Rehabilitation team.

Recent evidence has shown that early inclusion of graded aerobic exercise supports recovery. the GRTRacing provides examples of the types of activities and intensity levels that are suitable at each stage. Riders should be reassured that mild symptoms can be normal up until and including stage 4 provided they settle after a short rest. In cases where symptoms increase more than mildly or don't settle after a short rest, the level and/or duration of the activity should be reduced, and the Rider should be reassessed if/as indicated. Within this framework, specific rehabilitation exercises should be prescribed on a case-by-case basis to target any deficits identified, for example targeted vestibular-oculomotor rehabilitation exercises.

Riding or horse facing tasks with a risk of head injury (including activities within kicking distance of a horse) are not permitted until Rider's have met the criteria to progress to stage 5. During stage 5, Riders should be reminded that HELMETS ARE ESSENTIAL for all horse facing tasks, eg: tacking up. Under the supervision of the BHA and IJF Medical Rehabilitation team, riding duties with careful horse selection can be included at this stage. Then the number of lots and speed can be increased gradually. This can be progressed to schooling but NO RACING at this stage. At this stage, activities should not bring on any symptoms.

When Riders meet the criteria to progress to stage 6, the IJF Rehabilitation team should refer them to the CMA for the Return to Racing Assessment via the EMR IJF Concussion Assessment form.

As detailed above, the Rider cannot be referred for the Return to Racing Assessment before a minimum of 7 days after the injury; Day 0 = day of injury). For example, a Rider sustaining a concussion on Saturday 1st March = day 0, the earliest day they would be able to undergo the Return to Racing assessment would be a minimum of 7 days later, which would be Sunday 8th March.

It is acknowledged that the nature of the racing industry, with Riders located across the UK, poses challenges for some Rider's to attend BHA and/or IJF in-person medical care. Despite best efforts to facilitate in-person care, some Rider's might elect to seek medical care at other facilities. In such cases, it will be the Rider's (or their designated advocate) responsibility to provide evidence that the appropriate multi-modal care has been provided by suitably qualified medical professionals in line with the BHA and IJF GRTRacing Assessment Guidelines for jockeys and riders with a current GB licence. In such cases, access to the GRTRacing pathway will be at the discretion of the BHA CMA.

**Exercise tolerance testing – In the context of concussion, the Buffalo Concussion test should be used to assess whether the Rider exhibits exercise intolerance in relation to concussion (increase in symptoms) and if so, to establish the level of aerobic exercise intensity that is suitable for the Rider at the point of testing. The level attempted should be restricted in accordance with the intensity level of the GRTRacing stage at the point of testing. For example, a Rider who has mild or no symptoms by stage 3 should be restricted to a Buffalo test level of moderate intensity, synonymous with jogging/running and should not be performing any high intensity exercise yet. When used in this fashion, the Buffalo Concussion test offers a controlled environment to inform rehabilitation and can make up part of the exercise programme. Reaching levels involving high intensity exercise on the*

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Buffalo Concussion test are not a requirement of the GRTRacing. It is preferred that this test is used to inform rehabilitation planning than as a fitness test.

5.1.3. Return to Racing Assessment

All concussed Riders must undergo the Return to Racing assessment, not before a minimum of 7 complete days after the day of the injury, (Day 0 = day of injury). For example, a Rider sustaining a concussion on Monday 1st March = Day 0, the earliest day they would be able to undergo the Return to Racing assessment would be after a minimum of 7 complete days later, which would be Tuesday 9th March. If the first eligible day for testing falls at a weekend or Bank Holiday then testing may be deferred to the first working day.

The Return to Racing assessment includes a review by a Neurologist and a repeat Baseline Assessment, which is reported on by a Neuropsychologist. The CMA should then review the Rider’s recovery through the GRTRacing process and any assessments to date. If there are any outstanding concerns the CMA should discuss them with the Rider and, as relevant, the IJF Rehabilitation team, and consider any appropriate care if/as relevant. Riders who have completed the GRTRacing and Return to Racing assessment to the satisfaction of the CMA, can be cleared by the CMA to return to race riding. The CMA should record the results of the Return to Racing assessment on the EMR and update the Riders status accordingly.

At the CMA’s discretion, Riders who have completed the GRTRacing and are expected to complete the Return to Racing assessment without complication, can be updated to an Amber status (by the CMA only) to enable the Rider to tentatively book future race rides on the understanding that this will be at the Rider’s risk and they will only be able to fulfil these bookings after the CMA has cleared them to return to racing and updated their status to Green. The Rider will be responsible for any costs or consequences that this might incur, should there be any delay to them being cleared to return to racing.

5.1.4. Referral to external providers

It is anticipated that a small number of concussed Riders might need specialist input from external providers. This should be discussed on a case-by-case basis with the CMA, who will be able to facilitate referrals if/as indicated. Considerations that might suggest specialist input might be indicated include, complex presentations, persistent symptoms (>14 days, in particular if migraine type headaches are involved) that are not responding to rehabilitation, Riders who are not responding as expected or improvement has stalled or Riders who have sustained multiple concussions in a short period of time (eg: >3 in concussions a 12 month period).

5.1.5. Delayed presentation of concussion in Riders attending IJF Centres for a concomitant injury

Riders attending one of the IJF Centres for a concomitant injury, eg: fracture, that present with possible signs and/or symptoms suggesting they also sustained a concussion should be managed according to the guidelines above in ‘Delayed or transient symptoms’.

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Staff members, eg: the administration team booking appointments or the welfare team, who interact with Riders should be aware of the signs and symptoms of concussion and report any possible concerns to a member of the rehabilitation team to investigate further.

5.1.6. Traumatic injuries above (but not including) the clavicle

At the discretion and direction of the CMA, Riders who sustain traumatic injuries above (but not including) the clavicle should be presumed to have sustained a concussion and follow the GRTRacing.

6. Long term effects of concussion

Concussion is a mild traumatic brain injury. In the short-term concussion can reduce performance and there is some evidence that repeated concussions may lead to long term impairment of brain function. Some studies have shown an association between men who participated in professional sport and certain neurological diseases (eg: ALS) and dementia. Further research is required to identify potential risk factors and inform future management of concussion.

7. Medical team training

All BHA and IJF Medical and Rehabilitation team staff are strongly advised to complete the online BHA Concussion Awareness course on Racing2Learn to inform discussions with Rider's. They are also expected to ensure that they are following the most recent BHAGI and Concussion SOP and have completed appropriate training to manage concussion in line with emerging evidence.

In addition, baseline assessors are required to attend biannual training and in the case of any updates to the assessment protocol within a two-year cycle, to attend supplementary training.

8. Medical indemnity

The medical indemnity policy for the racecourse medical team specifies that claims in connection to a brain trauma or alleged brain trauma will be excluded from cover in cases where the insured has not complied with,

a. The most recent Concussion in Sport Group Consensus Statement together with any accompanying guidelines/protocols/tools published by them since
b. Any BHA concussion guidelines/protocols/tools

They define brain trauma as any brain trauma injury, including but not limited to concussion and sub-concussive injuries, as well as neurological conditions or diseases caused by brain trauma.

This Concussion SOP has been developed for the racing environment in-line with emerging evidence including the Amsterdam Concussion in Sport Consensus Statement and will remain under review as new evidence emerges.

It is the responsibility of the medical team to stay up to date with future revisions of this BHA Concussion SOP and to ensure that they have completed the appropriate training to administer the tests/protocols required in their respective roles.

As referenced in BHA Medical indemnity policy 2024.

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9. Annexes/Links:

ANNEX 1 Concussion Protocol Overview – Flowchart

ANNEX 2 Concussion Awareness Course Resources

ANNEX 2.1 Concussion Awareness Course

ANNEX 2.2 Jockeys Head Injury Advice Leaflet

ANNEX 2.3 Concussion Factsheet for jockeys and riders with a current GB licence

ANNEX 2.4 Gradual Return to Racing (GRTRacing) for jockeys and riders with a current GB licence

ANNEX 3 IJF / BHA – Warm up and Movement Preparation Strategies for Race Riding (as per 7/3/2024)

ANNEX 4 Concussion Baseline Centres

ANNEX 5 Racecourse Concussion Protocol

ANNEX 6 Non-Racecourse Recognise and Remove Protocol – Jockeys & Riders with Current GB Licence

ANNEX 7 Dual Task Gait

ANNEX 8 Summary of Assessments

ANNEX 9 BHA Medical Report Form (NMED19) – Concussion Declaration Form

Review date: 1st January 2026

Signed: Date: **25 October 2024**

Dr Jerry Hill - Chief Medical Adviser

Approved:

Director:

Brant Dunshea – Chief Regulatory Officer Date: **25 October 2024**

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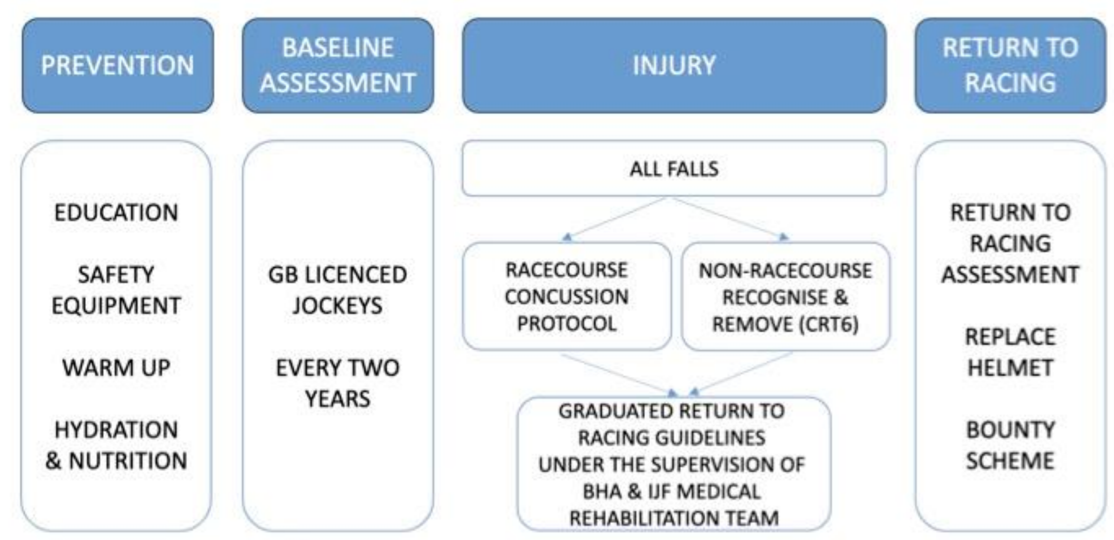
ANNEX 1 Concussion Protocol Overview – Flowchart

CONCUSSION PROTOCOL OVERVIEW - FLOWCHART
JOCKEYS & RIDERS WITH A CURRENT GB LICENCE



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Concussion SOP_Annex 1_Concussion Protocol Overview - Flowchart_v1_30.5.24

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ANNEX 2 Concussion Awareness Course Resources

ANNEX 2.1 Concussion Awareness Course

https://racing2learn.com

Login / Register

Select 'Safeguarding, Diversity and Inclusion and Medical'

Select 'Medical'

Select 'Concussion Awareness Course'

Or scan QR link below:

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ANNEX 2.2 Jockeys Head Injury Advice Leaflet

COMMON SYMPTOMS

HEADACHE | BALANCE PROBLEMS | DIZZINESS

CONFUSED | FATIGUE | NAUSEA

FEELING IN A FOG | MORE EMOTIONAL | LIGHT SENSITIVITY

BLURRED VISION | FEELING SLOWED DOWN | SOUND SENSITIVITY

MEDICAL SUPPORT

BHA Medical Department
020 7152 0138 or 07788 567440

IJF
Oaksey House
01488 674242

Jack Berry House
01653 602090

Peter O'Sullevan House
01638 676200

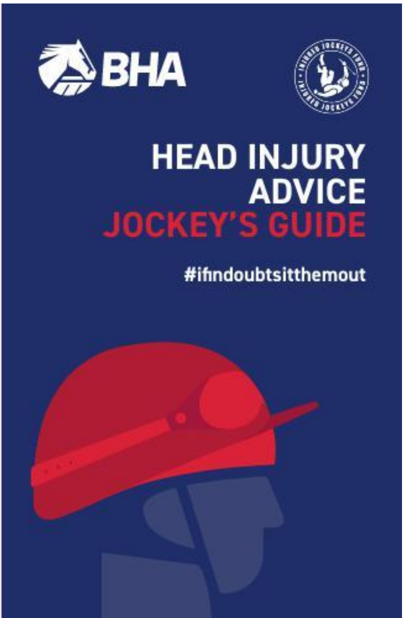
Dial 111 or call your GP

NON-MEDICAL SUPPORT

PJA
www.thepja.co.uk
01635 778108

AJA
www.amateurjockeys.org.uk
01684 218354 or 07789 935399

P2P
www.pointtopoint.co.uk
01793 781990



WHAT IS A CONCUSSION?

Concussion is an injury to the brain and can be very serious.

If concussion is suspected or diagnosed, the person must be removed from any activity with a risk of head impact or injury such as riding.

You should not ride nor be close enough to a horse to be kicked before Stage 5 of the Graduated Return to Racing has been reached.

Be honest with how you are feeling.

Report any symptoms to your physiotherapist or doctor so they can help guide you through your recovery and advise you when it's safe to drive and ride.

✔ DO

- Stay with a responsible adult for the first 24 hours
- Stay within easy reach of a phone
- Keep screen use to a minimum for the first 2 days, eg: phone, computer, TV
- Rest as needed
- Replace your helmet
- Follow the Graduated Return to Racing guidelines under the supervision of the BHA and IJF Medical Rehabilitation teams

✘ DON'T

- DON'T RIDE A HORSE
- Don't drive for the first day*
- Don't do any activities with a risk of head impact or injury, including horse facing yard duties or contact sports
- Don't drink alcohol
- Don't take any drugs unless advised to by a doctor

*Seek medical advice from your IJF/BHA Medical Rehabilitation team before returning to driving or riding

WHEN TO GET HELP

- If symptoms are not starting to settle
- If you have a worsening headache
- If your behaviour is unusual for you
- If you have any weakness or pins and needles in your legs or arms
- If you have vomited more than once within the first 2 day after your injury
- If there is any concern of deteriorating conscious level

IT'S NORMAL

- To have mild symptoms
- For symptoms to come and go
- To not feel like your normal self in the early stages of recovery
- To feel sick or nauseous

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ANNEX 2.3 Concussion Factsheet for jockeys and riders with a current GB licence

CONCUSSION FACTSHEET JOCKEY

JOCKEYS & RIDERS WITH A CURRENT GB LICENCE

Concussion is an injury to the brain that can happen after a fall or impact to the head or body.
Even if it looks like the symptoms are mild, it can have serious effects if not managed well.

WHAT DOES IT FEEL LIKE?

FEELING SLOWED DOWN

SOUND SENSITIVITY

BLURRED VISION

FEELING IN A FOG

LIGHT SENSITIVITY

DIZZINESS

FATIGUE

NAUSEA

HEADACHE

NECK PAIN

WHAT DOES IT LOOK LIKE?

MORE EMOTIONAL

BALANCE PROBLEMS

LOSS OF CONSCIOUSNESS

CONFUSED

GRABBING HEAD

WHAT SHOULD YOU DO?

RECOGNISE

Always look out for signs and symptoms of concussion after a fall from a horse or any injury where there is an impact to the head or body that could potentially cause concussion.

REMOVE

It is not safe to ride or be close enough to a horse to be kicked if concussion is suspected. Remove the person away from danger, ie: away from the horse. Then get medical help.

RECOVER

As with all injuries, the brain takes time to recover. You often feel better before the brain has fully recovered. It's important to be patient and give yourself time to recover properly.

RETURN

Follow the Graduated Return to Racing guidelines under the supervision of the BHA and IJF Medical Rehabilitation teams. The guidelines help you to get your confidence and balance back to normal before returning to racing.

WHEN SHOULD YOU GET MEDICAL HELP?

If any of the following 'red flags' are reported or observed, urgent medical assessment from an appropriate Healthcare Professional onsite or in a hospital Accident and Emergency (A&E) Department is needed.

- Any loss of consciousness
- Deteriorating consciousness (drowsy)
- Seizure or limb twitching
- Increasing confusion or irritability
- Severe or increasing headache
- Severe neck pain
- Any suspicion of a skull fracture
- Current drug or alcohol intoxication
- Difficulty understanding or speaking
- Weakness
- Reduced sensation
- Loss of balance

WHERE CAN YOU GET SUPPORT?

MEDICAL SUPPORT:

British Horseracing Authority, Medical Team:
T: 07788567440

Injured Jockeys Fund:
Oaksey House T: 01488 674242
Jack Berry House T: 01653 602090
Peter O'Sullevan House T: 01638 676200

NHS:
Dial 111

NON-MEDICAL SUPPORT:

Professional Jockeys Association:
W: www.thepja.co.uk
T: 01635 778108

The Amateur Jockeys Association of Great Britain:
W: www.amateurjockeys.org.uk
T: 01684 218354 or 07789 935399

Point-to-Point Authority:
W: www.pointtopoint.co.uk
T: 01793 781990

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ANNEX 2.4 Gradual Return to Racing (GRTRacing) for jockeys and riders with a current GB licence

GRADUAL RETURN TO RACING JOCKEY

JOCKEYS & RIDERS WITH A CURRENT GB LICENCE

Concussion is an injury to the brain and can be very serious. If concussion is suspected or diagnosed, the person must be removed from any activity with a risk of head impact or injury such as riding.

✓ DO

- Stay with a responsible adult for the first 24 hours
- Stay within easy reach of a phone
- Keep screen use to a minimum for the first 2 days, eg: phone, computer, TV
- Rest as needed
- Replace your helmet

✗ DON'T

- DON'T RIDE A HORSE
- Don't drive for the first day*
- Don't do any activities with a risk of head injury, including horse facing yard duties or contact sports
- Don't drink alcohol
- Don't take any drugs unless advised by a doctor

*Seek medical advice from your IJF/BHA Medical Rehabilitation team before returning to driving or riding

WHEN TO GET HELP

- If symptoms are not starting to settle
- If you have a worsening headache
- If your behaviour is unusual for you
- If you have any weakness or pins and needles in your legs or arms
- If you have vomited more than once within the first 2 days after your injury
- If there is any concern of deteriorating conscious level

IT'S NORMAL

- To have mild symptoms
- For symptoms to come and go
- To not feel like your normal self in the early stages of recovery
- To feel sick or nauseous

STAGES

NO RIDING (stages 1–4) | **RIDING** (stages 5–6)

UNDER THE SUPERVISION OF THE IJF AND BHA MEDICAL REHABILITATION TEAM

1. Give yourself time to rest and recover for at least the first 24 hours
2. Return to normal daily activities at home
3. Gradually build up physical and mental activity
4. Increase physical activity and return to study/office work/non horse facing yard duties
5. Preparation for race-riding. Activities should not bring on any symptoms at this stage
6. Return to race-riding. NOT BEFORE A MINIMUM OF 7 DAYS. REQUIRES CLEARANCE FROM IJF/BHA MEDICAL REHABILITATION TEAM

You should not ride, nor be close enough to a horse to be kicked, before Stage 5 of the Graduated Return to Racing has been reached.

WHERE CAN YOU GET SUPPORT?

MEDICAL SUPPORT:

British Horseracing Authority, Medical Team:
T: 07788567440

Injured Jockeys Fund:
Oaksey House T: 01488 674242
Jack Berry House T: 01653 602090
Peter O'Sullevan House T: 01638 676200

NHS:
Dial 111

NON-MEDICAL SUPPORT:

Professional Jockeys Association:
W: www.thepja.co.uk
T: 01635 778108

The Amateur Jockeys Association of Great Britain:
W: www.amateurjockeys.org.uk
T: 01684 218354 or 07789 935399

Point-to-Point Authority:
W: www.pointtopoint.co.uk
T: 01793 781990

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GRADUAL RETURN TO RACING JOCKEY

UNDER THE SUPERVISION OF THE IJF AND BHA MEDICAL REHABILITATION TEAM

NO RIDING OR HORSE FACING TASKS OR ACTIVITIES WITH A RISK OF HEAD IMPACT OR INJURY BEFORE STAGE 5

STAGE 1

FOCUS: GIVE YOURSELF TIME TO REST AND RECOVER

Keep physical and mental activity to a minimum for the first 24 hours. Gentle activities around the house are fine but avoid activities that make your symptoms worse.

Examples of activities for up to 10-15 minutes at a time:

- Short walks
- Reading
- Light chores at home

CRITERIA TO PROGRESS TO STAGE 2

Not before 24 hours after injury and when symptoms have settled to no more than mild when doing light activity, or as advised by the IJF/BHA Medical Rehabilitation team.

STAGE 2

FOCUS: RETURN TO NORMAL DAILY ACTIVITIES AT HOME

Start with 10-15 minutes of activity at a time and build up gradually.

Examples of activities:

- Walking or stationary cycling
- Studying or office work
- Reading

If your symptoms increase more than mildly or don't settle after a short rest, reduce the level and duration of the activity.

CRITERIA TO PROGRESS TO STAGE 3

When you can do normal activities at home and 'easy' thinking activities, eg: reading or phone use, with only mild or no symptoms, or as advised by the IJF/BHA Medical Rehabilitation team.

Give your brain time to recover. Going too quickly can bring on symptoms and might slow your recovery. Mild symptoms are normal provided they settle after a short rest.

STAGE 3

FOCUS: GRADUALLY BUILD UP PHYSICAL AND MENTAL ACTIVITY

Build up to 20-30 minutes of activity at a time.

Examples of activities:

- Jogging, running, stationary cycling
- Body weight gym exercises
  No high intensity exercise and no added weights
- Build up study/office work

CRITERIA TO PROGRESS TO STAGE 4

When you are back to normal study/office work and are able to do light physical activity with only mild or no symptoms, or as advised by the IJF/BHA Medical Rehabilitation team.

STAGE 4

FOCUS: INCREASE PHYSICAL ACTIVITY AND RETURN TO STUDY/OFFICE WORK/NON HORSE FACING YARD DUTIES

Build up exercise intensity.

Example of activities:

- Running, stationary cycling
- Resistance exercises with added weight
- Yard duties that are not horse facing, eg: mucking out an empty stable

CRITERIA TO PROGRESS TO STAGE 5

When you are back to pre-injury level aerobic and resistance exercise, or as advised by the IJF/BHA Medical Rehabilitation team.

RIDING

STAGE 5

FOCUS: PREPARATION FOR RACE-RIDING

Examples of activities:

- Pre-injury level of aerobic and resistance exercise
- Horse facing duties, **HELMET ESSENTIAL**, eg: tacking up, grooming, lunging or leading a horse
- Riding duties with careful horse selection then schooling **(NO RACING)**

Build up the number of lots and speed gradually over time before moving on to schooling. Don't ride if tired, dehydrated or hungry.

At this stage, activities should not bring on any symptoms.

CRITERIA TO PROGRESS TO STAGE 6

NOT BEFORE A MINIMUM OF 7 DAYS AFTER INJURY. REQUIRES CLEARANCE FROM IJF/BHA MEDICAL REHABILITATION TEAM.

STAGE 6

FOCUS: RETURN TO RACE-RIDING

It's important to start slowly after recovering from concussion and build up your number of rides on a card if racing.

Don't ride if tired, dehydrated or hungry.

Most people return to riding without any problems after concussion but if you have any concerns, report them to your IJF/BHA Medical Rehabilitation team.

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ANNEX 3 IJF / BHA – Warm up and Movement Preparation Strategies for Race Riding (as per 7/3/2024)

Warm-up and Movement Preparation Strategies for Race Riding

Why should you warm-up?

- Injury Prevention
- Increase Neuromuscular Activation and Motor Unit Firing
- Increases Heart Rate/Muscles to Prepare the Body for Exercise
- Stimulate the Stretch Shortening Cycle
- Increase Athletic Performance
- Prepare Mentally for Physical Activity

Components of a warm-up

Raise, heart rate, blood flow, respiration rate, core temperature

Activate key muscle groups for specific activity

Mobilse key joints and ranges of motion used in the sport or activity

Potentiate and prime the body and neuromuscular system for specific activity

The R.A.M.P protocol is a structured warm-up system that covers all aspects of a comprehensive warm up routine

Peter O'Sullevan House • 7a Newmarket Road • Newmarket • Suffolk CB8 7NU
Oaksey House • Oxford Street • Lambourn • Berkshire • RG17 8XS
Jack Berry House • Old Malton Road • Malton YO17 7EY

Racing to Recovery

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Race-Ready Warm-up

Skipping Rope x 2-3 mins

Mini Band Lateral Walks x 10es,
Band Pull-Aparts x 10ea

Rollover to V-Sit, Squat to Stand,
Handwalkouts, Leg Cradle to Spiderman
(complete 50s work x 10s rest)

Jump Squats x 10 reps each

SKIPPING

MINI BAND LATERAL WALKS

BAND PULL-APARTS

ROLLOVER TO V-SIT

SQUAT TO STAND

HANDWALKOUTS

LEG TO CRADLE SPIDERMAN

JUMP SQUATS

Please visit our Instagram page for the video link to **Race-Ready Warm-Up:**
@ijfperformance

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ANNEX 4 Concussion Baseline Centres

BRITISH HORSERACING AUTHORITY CONCUSSION CENTRES

TO NEW APPLICANTS: please ensure your GP medical examination is completed and reviewed by BHA Chief Medical Advisor, Dr Jerry Hill, before undertaking your baseline concussion test. If you do your baseline concussion test without prior approval, you may be liable for the full cost.

CENTRE	ADDRESS	TESTER	CONTACT
BRISTOL Yate	Shelley Coles, Bristol	Shelley Coles	**07717501993**
Edinburgh FASIC Sports & Exercise Medicine Clinic	FASIC Sport & Exercise Medicine Clinic, Pleasance Sports Complex, University of Edinburgh, 46 Pleasance, Edinburgh, EH8 9TJ	Sandi Lyall	**0131 6502578**
NEWCASTLE Cognisant	John Buddle Village, Buddle Road, Newcastle upon Tyne, NE4 8AW	Pat Ratcliffe	**0191 2267966**
NEWMARKET Soham	Helen Wilson, Soham, Nr Newmarket	Helen Wilson	**07518071370**
Newmarket Peter O'Sullevan House	Peter O'Sullevan House,7a Newmarket Road, Newmarket, Suffolk, CB8 7NU	Ali Cunnell Sue Pateman	**07888716119** **07723602071**
SWINDON Washbourne House Therapy Centre	Washbourne House Therapy Centre 77a High St, Wroughton SN4 9LB	Helen Nichols	**07392164285**
WARWICK	Patricia Bryniarska's, Warwick	Patricia Bryniarska	**07947472297**
WEST SUSSEX	Three Locations: • The Lodsworth Clinic GU27 2LZ • Pulborough Medical Group RH20 1FG • Fontwell Anna Harrison's Address	Dr Guy Mitchell Di Patterson Anna Harrison	**07974238776** **07930114668** **07543894388**
YORK Yorkshire Sports Medicine Clinic	Yorkshire Sports Medicine Clinic, St John's Playing Field, Hull Rd, York YO10 3LG (Sat Nav YO10 3LF)	James Pacey Sarah Hattee Sarah Rayner Jennifer Debenham	**01904 413669**

WHEN BOOKING PLEASE SPECIFY JOCKEY BASELINE CONCUSSION TEST
PLEASE TAKE PHOTO ID & NOTE THERE IS A 24HR CANCELLATION POLICY
IF YOU CANCEL WITH LESS THAN 24 HOURS NOTICE YOU WILL BE LIABLE FOR THE COST OF £105 PER TEST

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ANNEX 5 Racecourse Concussion Protocol

RACECOURSE CONCUSSION PROTOCOL

ALL FALLS & INJURIES WITH RISK OF CONCUSSION
(ACRM Criterion 1*)

FALLEN RIDER ASSESSMENT → **MAJOR TRAUMA**

CONCUSSION SCREEN

CLINICAL SIGNS
Witnessed or video?
Loss of Consciousness
Alteration of Mental Status
Amnesia
Other Neurological Signs
(ACRM Criterion 2*)

ACUTE SYMPTOMS
Subjective Alteration in Mental Status
Physical Symptoms
Cognitive Symptoms
Emotional Symptoms
(ACRM Criterion 3*)

CLINICAL EXAMINATION
Cognitive: Turner Questions
Balance: Dual Task Gait**
(Oculomotor Impairment)
(ACRM Criterion 4*)

Indications to perform SCAT6:
Best practice, Diagnostic uncertainty, Establish baseline for rehabilitation
(The Rider can be stood-down temporarily for the next race for further assessment)

CLINICAL DECISION
(Refer to ACRM Diagnostic Criteria for mTBI*)

PRECAUTIONARY REPEAT CONCUSSION SCREEN
The Rider can be required to return ONCE, 30-60 minutes after injury. At the discretion of the SRMO/RMO.

CONCUSSION SUSPECTED
STAND DOWN

ADVICE
Head injury leaflet, Transport home plan

INFORM CMA IMMEDIATELY

CONCUSSION NOT SUSPECTED
CONTINUE WITH SPORT

MECHANISM OF CONCERN?
SRMO/RMO Review

YES

NO

RECORD RELEVANT POSITIVE & NEGATIVE FINDINGS ON CONCUSSION SCREEN FORM
Mechanism, Witnessed/Video, Clinical Signs, Acute Symptoms, Clinical Examination (including Turner Questions & Dual task gait**), Clinical Decision, Advice provided.

*Adapted American Congress of Rehabilitation Medicine (ACRM) Diagnostic Criteria for mild traumatic brain injury (2023)
Adapted for racing environment (Imaging not available at point of clinical decision).
**Stepwise assessment order of complexity: Dual task gait > Tandem gait > Tandem stance errors in 20s

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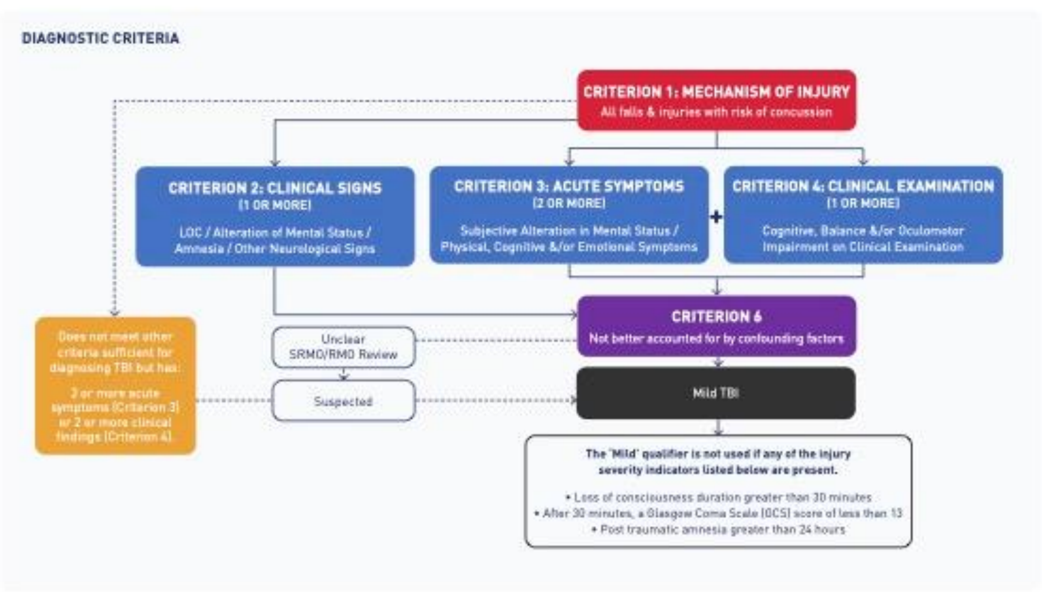
RACECOURSE CONCUSSION PROTOCOL

ADAPTED ACRM DIAGNOSTIC CRITERIA FOR MILD TRAUMATIC BRAIN INJURY



EXPLANATORY NOTES

CRITERION 1: MECHANISM OF INJURY

Traumatic brain injury (TBI) results from a transfer of mechanical energy to the brain from external forces resulting from the (1) head being struck with an object; (2) head striking a hard object or surface; (3) brain undergoing an acceleration/deceleration movement without direct contact between the head and an object or surface; and/or (4) forces generated from a blast or explosion.

Notes: Criterion 1 can be met by direct observation (in person or video review) or collateral (witness) report of the injury event, review of acute care records, or the person's recount of the injury event during an interview.

CRITERION 2: CLINICAL SIGNS

The injury event causes an acute physiological disruption of brain function, as manifested by one or more of the clinical signs listed below.

i. Loss of consciousness immediately following injury (eg, no protective action taken on falling after impact or lying motionless and unresponsive).

ii. Alteration of mental status immediately following the injury (or upon regaining consciousness), evidenced by reduced responsiveness or inappropriate responses to external stimuli; slowness to respond to questions or instructions; agitated behavior; inability to follow two-part commands; or disorientation to time, place, or situation.

iii. Complete or partial amnesia for events immediately following the injury (or after regaining consciousness). If post-traumatic amnesia cannot be reliably assessed (eg, due to polytrauma or sedating analgesics), retrograde amnesia (ie, a gap in memory for events immediately preceding the injury) can be used as a replacement for this criterion.

iv. Other acute neurologic sign(s) (eg, observed motor incoordination upon standing, seizure, or tonic posturing immediately following injury).

Notes: Criterion 2 can be met by direct observation (in person or video review), collateral (witness) report, review of acute care records, or when none of these are available, the person's recount of the injury event.

CRITERION 3: ACUTE SYMPTOMS

The physiological disruption of brain function is manifested by 2 or more new or worsened symptoms from the list below.

i. Acute subjective alteration in mental status: feeling confused, feeling disoriented, and/or feeling dazed.

ii. Physical symptoms: headache, nausea, dizziness, balance problems, vision problems, sensitivity to light, and/or sensitivity to noise.

iii. Cognitive symptoms: feeling slowed down, "mental fog," difficulty concentrating, and/or memory problems.

iv. Emotional symptoms: uncharacteristic emotional lability and/or irritability. The symptoms may be from one or more categories (ie, experiencing 2 symptoms within a single category is sufficient). Other symptoms may be present, but they should not be counted toward Criterion 3. The onset of acute subjective alteration in mental status occurs immediately following the impact or after regaining consciousness. The onset of other symptoms (physical, cognitive, and emotional) may be delayed by a few hours, but they nearly always appear less than 72 hours from injury.

Notes: Criterion 3 can be met by (1) review of acute care documentation of the injured person's acute symptoms; (2) interviewing the injured person about the first few days following injury; (3) having the injured person complete a self-report rating scale documenting symptoms during the first few days following injury; or (4) collateral observation for an individual who cannot accurately report symptoms due to developmental stage (eg, children under 5 years old) or pre-injury disability.

CRITERION 4: CLINICAL EXAM

The assessment findings listed below can also provide supportive evidence of brain injury.

i. Cognitive impairment on acute clinical examination.

ii. Balance impairment on acute clinical examination.

iii. Oculomotor impairment or symptom provocation in response to vestibular-oculomotor challenge on acute clinical examination.

iv. Elevated blood biomarker(s) indicative of intracranial injury.

Notes: Clinical and laboratory tests that meet standards of reliability and diagnostic accuracy should be considered for Criterion 4. Impairment in Criterion 4i-iii is defined as a clinically meaningful discrepancy between post-injury test performance and age-appropriate normative reference data, or where available, pre-injury test performance. The diagnostic sensitivity of most clinical and laboratory tests decreases over the first 72 hours following injury and the rate of sensitivity decline differs between specific tests.

CRITERION 5: OMITTED AS NEUROIMAGING NOT AVAILABLE AT POINT OF CLINICAL DECISION

CRITERION 6: NOT BETTER ACCOUNTED FOR BY CONFOUNDING FACTORS

Confounding factors, including pre-existing and co-occurring health conditions, have been considered and determined to not fully account for the clinical signs, acute symptoms, and clinical examination and laboratory findings that are necessary for the diagnosis.

Notes: A clinical sign only qualifies for Criterion 2 when it is not better accounted for by acute musculoskeletal pain, psychological trauma, alcohol or substance intoxication, pulmonary or circulatory disruption, syncope prior to fall, or other confounding factors. Symptoms should only be counted toward Criterion 3 when they are not better accounted for by drug, alcohol, or medication use; co-occurring physical injuries (eg, musculoskeletal injury involving the neck or peripheral vestibular dysfunction) or psychological conditions (eg, an acute stress reaction to trauma), pre-existing health conditions; or symptom exaggeration. Criterion 4 findings must not be better accounted for by drug, alcohol, or medication use; co-occurring physical injuries or psychological conditions; pre-existing health conditions; or factors influencing the validity of the symptom reporting or test results.

General Notes: Consideration should be given to cultural and linguistic differences in symptom reporting and test performance. Caution is warranted when applying the diagnostic criteria for mild TBI to young children and individuals with pre-injury cognitive and/or communication impairments. Due to developmental stage (eg, children under 5 years old) or pre-injury disability, an individual may not be able to accurately report symptoms in Criterion 3; thus, this criterion could be met based on proxy report or observation of related behaviors (eg, changes in appetite or behaving out of character). An injured person's behavior should also be interpreted in the context of their developmental stage and pre-injury functioning. Clinical and laboratory test interpretation requires age-appropriate scales and/or cut-off scores.

Reference: Silverberg, ND., et al. (2023). The American Congress of Rehabilitation Medicine Diagnostic Criteria for mild traumatic brain injury. Arch. Phys. Med. Rehabil., 104(8) pp1343-1355. (Adapted for racing environment. **Criteria 5 omitted as neuroimaging not available at point of clinical decision**)

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ANNEX 6 Non-Racecourse Recognise and Remove Protocol – Jockeys & Riders with Current GB Licence

CONCUSSION RECOGNITION TOOL 6 (CRT6) FLOWCHART
JOCKEYS & RIDERS WITH A CURRENT GB LICENCE

BHA

RECOGNISE

ALL FALLS & INJURIES WITH A RISK OF CONCUSSION
Including impacts to the head or body

BASIC FIRST AID:
Any Airway, Breathing &/or Circulation problems?

No

ANY RED FLAGS?

No

ANY VISIBLE SIGNS OR SYMPTOMS?

No

CONCUSSION IS NOT SUSPECTED

Normal riding & yard duties

Non-urgent medical care for other injuries as/if required (eg: GP)

SUSPECTED SYMPTOMS LATER ON
(Symptoms might start later or come and go)

Yes

Yes

Yes

CONCUSSION IS SUSPECTED

URGENT MEDICAL ASSESSMENT REQUIRED
(Ambulance / A&E / HCP Onsite)

REMOVE

INFORM CMA IMMEDIATELY

DO'S & DON'TS
CONCUSSION FACTSHEET (JOCKEYS)

IMMEDIATE REMOVAL FROM DANGER / HORSES

Yes

GRADUAL RETURN TO RACING GUIDELINES
UNDER THE SUPERVISION OF BHA & IJF MEDICAL REHABILITATION TEAMS

Red Flags:

Neck pain or tenderness
Double vision
Loss of consciousness
Weakness or tingling/burning in arms or legs
Deteriorating conscious state
Severe or increasing headache
Increasingly restless, agitated or combative

Visible Signs & Symptoms:
Any one of the following may suggest a concussion

Physical Symptoms:	Change in Emotions:	Change in Thinking:
Headache	More emotional	Difficulty concentrating
"Pressure in head"	More irritable	Difficulty remembering
Balance problems	Sadness	Feeling slowed down
Nausea or vomiting	Nervous or anxious	Feeling like "in a fog"
Drowsiness		Confusion

URGENT / EMERGENCY: CALL 999

NON-URGENT: CALL NHS 111 OR YOUR GP

First Aid Contact

Name:

Phone Number:

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Concussion SOP_CRT6 Flowchart_V1_7.3.2024

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ANNEX 7 Dual Task Gait

DUAL TASK GAIT INSTRUCTIONS

Dual task gait tests the ability to perform a balance and coordination task and a cognitive task concurrently. The ability to perform complex tasks is essential in a sporting context. It provides an opportunity to screen for more subtle presentations of concussion that might not be identified using single task tests.

Stepwise approach in decreasing order of complexity:

Dual task gait is the most complex version of the stepwise approach and should be selected in all cases unless there is an alternative (non-concussion related) medical or practical reason precluding it's use.

In cases where there is an alternative medical or practical reason precluding the administration of dual task gait, select the most appropriate starting point and scale up to the most complex version. It should be noted that, in the absence of an alternative medical reason, the inability to perform dual task gait should be considered as concussion in the context of concussion screening and managed accordingly until proven otherwise.

Set up:

- 3m line of 3.8cm tape on firm surface (ideally in a quiet area with no/minimal visual distractions)

Instructions:

- "Walk heel-to-toe quickly to the end of the tape, turn around and come back as fast as you can without separating your feet or stepping off the line, whilst naming as many racecourses as you can" (Hands on hips)

Fail (one or more):

- Overt separation of heel and toe
- Stepping off the tape
- Reaching for the wall or assessor to balance

Record:

- Time taken to complete the test
- No need to record cognitive accuracy but if they struggle to walk and talk then this might indicate difficulty with dual/complex tasks and, in this context, might be a sign of concussion

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CONCUSSION SOP_Dual Task Gait Instructions_v1_18.3.24.pptx

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ANNEX 8 Summary of Assessments

BHA & IJF GRADUAL RETURN TO RACING SUMMARY OF ASSESSMENTS

	Assessment						
		Racecourse			IJF		
	Baseline	Concussion Screen	Detailed Assessment	CMA Follow up	Triage	Initial & Rehabilitation	Return to Racing
Neuropsychology:							
Pen & paper; ImPACT	✓						✓
BHAGI Fallen rider assessment		✓					
Injury details/trajectory		✓		✓	✓	✓	
Signs & symptoms	✓	✓	✓	✓	✓	✓	
Red flags		✓					
Turner questions	✓	✓					
Coordination & ocular/motor screen			✓				
Cervical spine assessment			✓			✓	
Neurological screen:							
Screen for VBI risk (5Ds & 3Ns)*					✓	✓	
Cranial nerves/ UL/ LL						✓ (blue)	
Screen for complications				✓			
Further investigations if/as indicated				✓			
Cognitive:							
Orientation; Immediate memory; Delayed recall	✓		✓			✓ (blue)	
Concentration:							
Digits backwards; Months in reverse	✓		✓			✓ (blue)	
Coordination & balance:							
mBESS (hard floor, field)	✓		✓				
mBESS (foam)							
MCTSIB						✓ (yellow)	
Tandem gait	✓						
Dual task gait	✓	✓*				✓ (green)	
Vestibular-oculomotor function:							
Objective assessment (Where available)	✓					✓	✓
Full VOMS						✓ (yellow)	
Dix Hallpike						✓ (yellow)	
Orthostatic vital signs						✓ (blue)	
Buffalo concussion &/or fitness test						✓ (green)	
Wellness screen:							
Wellness screening questions**					✓	✓ (yellow)	
Anxiety; Depression; Sleep						✓ (blue)	
Specialist reivew:							
Neuropsycholgist	✓						✓
Neurologist							✓
CMA							✓

Key:
- ✓ (red) Administer during this assessment
- ✓ (yellow) Ideally Initial Assessment / Prior to RTR Assessment
- ✓ (green) Prior to RTR Assessment
- ✓ (blue) As clinically indicated
- ✓* Stepwise assessment order of priority: Dual task gait > Tandem gait > Tandem stance

*Consider in conjunction with concussion symptoms evaluation and report any concerns immediately to CMA and provide appropriate advice.

**How are you feeling in yourself? Are you eating and sleeping at normal times? Do you feel depressed?

Clinical reasoning should be applied to each case individually.
Cautions/contraindications should be discussed as indicated with the CMA.

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CONCUSSION SOP_BHA & IJF GRTRacing Summary of Assessments_v2_12.8.24.pptx

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ANNEX 9 BHA Medical Report Form (NMED19) – Concussion Declaration Form

CONFIDENTIAL – MEDICAL REPORT IN CONNECTION WITH AN APPLICATION TO RIDE IN RACES UNDER THE RULES OF RACING, THE POINT-TO-POINT OR ARABIAN RACING REGULATIONS

COMPLETED FORM TO BE EMAILED TO rqcmedicals@britishhorseracing.com

TYPE OF LICENCE/PERMIT APPLIED FOR:
Professional

Full Jump ☐ Conditional ☐
Full Flat ☐ Apprentice ☐

Amateur Registration
Under Rules Flat Races ☐
Steeple Chases and Hurdle Races ☐
Both - Flat and Steeple Chase/Hurdle Races ☐
Point to Point ☐
Arabian ☐

Surname .... All Forenames ....
(Previous surname, e.g. maiden name) ....
Date of Birth.. Age .... NHS Number..
Home Address ....
....
Tel no.. E-mail Address ....
Next of Kin Name.. Next of Kin Tel no. ....
Next of Kin Relationship to Applicant..
DETAILS OF PREVIOUS LICENCES/PERMITS HELD:-

What licence(s)/permit(s) to race ride do you currently hold?
....

List of any licences/permits held in the past of another type
....

Date of first licence/permit issued by the Jockey Club/Horseracing Regulatory Authority/British Horseracing Authority/Arabian Racing Organisation.
....

Have you ever had a licence refused or deferred by the Jockey Club/Horseracing Regulatory Authority/British Horseracing Authority/ Arabian Racing Organisation on medical grounds?

Date .... Reason ....Date re-instated........................

Date of last medical examination by own GP or Jockey Club/Horseracing Regulatory Authority/British Horseracing Authority Chief Medical Adviser in support of an application for a licence/permit
....

Do you hold a valid drivers licence? yes/no Has your licence ever been revoked or suspended for medical reasons? yes/no

If yes, please state date(s) and reasons..

INTRODUCTION

Race riding is an activity that requires jockeys to exercise physical skills and judgement of an extremely high order. Any failure in a jockey's performance may not only put his/her life in danger but may also put others at risk of injury, permanent disability or death. The British Horseracing Authority requires that all jockeys applying for a licence or permit to ride under Rules or Point-to-Point or Arabian Racing Regulations provide a Declaration of Health and appropriate medical evidence of his/her 'fitness to ride'.
Each application is subject to scrutiny by the British Horseracing Authority's Chief Medical Adviser who may request additional medical reports or specialist examination(s) as appropriate. **All costs incurred in providing this information are the responsibility of the applicant.** When sufficient information is available, a medical recommendation regarding each applicant is made to the Licensing Committee of the Point-to-Point Authority, British Horseracing Authority or Arabian Racing Organisation for their consideration.
The decision to grant or refuse a licence or permit rests with the British Horseracing Authority. Such decisions may be subject to a Medical Review Procedure where appropriate.
Existing licence or permit holders who, during the period of the licence or permit, suffer a significant injury (e.g. concussion, fracture) or significant illness (e.g. cancer, hepatitis) that could in any way affect their fitness to ride, must inform the British Horseracing Authority Chief Medical Adviser at the earliest opportunity. This applies to any significant illness or injury - regardless of whether or not it resulted from a racing incident (e.g. road traffic accident, hacking, eventing, on the gallops, winter sports, hang gliding etc.)

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STATEMENT ON CONCUSSION

Concussion is a minor traumatic brain injury. In the short term concussion reduces performance and there is some evidence that repeated concussions may lead to long term impairment of brain function. Horse racing currently has one of the highest rates of concussion in sport.

If you believe you or a colleague may be concussed from a fall on the gallops or on a racecourse you should seek medical advice. It is important that you do not return to race riding while you are still recovering from concussion and it is suggested you undergo rehabilitation with a suitably trained Physiotherapist.

If you suspect that you have suffered a concussion please contact the BHA Medical Department for advice on how best to manage it. A concussion regardless of where it is sustained is a reportable injury under the Rules of Racing. (Rider Manual (D) Part 2, 13)

Current helmets do not prevent concussion. However, if you have suffered a concussion you should replace your helmet as its strength will have been impaired and for concussions diagnosed on the racecourse the BHA through the Helmet Bounty Scheme will help pay for a replacement.

To return to race riding after a concussion the BHA will arrange for you to undergo post-concussion testing and see a Neurologist.

I acknowledge that I understand the potential risk that I am exposing myself to by participating in race riding.

(Name)………………………………………… (Signature)………………………………………

(If under 18, this must be signed by a parent or guardian)

Chief Medical Adviser

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