

# CONCUSSION AND RETURN TO RIDING GUIDELINES

*To make this document as easy to read as possible, we use the terms 'ride', 'riders', 'riding' and 'participants' to include anyone who comes into contact with horses as part of their work, sport or recreational activity.*

## INTRODUCTION

The following guidance is intended to provide information on how to recognise concussion, and how concussion should be managed, from the time of injury through to a safe return to equestrian activity. While this document contains general medical information, it doesn't constitute medical advice and should not be relied on as such. This guidance is not a substitute for medical advice from a qualified medical practitioner or healthcare provider.

While helmets save lives, concussions can still occur and can threaten the long-term health of participants.

At all levels of equestrian activity, a participant must be immediately stood down from riding and any potentially strenuous mental and physical activities if they are suspected to have a concussion.

## IF IN DOUBT, SIT THEM OUT

## WHAT IS A CONCUSSION?

Concussion is an injury to the brain resulting in a disturbance of brain function. It can be caused by a direct blow to the head, but can also occur when a blow to another part of the body results in rapid movement of the head, such as whiplash type injuries.

Loss of consciousness does not always occur – in fact, it occurs in less than 10% of concussions.

Concussions can happen to participants at any age. However, children and adolescents (18 and under):

- are more susceptible to brain injury
- on average take longer than adults to recover – usually four weeks compared to two weeks
- have more significant memory and mental processing issues
- are more susceptible to rare and dangerous neurological complications, including death caused by a single or second impact.

A history of previous concussion increases the risk of further concussions, from which it may also take longer to recover.

## HOW TO RECOGNISE A CONCUSSION

The following signs and symptoms of a concussion are a broad guideline and each person's presentation may differ to some degree. Remember that signs/symptoms may take hours or sometimes days to appear.

Possible signs observed by officials, coaches and/or family	Symptoms reported by the participant
<b>Physical</b> <ul style="list-style-type: none"><li>• slowed reaction time</li><li>• inability to perform or poor performances</li><li>• appears dazed</li><li>• slurred speech</li><li>• loss of consciousness or lack of responsiveness</li><li>• poor coordination/balance</li><li>• drowsiness</li><li>• amnesia</li></ul>	<b>Physical</b> <ul style="list-style-type: none"><li>• headache or pressure</li><li>• neck pain</li><li>• nausea/vomiting</li><li>• finding it difficult to balance</li><li>• sensitivity to light or noise</li><li>• feeling sluggish or slowed down</li><li>• ringing in the ears</li><li>• fatigue</li></ul>
<b>Cognitive</b> <ul style="list-style-type: none"><li>• confusion</li><li>• easily distracted</li><li>• forgets instructions</li><li>• difficulty concentrating</li><li>• doesn't know the activity, class etc. they were participating in</li></ul>	<b>Cognitive</b> <ul style="list-style-type: none"><li>• issues concentrating</li><li>• memory problems</li><li>• confusion</li><li>• dazed</li></ul>
<b>Behavioural</b> <ul style="list-style-type: none"><li>• changes in mood, behaviour or personality</li><li>• strange, inappropriate emotions (e.g. easily angered, laughing, crying etc.)</li></ul>	<b>Behavioural</b> <ul style="list-style-type: none"><li>• irritable or unusually emotional</li><li>• nervous, anxious, depressed</li><li>• drowsy</li><li>• change in sleep patterns</li></ul>

The Pocket Recognition tool (CRT5) may be used to aid assessment (see useful links section).

## WHAT TO DO NEXT

If you believe someone has suffered a concussion following a fall from a horse, or a blow to the head, face, neck or body, take immediate action.

Always follow the four Rs...

- **Recognise** the signs and symptoms
- **Remove** the injured person from the scene
- **Recover** until all symptoms have been resolved
- **Return** gradually to activity

### Recognise

Immediately following a direct or indirect blow to the head, any of the following could suggest a possible concussion:

- Lying motionless
- Delay in getting up
- Facial injuries
- Blank or vacant expression
- Disorientation or confusion
- Slow, laboured or wobbly movements
- Finding it difficult to balance

The following may also start to appear over time:

- Reduced reaction time
- Sensory sensitivity
- Drowsiness or fatigue
- Amnesia or memory problems
- Difficulty concentrating
- Feeling sluggish or slow
- Dizziness
- Confusion
- Heightened emotions
- Changes to mood, personality or behaviour
- Slurred speech
- Ringing in the ears
- Lack of responsiveness

The signs and symptoms above are a broad guideline and each person's presentation may differ to some degree. Remember that signs/symptoms may take hours or days to appear.

## Remove

If the person is unconscious, seek immediate help from a licensed medical professional. If one isn't available, dial 999 and follow the call handler's instructions. This also applies if the person is suffering from any of these **red flag symptoms**:

- Neck pain
- A severe or worsening headache
- Double vision
- Weakness or tingling sensation in the limbs
- Vomiting
- Loss or deterioration of consciousness
- Seizure or convulsions
- Restless, combative or agitated behaviour

Due to the risk of spinal cord injuries, do not attempt to move the person, or remove their riding hat or other protective equipment, unless you're trained to do so. The only exception to this is if they're having difficulty breathing.

If the person is conscious and showing no red flag symptoms:

1. Prevent them from getting back on their horse or continuing their activity. They must not be allowed to leave the venue by themselves, or be allowed to operate or drive a motorised or motor-assisted vehicle.
2. Contact their parent/guardian or emergency contact to notify them of the incident, then stay with them until that person arrives.
3. Monitor and document any physical, cognitive or behavioural changes they might exhibit.
4. Instruct the parent/guardian or emergency contact that the individual needs to be seen by a medical practitioner.

Anyone with a concussion or suspected concussion should not:

- be left alone in the first 24 hours after the incident
- consume alcohol in the first 24 hours after the incident, and thereafter should avoid alcohol until free of all concussion symptoms
- drive a motor vehicle and or return to driving until provided with medical or healthcare professional clearance or, if no medical or healthcare professional advice is available, should not drive until free of all concussion symptoms.

## Recover and return

The first 48 hours are critical to recovery. The concussed person should be advised to rest for 48–72hrs and screen use should be minimised for 48hrs. This involves resting the body and the brain from:

1. **Physical activities**, including riding, running, cycling, swimming and any physical work.
2. **Mental activities**, including school work, reading, watching television and playing video games, computer work, browsing social media and using a mobile phone.

Light physical activity can then be started after the 48–72hr period and this has been shown to aid recovery. A graduated return to sport can be started once the participant has returned to normal education or work – for more information, check the [ACoRN traffic light system](#).

**IF ANY SYMPTOMS PERSIST AFTER 21 DAYS, PLEASE SEE YOUR GP**

## STANDARD RETURN TO RIDING PATHWAY

The participant should not move onto the next stage in the recovery pathway if any symptoms are still in effect or become evident during the activity or the following day. If symptoms are experienced either during the activity or the following day after introducing a new activity, return to the stage where symptoms were not triggered and only move to the next stage when you are able to do so without experiencing any symptoms.

Rehab. stage	Time period	Suggested exercise	Objective
Stage 1 Complete rest	48 hours post-concussion	No activity at this stage	Recovery
Stage 2 Light physical activity	48–72 hours post-concussion	Short bouts of light activity at a level where you can speak in short sentences, such as walking at a comfortable pace, easy stationary bike or light swimming. This can increase gradually over the following days. No resistance training or high-intensity exercise.	Increase heart rate without any increase in symptoms
Stage 3 Sport-specific exercises	Not before day 7 post-concussion	No activity that could result in head impact. Exercises could include walking/jogging a course or pattern without a horse, grooming, stretching or practicing riding position. Helmet use when in contact with horse. No resistance training or high-intensity training.	Add head movement and improve balance
Stage 4 Training drills	Not before day 14 post-concussion	Progression to more complex training drills, which may include resistance training and increasing the intensity of exercise. Exercises could include yard chores, grooming or groundwork.	Exercise, coordination and cognitive load

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Rehab. stage	Time period	Suggested exercise	Objective
Stage 5 Full practice	Not before day 21 post-concussion	Resume full schedule of riding on a suitable horse in calm weather conditions (no young or spooky horses). No unsupervised riding or competitions. Helmet use mandatory.	Restore confidence and assess functional skills
Stage 6 Return to regular riding	Following Stage 5	Return to competition if applicable.	Recover

## FURTHER HELP

If concussion symptoms aren't improving after 21 days, see your GP. Depending on your symptoms and their examination findings, they may choose to offer treatment or refer you to a specialist concussion service for further investigation and treatment. Some of these services will be consultant-led and allow access to further investigations, while others will be specialist physiotherapy-led. The majority of these services won't be available through the NHS. Deciding on the most suitable service is best done in conjunction with your GP.

## USEFUL LINKS

- [Berlin Concussion Group Consensus Statement](#)
- [Sport concussion assessment tool \(SCAT\) 5](#)
- [Paediatric SCAT 5](#)
- [Pocket concussion recognition tool \(CRT5\)](#)
- [Scottish concussion guidelines](#)

## RESOURCES

- [FEI: Concussion information for health care professionals](#)
- [SMA: Concussion advice](#)

## APPENDIX 1 – ADVANCED CARE SETTINGS

In some circumstances, it is possible to undertake an accelerated return to riding that, in the case of the person being symptom-free, may take place over six days. This is called the enhanced care setting and this must include the following minimum criteria to qualify:

- There is a doctor with training and experience in the management of concussion in sport available to closely supervise the person's care and graduated return to play (GRTR), and to clear the person prior to return to sport.
- There is a structured concussion management programme in place as outlined below:
  1. Baseline sport concussion assessment tool (SCAT) and/or computerised neuro-psychometric/cognitive testing of the person has been conducted prior to the injury.
  2. Clinical serial multimodal assessment of the person occurs post-concussion to guide the recovery protocol.
  3. A formalised GRTR programme with regular SCAT or equivalent assessments is followed and recorded in the person's medical records.
  4. The person has access to a multi-disciplinary team including physiotherapy, neuropsychology, neurology and/or neurosurgery.
  5. A formal and documented concussion education programme exists for coaches and participants in the club or team involved.
  6. Clinical multimodal assessments documented including repeat SCAT 5 testing, vestibular ocular motor screening (VOMS), modified balance testing (mCTSIB), and buffalo testing to determine level of activity, a cervical spine assessment, and a concussion symptom score.

If any element of the above criteria is absent, the person should follow a standard return to riding pathway. It is never appropriate for someone under the age of 16 to follow this enhanced pathway.