Concussion Guidelines – Muaythai Australia

Injury – Training at Muaythai carries the risk of injury. It is recommended that all athletes complete a thorough medical examination prior to commencing any exercise program. If injury symptoms occur during training, the athlete should review this medical advice before continuing further training. In addition, any injury that restricts training or causes concern should be reviewed by a doctor.

Concussion is a specific type of injury to the brain. As with many other injuries, concussion requires management guidelines, including review by a doctor, and a graduated return to training. This is the responsibility of the athlete, or the parent or guardian for athletes under 18. Most injuries are easily managed, however they all have varied levels of seriousness and consequence. The responsibility for injury management is that of the individual, after assessing the risks involved with participation in the activity.

Muaythai Australia requires a medical form to be completed for any athlete to be declared fit to compete. The MTA follows Muaythai Australia guidelines for concussion management. The MTA provides the following forms:

1. MTA Concussion form – required after any concussion or injury sustained in training. This is to be given to a doctor for review, and to authorise return to training.
2. MTA Head Injury form – required after any head injury received in competition.

Forms are available at: www.muaythaiaustralia.com.au

What is concussion?

Concussion is a traumatic brain injury, induced by biomechanical forces to the head, or anywhere on the body which transmits an impulsive force to the head. It causes short-lived neurological impairment. Symptoms may evolve over the hours or days following the injury.

The main treatment is rest, followed by gradual return to activity.

Recognising concussion

Recognising concussion can be difficult, as the symptoms and signs are variable, non-specific and can be subtle. Coaches should suspect concussion when an individual receives a knock to the head, or to the body that transmits a force to the head. A hard knock is not required as concussion can occur from minor knocks.

There may be obvious signs of concussion such as loss of consciousness, brief convulsions or difficulty balancing or walking. However, other signs may be more subtle. Possible symptoms are:

- headache
- ‘don’t feel right’

If in doubt, sit them out.

Anthony Manning – Sep 2019

- 'pressure in the head'
- difficulty concentrating
- neck pain
- memory difficulties
- nausea or vomiting
- fatigue or low energy
- dizziness
- confusion
- blurred vision
- drowsiness
- balance problems
- sensitivity to light
- more emotional
- sensitivity to noise
- irritability
- feeling slowed down
- sadness
- feeling like 'in a fog'
- nervous or anxious
- trouble falling asleep

Recognising concussion is critical to correct management and prevention of further injury.

If an athlete is suspected of having concussion, fundamental first aid principles still apply. A systematic approach to assessment of airway, breathing, circulation, disability and exposure should be followed in all situations. Cervical spine injuries should be suspected if there is any loss of consciousness, neck pain or mechanism that could lead to spinal injury. Manual in-line stabilisation should be undertaken, and a hard collar applied until a cervical spine injury is ruled out.

Any athlete with suspected concussion should be reviewed by a medical practitioner as soon as possible. In situations where there is no access to a medical practitioner, the athlete must not return to sport on the same day. If there is any doubt about whether an athlete is concussed, that athlete should not be allowed to return to sport that day. Any athlete with suspected concussion should be reassessed for developing symptoms and cleared by a medical practitioner before returning to training. Delayed symptom onset is not unusual, due to the evolving nature of concussion. Therefore, any athlete cleared to return to sport after medical assessment for suspected concussion should be monitored closely during the game/competition for developing symptoms or signs. If symptoms develop, the athlete should be removed from training.

Sometimes there will be clear signs that an athlete has sustained a concussion. Athletes displaying any of the following clinical features should be immediately removed from training/competition:

- loss of consciousness
- no protective action taken by the athlete in training or competition
- impact seizure or tonic posturing
- confusion, disorientation
- memory impairment
- balance disturbance or motor incoordination (e.g. ataxia)
- athlete reports significant, new or progressive concussion symptoms

If in doubt, sit them out.

Anthony Manning – Sep 2019

- dazed, blank/vacant stare or not their normal selves
- behaviour change atypical of the athlete.

Some features suggest more serious injury and athletes displaying any of these signs should be immediately referred to the nearest emergency department:

- neck pain
- increasing confusion, agitation or irritability
- repeated vomiting
- seizure or convulsion
- weakness or tingling/burning in the arms or legs
- deteriorating conscious state
- severe or increasing headache
- unusual behavioural change
- double vision.

Concussion can occur in routine training sparring and competition.

Concussion is possible, although unlikely, during training that does not involve sparring. It may occur during pad work or defensive drills if contact to the body or head occurs. Any signs of concussion observed or felt should be reported immediately to the coach.

During sparring, head protection and safety of the athlete is critical. The athlete is responsible for protecting their head at all times and must take the first responsibility for reducing any head contact, as well as defending strikes to the body and takedowns. Any sparring session where an athlete is not demonstrating required skills to avoid and defend head contact or excessive body contact and take downs (falling), should be stopped by the coach and not continue until the athlete has demonstrated the required ability to spar safely. Practitioners should always work at the level of the least experienced person and look after each other in sparring by adjusting tempo, contact power, speed and work rate depending on the opponent's experience and control.

All sparring must be fairly matched by weight, experience, age and gender. Experienced people may partner and coach junior people, however this must be controlled for training purposes.

All sparring must be supervised to measure contact and all participants must understand the level of contact of the sparring and abide by this. The coach must ensure this is clear. Sparring can take many levels but routinely it is progressive from light to semi-contact, to full contact to competition level.

Any athlete that reports concussion must be reviewed by the coach and advised to see a doctor for review. Any athlete reporting concussion should be sat out of the training session. The athlete should only return to training after a graduated return (step back) process after review by a doctor.

The steps in the return to activity phase are:

- light aerobic activity (at an intensity that can easily be maintained while having a conversation) until symptom-free

If in doubt, sit them out.

Anthony Manning – Sep 2019

- basic sport-specific drills which are non-contact, with no head impact
- more complex sport-specific drills without contact (may add resistance training)
- full contact practice following medical review
- Normal training in classes including pad work
- Light sparring
- Sparring
- Competition – only after a medical review to return to competition.

Any athlete that demonstrates symptoms at training must see a doctor for a review. A medical approval should be sighted by the club before the athlete returns to training.

Regardless of sparring or competition the follow guidelines are recommended:

- An athlete that cannot continue due to concussion is to be sat out of training and not return to training or competition, until approved by a medical practitioner.
- If a coach observes an athlete showing signs of concussion in training or after competition – the coach must send the athlete to see a doctor before returning to training.
- Any athlete that is knocked down and cannot continue competition (or sparring) is not to compete for a minimum of 30 days and can not return to training until reviewed by a doctor.
- Any athlete concussed in training is recommended to see a doctor for clearance to return to training.
- Any athlete that shows signs of concussion after competition (or sparring), must be reviewed by a doctor before returning to sparring.
- Any concussion is to be reviewed by a doctor and the athlete should not return to training without a medical clearance.
- Any athlete that is stopped by knock out in a competition cannot return to competition until the MTA medical clearance form for concussion and a complete new medical assessment is completed.

The MTA recommends that any athlete that is reviewed by a doctor must be medically fit to return to training. A doctor must complete the MTA Concussion form provided by their coach.

General Advice

Head-injury advice should be given to all athletes with concussion and to their carers. Any athlete with suspected or confirmed concussion should remain in the company of a responsible adult and not be allowed to drive. They should be advised to avoid alcohol and check medications with their doctor. Specifically, they should avoid aspirin, non-steroidal anti-inflammatory drugs, sleeping tablets and sedating pain medications.

Once the diagnosis of concussion has been made, immediate management is physical and cognitive rest. This may include time off school or work and relative rest from cognitive activity. Having rested for 24–48 hours after sustaining a concussion, the patient can commence a return to light intensity physical activity, as long as such activity does not cause a significant and sustained deterioration in symptoms. The majority of concussive symptoms should resolve in 10–14 days.

The activity phase should then proceed as outlined above, with a minimum of 24 hours spent at each level. The activity should only be upgraded if there has been no recurrence of symptoms during that time. If there is a recurrence of symptoms, there should be a ‘step down’ to the previous level for at least 24 hours (after symptoms have resolved).

If in doubt, sit them out.

Anthony Manning – Sep 2019

Children and adolescents

A consistent and growing body of evidence supports a slower rate of recovery in children and adolescents aged 18 and under. Given this, a more conservative approach to concussion is recommended, and return to learn should take priority over return to sport.

Long-term consequences

There is concern about potential long-term consequences of concussion or an accumulation of sub-concussive head impacts resulting from ongoing participation in contact, collision and combat sports. There is some association between a history of multiple concussions and cognitive deficits later on in life. However, there is currently no reliable evidence clearly linking sport-related concussion with chronic traumatic encephalopathy (CTE).

Further information:

The Australian Sports Commission report on concussion in sport is available on the MTA web page.

The Concussion Recognition Tool 5 (CRT5) is recommended to help recognise the signs and symptoms of concussion. This can be downloaded at:

bjsm.bmj.com/content/bjsports/early/2017/04/26/bjsports-2017-097508CRT5.full.pdf

If in doubt, sit them out.

Anthony Manning – Sep 2019