MOTORCYCLING AUSTRALIA

Concussion Management Guidelines

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CONCUSSION MANAGEMENT GUIDELINES

The Motorcycling Australia guidelines on sport-related concussion are essential to provide clear and comprehensive instructions for our administrators, officials, participants, coaches and healthcare personnels.

Concussion is a type of traumatic brain injury caused by biomechanical forces that can result from the high-risk nature of motorcycle sports. It can be caused by any force from a minor 'knock' to a heavy and severe impact. It has the possibility to significantly affect an individual's health, performance and overall quality of life. These guidelines are designed to empower all stakeholders with knowledge and procedures to effectively recognise, respond to, and manage incidents of concussion.

These guidelines are based on the International Consensus statement on Concussion in Sport and incorporate Australian guidelines from Concussion and Brain Health Position Statement 2023 found at https://www.concussioninsport.gov.au/

These guidelines follow the 11 'Rs' of sport-related concussion management:

RECOGNISE, REDUCE, REMOVE, REFER, RE-EVALUATE, REST, REHABILITATE, RECOVER, RETURN-TO-LEARN/RETURN-TO-SPORT, RECONSIDER and RESIDUAL EFFECTS

RECOGNISE
Sport-related concussion is a traumatic brain injury caused by a direct blow to, or sudden deceleration or rotation of, the head, neck or body resulting in an impulsive force being transmitted to the brain that occurs in sports and exercise-related activities.

Symptoms and signs may present immediately, or evolve over minutes or hours after the incident, and are commonly resolved within days but may be prolonged to weeks, months or even years.

Initial assessment of any person involved in an incident should first follow standard first-aid processes. Additional trauma management procedures including Advanced Trauma Life Support and/or Prehospital Trauma Life Support may be required depending on the clinical situation.

Emphasis initially should be on assessing Danger at the scene, Responsiveness of the injured, and assessment and management of Airway, Breathing and Circulation.

An unconscious/unresponsive person should not be moved unless for airway management and/or reasons of safety.

Assessment for a spinal and/or spinal cord injury is a critical part of the initial evaluation. Only do so if you are trained.

Do not remove a helmet or any other equipment unless trained to do so safely, or for reasons of immediate risk to the injured e.g. airway management.

It is the responsibility of the rider or their guardian to inform Motorcycling Australia of any concussion that occurs outside of a Motorcycling Australia activity or event.

REDUCE
Riders and teams should be aware of current Motorcycling Australia safety equipment regulations and homologation requirements. Appropriately homologated and well-fitting safety apparel and equipment is important to reduce the risk of injury – especially helmets and approved braces.

Consideration should be given to additional safety equipment (e.g. mouthguard) in events with jumps and/or significant vertical impact including off-road, motocross and trial events.

Optimal concussion management can reduce the risk of future concussion.

REMOVE

"If in doubt, sit them out".

Any person suspected of concussion should be removed from riding until they have been evaluated. This may include observations of:

- Mechanism of injury – Any incident that results in a significant impact to the head.
- Reported or witnessed features of concussion such as those described in the Concussion Recognition Tool (below).

Mandatory Exclusion periods will be applied if any of the following symptoms or signs are reported or witnessed:

- Loss of consciousness.
- Lying motionless for >5 sec.
- No protective action was taken by the athlete in a fall to the ground, directly observed or on video.
- Impact seizure or tonic posturing (abnormal outstretched limbs)
- Confusion, disorientation.
- Memory impairment/amnesia.
- Balance disturbance or motor incoordination (e.g. ataxia - clumsy movement/walking).
- Athlete reports significant, new, or progressive concussion symptoms dazed, blank/vacant stare or not their normal selves.
- Behaviour change atypical of the athlete.

Further Evaluation of possible signs or symptoms of concussion can be performed by anyone but preference by persons trained in first aid and/or concussion assessment.

First Aid, Officials, Teams and Crew

- Use Concussion Recognition Tool 6 (CRT6).

Healthcare Providers

- If the person is 13yo or older Use Sports Concussion Assessment Tool 6 (SCAT6).
- If the person is less than 13yo Use Child Sports Commission Assessment Tool 6 (Child SCAT6).

For SCAT6/CRT6 - Suggested modifications to the Maddocks/Awareness questions for the motorcycling participant/official.

"Where are we at today?"

"What session were you riding in"

"What was the turn/stage/section that your incident occurred on?"

"What circuit/event were you last at prior to this one?"

"What was your result at the last event you attended?"

Failure to answer any of these questions correctly may suggest a concussion.

Post Evaluation

- All "Red Flag" symptoms and signs should have an ambulance called urgently if no doctor is immediately present.

Unclear or suspected of concussion

- Refer for further evaluation "If in doubt, sit them out".
- Licence is suspended pending further evaluation and/or clearance.
- Suspend on RiderNet.

NOT suspected of concussion

- Cleared to return to competition.

REFER
"If in doubt, sit them out". If there is any doubt in the case of suspected concussion, then the person should be removed from the sport until they are referred to a health care provider for further evaluation.

All cases of suspected concussion should be referred to a healthcare provider. Initially, if not diagnosed by a healthcare provider at an event, this referral should be to a doctor within 24 hours or to an Emergency Department depending on the severity of symptoms.

Those with clear concussion symptoms should be referred to their own doctor and/or emergency department as well as a healthcare provider experienced in the assessment and management of concussion.

RE-EVALUATE
SCAT6/Child SCAT6 are most useful for evaluation and re-evaluation in the first 72 hours, although their utility still exists for up to 5-7 days.

The severity of acute and sub-acute symptoms are predictors of slower recovery.

Re-evaluation by a specialist or healthcare provider after the initial 72 hours and/or diagnosis of concussion may include the use of office-based assessment tools and/or other assessment tools including imaging and functional assessments.

More expansive office-based assessment tools include:
- Sports Concussion Office Assessment Tool 6 (SCOAT6).
- Child Sports Concussion Office Assessment Tool 6 (Child SCOAT6).

REST
Relative rest (continue your activities of daily living) and reduced screen time are encouraged for the first 48 hours. Strict rest, dark room and total screen restriction is no longer recommended.

Light physical activity is encouraged even if it mildly exacerbates symptoms. If moderate to severe symptoms occur, then activity should be reduced.

Individuals should systematically increase the levels of physical activity and exertion based on their symptoms and exacerbation of those symptoms.

Discussion and clear planning with their healthcare provider is strongly recommended.

REHABILITATE
Symptoms lasting more than 10 days should be referred to a specialist for a detailed evaluation and specific rehabilitation program.

Active symptoms persisting for greater than four weeks in children and adolescents should be referred for multi-specialist input.

Symptoms that recur as part of a Return-to-Sport or Return-to-Learn may also benefit from specific rehabilitation programs.

RECOVER
Recovery and rehabilitation should be monitored and coordinated by interdisciplinary teams including medical practitioners and physiotherapists as well as concussion specialists as required.

Assessment of clinical recovery should incorporate three components:
- Resolution of symptoms.
- Resolution of symptoms under dynamic load including maximal exercise and cognitive load.
- Completion of a Return-To-Sport program.

RETURN-TO-SPORT
No competitor diagnosed with concussion may return to sport without clearance by a medical practitioner AFTER completing a Return-to-Sport program.

From the perspective of brain development, an adult is considered to be 19 years and over

- The mandatory minimum period of exclusion is 10 days from diagnosis, including the day of the incident. Permitted to return to sport on the 11th day.

From the perspective of brain development, a child is considered be 18 years and younger

- The mandatory minimum period of exclusion is 20 days from diagnosis, including the day of the incident. Permitted to return to sport on the 21st day.

Return-To-Learn (RTL) programs are not required for all individuals but may be of benefit to those who have difficulty with cognitive tasks post-concussion and those that have exacerbation of symptoms during screen time and when performing cognitive tasks.

Detailed Return-To-Sport (RTS) programs should be followed in a stepwise fashion with increasing levels of exertion, cognitive load and RTS and RTL should occur in parallel.

The Return-to-Sport Protocol should be supervised by a medical practitioner. If this is their second concussion within (6) six months or third concussion ever, then a specialist review by a neurologist familiar with concussion management or concussion specialist is required immediately. Those with three or more concussions require yearly review and clearance by the specialist.

Please see the appendices for RTS and RTL procedures.

RECONSIDER
Effects of concussion and repeated concussion may have long term health implications. Specialist consultation is encouraged and is mandated in those with repeated concussions. An assessment of the balance of risks and rewards should be considered including possible long-term effects of concussion and repeated concussion.

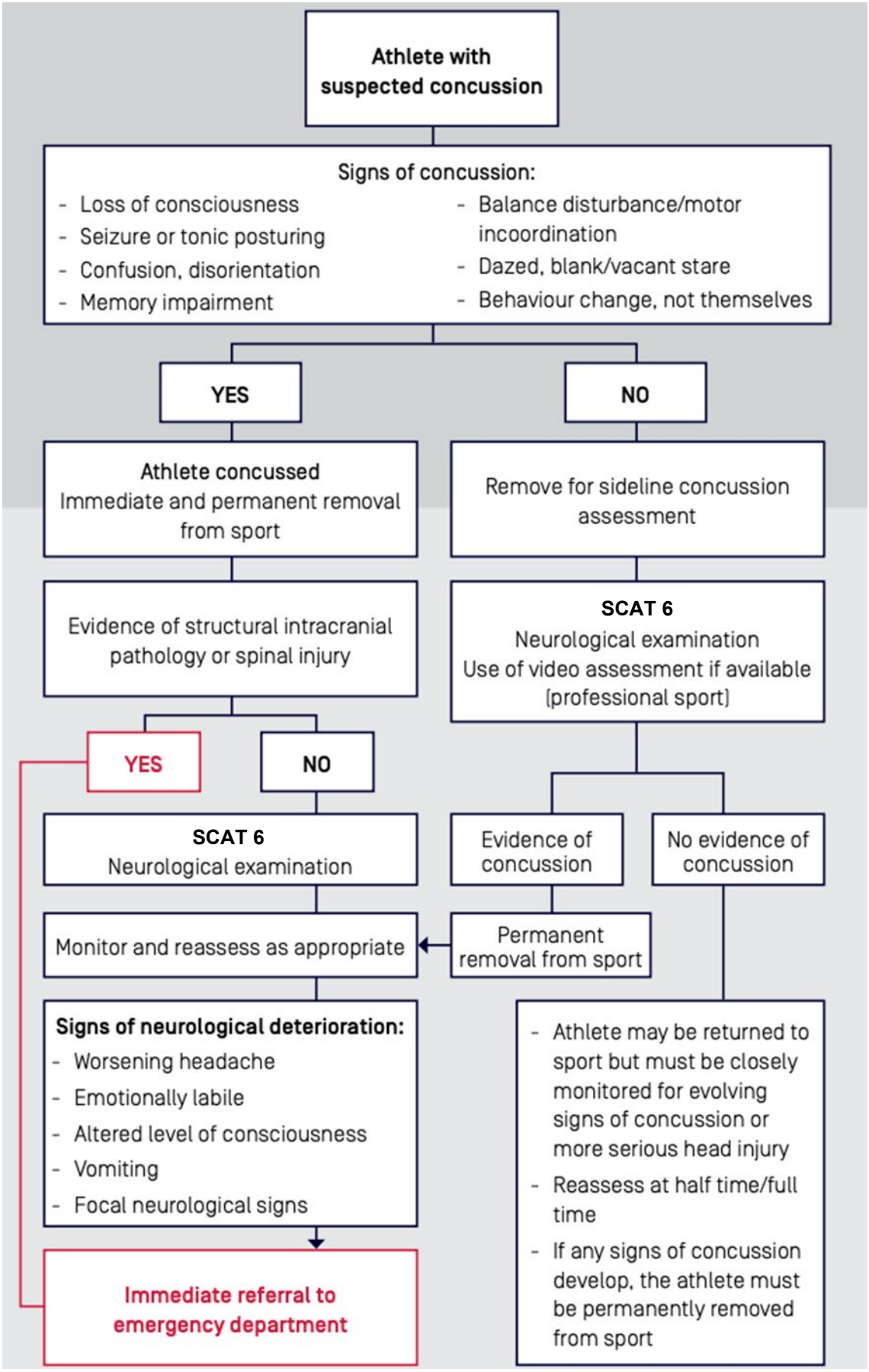
A decision to retire from sport may need to be considered for those with multiple concussions, severe symptoms and/or risk assessment in consultation with a specialist.

Children and adolescent concussion should also take into account the possible impacts on learning and long-term implications in development. Repeated concussions in children and adolescents require specialist input and regular clearance to compete in sport, not restricted to motor sport.

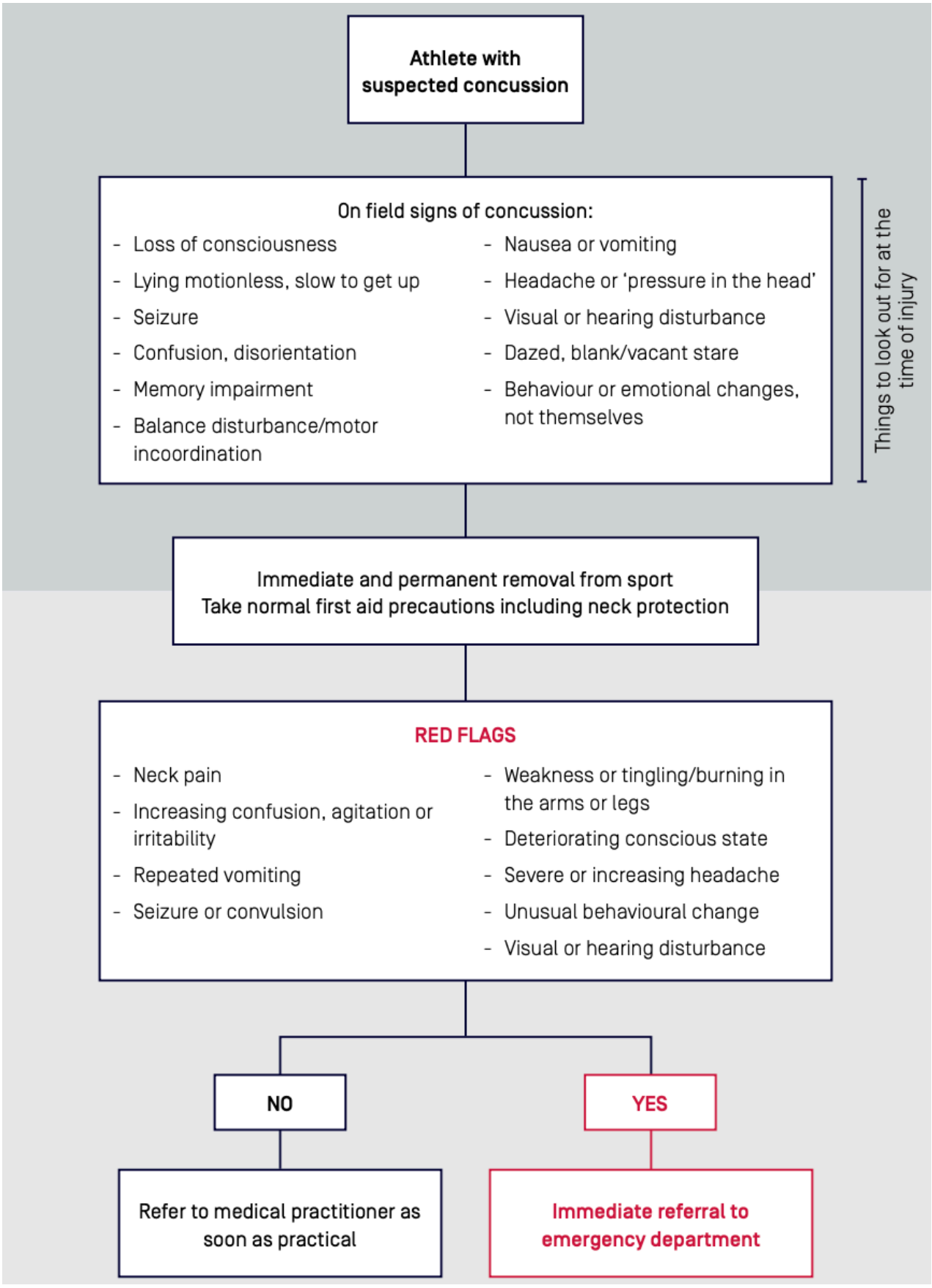
RESIDUAL EFFECTS
Ongoing residual effects from concussion may occur. Those suffering from long term symptoms or sequelae should actively engage a specialist in concussion management.

Engagement in short- and long-term research projects may help inform future management of concussion and improved outcomes. For example, the Concussion and Brain Health (CBH) Project 2021-2024 by the AIS.

Medical Trackside Assessment



Non-Medical Trackside Assessment



Motorcycling Specific Return To Sport Framework

Step	Exercise Strategy	Activity at each step	Goal
0		Rest for 24-48 hours after the incident.	Observation.
1	Symptom-limited activity	If the rider's symptoms have recovered COMPLETELY at rest, commence activities of daily living (such as reading, walking, watching TV, etc.) and returned to full work and/or school, without restrictions or the need for medication.	Gradual return to typical activities.
2	Aerobic Exercise (up to 70% Max HR)	The rider to complete stationary cycling, walking at slow to medium pace and start light resistance training. The rider is to remain free of concussion-related symptoms during the completion of a light/moderate aerobic exercise session.	Increased heart rate. See if physical activity highlights any concussion symptoms.
REST DAY			
3	Individual Sport-Specific Exercise	The rider to complete sport-specific training away from the track environment (e.g., running, change of direction, cycling, and/or individual training drills) including computer gaming/race simulators/ low impact recreational karting. No activities at risk of head impact.	Add movement and change in directions. Observe if increased physical activity and G-force simulation highlights any concussion symptoms. Observe if simulated cognitive activity highlights any concussion symptoms.
REST DAY			
4	Non-Impact Training Drills	The rider to complete high-intensity exercise including more challenging aerobic training drills. Continued computer gaming/race simulators/ low impact recreational karting to be completed after high aerobic exercise.	Increased intensity of training. Observe if increased physical activity and G-force simulation highlights any concussion symptoms. Observe if simulated cognitive activity highlights any concussion symptoms.
REST DAY			
5	Mandatory Exclusion Period Note, the Mandatory Exclusion Period must be adhered to, regardless if the certificate is provided prior to the exclusion period's end.	**Adult** From the perspective of brain development an Adults is considered to be 19 years and over The minimum period of exclusion for an Adult is 10 days from diagnosis, including the day of the incident. Permitted to return to sport on the 11th day. **Child** From the perspective of brain development, a Child is considered be 18 years and younger. The minimum period of exclusion is 20 days from diagnosis, including the day of the incident. Permitted to return to sport on the 21st day.	If the rider feels confident to return to the sport. The rider must obtain a Medical Concussion Clearance from a medical practitioner and then present that to the Relevant SCB.

Step	Exercise Strategy	Activity at each step	Goal
Once the following process has been adhered to: • Return to Sport Framework completed • The minimum timelines met • The MA specific Medical Concussion Clearance form completed by a medical practitioner • Submitted to the relevant SCB The relevant SCB will then consider removing the medical concussion suspension.			
6	Full Practice	Participate in normal training. High speed motorcycling, private practice, event practice sessions (with clinical review post session).	Restore confidence and assess functional skills by coaching staff.
7	Return To Competition	Normal event inclusion. Practice, qualifying and racing/competition.	

Note: MA's medical concussion policy is activated the moment the nature of the injury/illness is identified on the Injury Report Form as **concussion,** irrespective of the severity of the concussion or if it is considered a suspected concussion. Any reported concussion must follow the MA Return to Sport Framework.

The concussion clearance assessment must be completed by a Medical Practitioner: a medical doctor qualified and registered to practice in Australia with the post nominal MBBS or MD. This includes a GP, emergency physician, sports physician, neurologist, or any other medical doctor who has the experience to be comfortable completing the form.

The concussion clearance cannot be completed by a physiotherapist, nurse, osteopath, chiropractor or non-medical doctor.

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