



**UNITED WORLD WRESTLING**

Medical, Prevention & Anti-doping Commission

# Concussion Policy

## United World Wrestling

### Medical, Prevention and Anti-Doping Commission

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#### Executive Summary

This policy establishes United World Wrestling's (UWW) unified and sport-specific framework for the recognition, management, and safe return to wrestling following sport-related concussion across all Olympic wrestling disciplines, Freestyle, Greco-Roman, and Women's Wrestling, and all age categories (U15, U17, U20, U23, Senior and Veterans). Concussion represents a significant medical risk inherent to wrestling due to high-velocity throws, takedowns, impacts with the mat and collisions with opponents. To safeguard athletes, the policy mandates immediate removal from participation whenever a concussion is suspected, prohibits same-day return to wrestling, and requires a structured, graduated Return-to-Wrestling protocol under qualified medical supervision. This policy reinforces the independent authority of medical professionals, defines the responsibilities of athletes, coaches, referees, national federations, and establishes minimum rest periods and medical clearance standards. Through consistent global application, mandatory education, and continuous injury surveillance, this policy aims to protect athlete brain health, reduce both short- and long-term neurological risks, and uphold the highest standards of athlete safety across all UWW competitions and training worldwide.

#### 1. PURPOSE OF THE POLICY

- Protect athlete brain health,
- Standardize global concussion recognition, removal from play, and management in wrestling,
- Ensure a safe and medically supervised return to wrestling,
- Reduce long-term neurological risk and complications,
- Provide clear medical and procedural protection for UWW, national federations, coaches, referees and officials.

This policy is mandatory for all UWW-sanctioned competitions, training camps, and events and supersedes any national concussion protocols or guidelines during UWW events. Non-compliance may result in disciplinary action or sanctions against coaches, federations, teams or officials.



## 2. DEFINITION OF CONCUSSION

A concussion is a traumatic brain injury caused by a direct or indirect force transmitted to the head, face, neck, or body, resulting in a rapid onset of neurological dysfunction that is typically functional rather than structural and therefore may not appear on standard neuroimaging.

- Loss of consciousness is **NOT** required for the diagnosis of concussion.
- During UWW-sanctioned events, decisions made by UWW doctors regarding suspected or confirmed concussion are final, binding, and not subject to protest or appeal.

## 3. WRESTLING-SPECIFIC MECHANISMS OF CONCUSSION

Concussion in wrestling most commonly results from direct or indirect forces transmitted to the head and/or neck during high-velocity takedowns, throws, and falls to the mat, or from head-to-head and limb-to-head collisions with an opponent.<sup>1-5</sup> Injury-surveillance and epidemiological studies consistently identify the head/face/neck region as one of the most commonly injured anatomical areas in Freestyle, Greco-Roman and Women's wrestling, with concussions forming a substantial proportion of these injuries.<sup>2-4,6</sup> Some comparative studies report a higher proportion of head, face, neck injuries and concussions in Greco-Roman athletes than in Freestyle, likely related to the greater use of upper-body throws and high-amplitude techniques.<sup>3,7,8</sup>

In summary, concussion in wrestling most commonly occurs due to:

- Head impact with mat during Takedowns, Throws, Suplex/overhead techniques
- Head-to-head collision
- Whiplash mechanism from explosive or uncontrolled throws
- Illegal techniques
- Accidental limb-to-head collision (knee, elbow, or hip to head)

High-risk actions include high-amplitude Greco-Roman throws (e.g., reverse lift, grand amplitude techniques), snap-down collisions, poorly controlled double-leg finishes, and fatigued defensive reactions that reduce the athlete's ability to protect the head.

### Age-related considerations

- Children and adolescents have increased susceptibility to concussion due to lower neck strength, developing neuromuscular control and ongoing neurological development.
- Veteran athletes might also be more vulnerable due to age-related physiological changes and comorbidities.

## 4. CONCUSSION RECOGNITION – “RED FLAGS”

Early recognition of concussion is critical to preventing further injury and long-term neurological harm. This section outlines the key visible signs and reported symptoms that must trigger immediate medical evaluation and removal from participation.

Any of the following red flags on the mat or after a bout = suspected concussion:<sup>9</sup>



## Immediate Visible Signs:

- Loss of consciousness (even brief, <1 second)
- Blank or vacant stare
- Unsteady or staggering gait
- Delayed or slow-to-rise movement
- Clutching or holding the head
- Disorientation or confusion
- Vomiting
- Seizure or seizure-like-activity

## Reported Symptoms:

- Headache or pressure in the head
- Dizziness or balance problems
- Nausea
- Blurred or double vision
- Sensitivity to light or noise
- “Foggy” feeling, slowed or not right
- Confusion or difficulty concentrating
- Memory disturbance

## Mandatory referee action

Referees must immediately halt play and summon medical personnel when a red flag is observed.<sup>9</sup> If in doubt, the athlete must be removed (“If in doubt, sit them out”). Athletes with suspected concussion cannot resume the bout and must undergo medical evaluation.

## 5. MANDATORY “RECOGNISE & REMOVE” PROTOCOL

Immediate removal from participation following suspected concussion is the cornerstone of athlete brain protection. This section establishes a zero-tolerance policy for continued participation or same-day return to wrestling after a head injury.

If a concussion is suspected:

- The wrestler **MUST** be immediately removed from the bout, mat, training area, or warm-up zone.
- **NO** same-day return to wrestling is permitted under any circumstance, regardless of symptom resolution.

## Authority of the decision

This decision is:

- A medical decision only,



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- Final and non-negotiable,
- Not overruled by the coach, referee, federation, or athlete,
- Not subject to protest, review or appeal.

## Location of the medical assessment:

Following removal, athletes must be transferred to an off-mat medical evaluation area free from noise, distraction and crowd interference. This area is essential for accurate clinical assessment and must be quiet and well-equipped to ensure safe medical treatment.

## 6. MAT-SIDE MEDICAL ASSESSMENT

All suspected concussions must be assessed using a structured, medically approved process. This section defines who is authorized to perform the assessment and the minimum standards required for safe clinical decision-making.

### Authorized personnel

Mat-side concussion assessment is performed only by:

- UWW doctor,
- Certified tournament medical officer,
- Trained healthcare professional under the UWW authority.

Unqualified personnel (coaches, referees, team staff) may assess but not clear the athlete.

### Assessment tools

For quick assessment during a bout, the Cognition Recognition Tool 6 (CRT6) is recommended (rapid screening).<sup>10,11</sup>

Recommended tools after withdrawing from the bout due to suspicion:

- Sport concussion assessment tool 6 (SCAT6 -ages ≥13),
- Maddocks questions,
- Cervical spine assessment.

### Required on-site medical equipment:

At all UWW events, the minimum on-site equipment must include a cervical spine board or immobilization device, a light source, a symptom checklist, and standardized UWW concussion documentation forms. Every assessment must be fully documented and uploaded to the Athena system.

### Red-flag protocol

If red-flag signs are identified, an emergency hospital transfer is required immediately.

### Non-Compliance and Refusal of Medical Assessment

If an athlete, coach, or official **refuses** the mandatory concussion assessment or attempts to obstruct the medical process, including emergency hospital transfer, the following sanctions shall apply:

- The athlete is immediately removed from the competition, with full medical documentation completed.



- The **athlete's annual UWW license shall be immediately suspended**.
- The **national federation shall be sanctioned** in accordance with UWW disciplinary regulations.
- The **national federation must provide formal medical clearance** from an independent specialist before the athlete is eligible to return to training or competition.

Refusal to undergo an assessment constitutes a **serious breach of athlete safety regulations**.

### 7. RETURN-TO-WRESTLING (RTW) PROTOCOL

Safe return to wrestling requires a structured, graduated progression under medical supervision. This section outlines the mandatory, staged Return-to-Wrestling (RTW) protocol for all athletes following a diagnosed or suspected concussion.

#### Minimum 6-stage progression

- Each stage must last at least 24-48 hours for U23, senior, and veteran athletes.
- For U15, U17, and U20, progress must be at 48–72-hour intervals if symptom-free.
- If symptoms return, stop immediately and revert to the previous stage the following day. No athlete may skip stages.

#### Stage 1 – Symptom-limited activity

- Physical and cognitive rest,
- Light daily activity only,
- No training.

#### Stage 2 – Light aerobic exercise

- Stationary bike,
- Walking or light aerobic movement,
- No resistance training – Heart Rate (HR) <70% of maximum HR; <15 min.

#### Stage 3 – Wrestling-specific drills (no contact)

- Shadow wrestling – Heart Rate <80% of maximum HR; <45 min,
- Footwork exercises,
- Technique walkthroughs.

#### Stage 4 – Non-competitive controlled contact

- Controlled clinch work,
- Technical grip sparring,
- No throws, no high-amplitude techniques, no explosive takedowns,
- Heart Rate <90% of maximum HR.

#### Stage 5 – Full training

- Normal sparring and full wrestling practice,
- Athlete monitored by the medical staff or team for recurrence of symptoms.



### Stage 6 – Return to competition

- Requires written medical clearance from a qualified medical doctor experienced in concussion management,
- Clearance must be submitted to the UWW by the national federation before the competition.

All stages must be supervised by a qualified medical professional or team physiotherapist trained in concussion care. Progression may occur only with medical authorization and must be documented.

### Return To Wrestling Protocol

Stage	Phase Description	Permitted Activities	Medical Objective
1	Symptom-limited activity	Daily activities that do not provoke symptoms; relative physical and cognitive rest; no training	Recovery of baseline neurological function
2	Light aerobic exercise	Walking, stationary cycling, light swimming; no resistance training; no impact, max Heart Rate less than 70%, session duration less than 15 minutes	Gradual increase in heart rate without symptom recurrence
3	Wrestling-specific drills (no contact)	Shadow wrestling, stance and motion, footwork exercises, light technical drilling without partner contact. Max Heart Rate less than 80%, session duration less than 45 minutes	Reintroduction of wrestling specific movement patterns
4	Non-competitive controlled contact	Upper-body clinch work, grip fighting, controlled positional work; no throws, no high-amplitude technique or no explosive takedowns. Heart rate max less than 90%, session duration less than 60 minutes	Controlled reintroduction of contact and vestibular challenge
5	Full training	Normal wrestling training including full sparring under medical or coaching supervision	Restoration of confidence, physical readiness and functional performance
6	Return to competition	Match competition permitted only after written medical clearance from a qualified medical doctor experienced in concussion management	Confirmation of full medical and competitive clearance

### 8. MINIMUM REST PERIODS (BY AGE)

Recovery timelines following concussion vary significantly with age, neurological development, and individual health factors. This section establishes minimum rest periods before returning to competition



by age category. These timelines do not replace the staged Return-to-Wrestling (RTW) protocol; both requirements must be met.

Age Category and Minimum Time Before Return to Competition:

- U15                    21 days
- U17                    21 days
- U20                    14 days
- Senior                7–10 days
- Veteran               7–10 days

These represent MINIMUM rest periods – not target days. Athletes must progress through the full RTW protocol and obtain medical clearance before competing.

Veteran athletes or those with comorbidities or prior concussion, or in case of persistent symptoms, may require extended recovery periods at the discretion of the treating physician.

## 9. MEDICAL CLEARANCE REQUIREMENTS

No athlete may return to full training or competition without formal medical clearance after a concussion. This section defines the mandatory clinical conditions and the level of medical authorization required for safe return.

Return to training or competition requires:

- Symptom-free at rest,
- Symptom-free with exertion,
- Normal neurological exam,
- Completion of the full staged RTW protocol.

Signed clearance by a sports physician, neurologist, or doctor with experience in dealing with concussions and their management. Neuropsychological testing or vestibular/oculomotor assessment is recommended for prolonged symptoms (>14 days), recurrent concussion or atypical recovery timelines. Self-clearance, coach clearance, or administrative clearance is strictly prohibited. Only qualified medical professionals may authorize return to participation.

## 10. REPEAT CONCUSSION & MEDICAL REVIEW

Recurrent concussion significantly increases the risk of prolonged symptoms, impaired neurological recovery and long-term neurological consequences. This section defines thresholds that require specialist medical review and mandatory stand-down periods.

Number of Concussions Mandatory Action:

- 2 concussions within 12 months - Specialist review by a neurologist/sports physician experienced in concussion management,
- 3 concussions over a lifetime - Consider season suspension,
- 2 concussions within 3 months - Mandatory 3-month stand-down from training and competition.



These requirements are designed to protect athlete health, particularly in cases of vulnerable recovery, repeated impacts, or short-interval recurrences, which carry significantly higher risk.

A specialist may impose **longer suspension periods** depending on symptom severity, recovery history, or neurocognitive findings.

## 11. DATA COLLECTION & SURVEILLANCE

Reliable injury surveillance is essential for improving safety standards, refining medical protocols and guiding future rule development. This section establishes the requirement for systematic reporting of concussions across all UWW competitions.

All confirmed concussions must be recorded in the Athena system and categorized by the following variables:

- Wrestling Style (FS, GR, WW),
- Weight category,
- Age category,
- Mechanism of injury,
- Phase of the bout when the injury occurred.

Additional notes (e.g., illegal moves, recurrence, or mat-side red flags) should be included when relevant.

Consistent and accurate surveillance enables UWW to identify trends, inform prevention strategies, and strengthen athlete protection across all disciplines and age groups.

## 12. INJURY PREVENTION STRATEGIES

Reducing the risk of concussion requires a combined approach involving athlete preparation, coaching practices, equipment standards, and rule enforcement. UWW-MC recommends the following evidence-informed strategies:

- Neck-strengthening programs to enhance cervical stability and reduce head acceleration during impact,
- Strict enforcement of illegal techniques that increase head and neck injury risk,
- Coaching education on safe landing, falling, and defensive movement patterns,
- Periodic assessment of mat hardness and surface compliance, as well as overall competition-area safety.

These strategies complement medical protocols and contribute to a safer wrestling environment across all age groups and disciplines.

## CONCLUSION

This Concussion Policy reflects United World Wrestling's unwavering commitment to protecting the neurological health and long-term well-being of all wrestlers, across every discipline and age category. By defining clear standards for concussion recognition, immediate and mandatory removal from





participation, structured medical assessment, staged return to wrestling, and independent medical clearance, UWW reaffirms that athlete brain health is paramount and supersedes all competitive considerations. Consistent worldwide implementation - combined with mandatory education for coaches, referees, athletes, and medical staff, and with comprehensive injury surveillance - will ensure not only the effective management of concussions but also a meaningful reduction in their incidence, risk and long-term consequences. Through this policy, United World Wrestling continues to uphold the highest international standards of athlete protection and medical governance within the Olympic Movement and reaffirms its commitment to a safer future for all wrestlers worldwide.

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