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Return to play following a concussion.

Why is it so important to return to play at the appropriate time?

Returning too soon following a concussion may have serious short- and long-term consequences including:

- More serious brain injury and even death
- Persisting symptoms lasting weeks or months
- A greater risk of further concussions
- A higher risk of injuries to muscles, tendons and ligaments
- Interference with studies (school and university) and work
- Poor performance on the rugby field
- Potential longer-term brain effects including memory loss and emotional disturbances.

Mandatory time off from contact-rugby!

Unless advised by a specialist medical doctor with expertise in concussion management for Rugby Union, the following minimum stand-down periods away from contact-rugby are prescribed for players suspected of sustaining a concussion in rugby:

Players 18 and younger – time off from **contact-rugby** for a minimum of 2 weeks, followed by a period of Individualised Rehabilitation (see protocol below). Players may only return to match play at **21 days**.

Players 19 and older – time off from **contact-rugby** for a minimum of 2 weeks, followed by a period of Individualised Rehabilitation (see protocol below). Players may only return to match play at **21 days**.

These minimum periods away from **contact-rugby** only apply if the player no longer has **ANY** symptoms of concussion remaining.

Note: It is recommended that, in all cases of suspected concussion, the player be referred to a medical professional.

The Individualised Rehabilitation Protocol




Individualised Rehabilitation Protocol – each Stage progression is a minimum of 24 hours. The day the player sustained the suspected or confirmed concussion is considered '**Day ZERO**'. Operationally, *Stages 1-3* of the individualised rehabilitation, forms part of the two-week stand-down period away from contact-rugby. During these stages, the player may still experience some symptoms. *Stages 4-6* begins after completion of Stages 1-3 *and* the 2-week contact-rugby stand-down period. Stages 4-6 prepare the player gradually for contact fitness and to get them ready to play again. To start Stages 4-6, the player must have no symptoms remaining.

Stage	Rehabilitation	Objective	Exercise Allowed
1	Symptom-limited Activity (relative rest)	Recovery. Gradual reintroduction of work/school	<ul style="list-style-type: none"> Complete body and brain rest for the first 24-48 hours. Daily activities that do not exacerbate symptoms (e.g., walking).
2	Aerobic exercise 2A—Light (up to approximately 55% max HR) then 2B—Moderate (up to approximately 70% max HR)	Increase heart rate.	<ul style="list-style-type: none"> Stationary cycling or walking at slow to medium pace. May start light resistance training that does not result in more than mild and brief exacerbation* of concussion symptoms.
3	Individual sport-specific exercise Note: If sport-specific training involves any risk of inadvertent head impact; medical clearance should occur prior to Stage 3	Add movement, change of direction.	<ul style="list-style-type: none"> Sport-specific training away from the team environment (e.g., running, change of direction and/or individual training drills away from the team environment). No activities at risk of head impact. Running drills.
<i>Stages 4–6 should begin after the resolution of any symptoms, abnormalities in cognitive function and any other clinical findings related to the current concussion, including with and after physical exertion.</i>			
4	Non-contact training drills.	Resume usual intensity of exercise, coordination and increased thinking	<ul style="list-style-type: none"> Exercise to high intensity including more challenging training drills (e.g., passing drills, multiplayer training). Can integrate into a team environment. May start <i>progressive</i> resistance training. Player MUST be medically cleared at the end of this Stage before going to Full-contact training or Stage 5. If player remains sign and symptom-free for the full 24 hours, they then move onto Stage 5.
5	Full Contact Practice.	Restore confidence and assess functional skills by coaching staff.	<ul style="list-style-type: none"> Participate in normal training activities. If player remains sign and symptom-free for the full 24 hours, they then move onto Stage 6.
6	Return To Match Play / Sport.	Recover. Normal game play.	<ul style="list-style-type: none"> Player rehabilitated and can be progressively re-introduced into full match play.
<p>*Mild and brief exacerbation of symptoms (i.e., an increase of no more than 2 points on a 0–10-point scale for less than an hour when compared with the baseline value reported prior to physical activity).</p> <p>Athletes may begin Stage 1 (i.e., symptom-limited activity – relative rest) within 24 hours of injury, then moving to Stages 2 and 3 within the 14-day or 2-week stand-down period away from <u>contact-rugby</u>, with progression through each subsequent Stage thereafter typically taking a minimum of 24 hours.</p> <p>If more than mild exacerbation of symptoms (i.e., more than 2 points on a 0–10 scale) occurs during Stages 1–3, the athlete should stop and attempt to exercise the next day.</p> <p>Athletes experiencing concussion-related symptoms during Stages 4–6 should return to Stage 3 to establish full resolution of symptoms with exertion before engaging in at-risk activities.</p> <p>Written determination of readiness to Return To Sport (RTS) should be provided by a medical doctor before unrestricted RTS as directed by local laws and/or sporting regulations.</p> <p style="text-align: center;"><i>Max HR, predicted maximal heart rate according to age (i.e., 220-age).</i></p>			

Notes:

- **A player may only start the individualised rehabilitation Stages 4–6 once cleared by a medical doctor and all symptoms have cleared before, during, and after exercise in all three Stages 1-3.**
- **In individualised rehabilitation Stages 4–6 a player may only progress to the next stage if no symptoms occur before, during, and after exercise in each stage.**
- **A player must again be cleared by a medical doctor before starting full-contact training.**

Summary of Individualised Rehabilitation Criteria for ALL Amateur Rugby Players with Suspected or Confirmed Concussions.

AGE GROUP	COMPULSORY STAND-DOWN PERIOD AWAY FROM CONTACT-RUGBY POST CONCUSSION		INDIVIDUALISED REHABILITATION		NUMBER OF MISSED FULL WEEKS
<i>Players 18 and younger</i>	Minimum of 2 weeks (14 days) off from <i>contact-rugby</i> , while starting the <i>individualised rehabilitation Stages 1-3</i> , can even be longer if any signs or symptoms remain.	CAUTION! individualised rehabilitation Stages 4-6 can be started only if the player is symptom free and off medication that modifies symptoms of concussion. MEDICAL CLEARANCE REQUIRED	Individualised rehabilitation Stages 4-6 with progression to each next Stage if no symptoms experienced before, during, or after exercise, with a minimum duration of 24 hours per Stage.	CAUTION! Contact Sport should be authorized only if the player is symptom free and off medication. MEDICAL CLEARANCE REQUIRED	<u>Earliest Return To Sport</u> = 2 weeks (14 days) stand-down period away from contact-rugby post injury + individualised rehabilitation. (May only be cleared for Play earliest on <i>Day 21</i> post injury)
<i>Players 19 and older</i>					
 <p>Any player with a history of multiple concussions ***, players with unusual presentations or prolonged recovery should be assessed and managed by health care providers (multidisciplinary) with experience in sports-related concussions. However, the medical doctor clearance is non-negotiable and must always be provided before entering the <i>individualised rehabilitation Stages 4-6</i>, and before starting full-contact training, regardless of who is available to manage or monitor the <i>individualised rehabilitation</i> process.</p>					

EXCEPTIONS:

Exceptions to SA Rugby's and World Rugby's Concussion protocols are only allowed where a player has accessed an 'Advanced Level of Concussion Care' clinical setting.

The two-week stand-down period away from contact-rugby (Stages 1-3) and the completion of the individualised rehabilitation programme Stages 4-6, as defined above are compulsory, regardless of whether the Player has become symptom free, unless the Player has successfully accessed an 'advanced level of concussion care' and has been medically cleared and managed for an earlier return to rugby.

An 'advanced level of concussion care' has been defined in the World Rugby Concussion Guidance and has been agreed upon on an individual basis by the World Rugby Chief Medical Officer and the South African Rugby Union.

Advanced Level of Concussion Care

The following, World Rugby approved protocol, allows players who are removed from play with a suspected concussion to be evaluated by an SA Rugby or World Rugby recognised Advanced Care Concussion Doctor (ACCD), following a robust and multimodal evaluation consistent with that offered at the highest level of the game. This may allow for return to full contact rugby/match play before 21 days but no sooner than 14 days.*

Medical Centres and Healthcare Professionals qualifying to oversee Advanced Concussion Care must provide or have access to:

- A medical doctor who has experience in concussion management, has completed the World Rugby online module: Concussion Management for Medical Practitioners and Healthcare Professionals (it is important to do the latest version as it has been updated to reflect the newest SCAT), and who is approved by the Chief Medical Officer of World Rugby and the SA Rugby: Senior Medical Manager as an Advanced Care Concussion Doctor (ACCD), and*
- Scientifically validated computerised technology such as neurocognitive testing (e.g. Impact or Neuroflex), and*
- Access to brain imaging including CT and MRI scans, and*
- Access to a wider support network of clinicians who may assist in the diagnosis of concussion, other neurological and mental health disorders including but not limited to, a neurologist, neurosurgeon, psychologist, physiotherapist, and optometrist.*

All Advanced Care facilities should provide support to SA Rugby's Blue Card system and will be listed under their specific provincial region on the Sports Concussion SA (SCSA) website. They will also have the support of the international Your Brain Health network.

All players are encouraged to enter an Advanced Care pathway and to seek optimal concussion management but, if a return sooner than 21 days is to be considered, the following criteria must be fulfilled:

1. No Criteria 1 signs** are present.
2. The player does not have a significant history of concussion as defined by World Rugby***.
3. The player has not sustained a concussion that season.
4. The team doctor completes a Concussion Risk Stratification on the player.
5. The player requires a preseason baseline performed in the last 12 months (preferably SCAT6 and/or computerised cognitive/Neuroflex test).
6. Following a confirmed or suspected concussion a player needs to undergo a SCAT6 within 48 hours but no later than 72 hours post the injury.
7. All the baseline data, post-match SCAT6 results, and any video footage of the event is reviewed by the SA Rugby / World Rugby recognised ACCD.
8. A multimodal clinical face-to-face evaluation (SCOAT6 or similar) is undertaken by the appointed ACCD. Follow-up consultations can be via tele-conference call.
9. The Graduated Return-To-Play or 'Individualised Rehabilitation' (pg10) process is followed, with the player being asymptomatic during Stages 4-6.

*** An SA Rugby or World Rugby recognised ACCD**

- Are medical doctors, with experience and expertise in managing concussion, and are listed on the Sports Concussion South Africa website.

****Criteria 1 Signs.**

Players who are removed from play because the following signs and symptoms are evident will be noted as a confirmed concussion and will only be permitted to play after 21 days.

The following concussion signs are referred to as Criteria 1 signs:

- Confirmed loss of consciousness.
- Suspected loss of consciousness.
- Convulsion.
- Tonic posturing.
- Balance disturbance/ataxia.
- Clearly dazed and/or confused.

- *The player is clearly not orientated in time, place or person or doesn't know what time it is, where they are or who they are talking to.*
- *Definite changes in behaviour for that player.*
- *Oculomotor signs for e.g. spontaneous nystagmus or rapid involuntary eye movements.*

*****Concussion History Definition:**

1. *Concussed within last 3 months.*
2. *Three or more concussions in the last 12 months.*
3. *Five or more career concussions.*
4. *Reduced impact threshold noted. *****
5. *Any previous concussion complicated by psychological issues.*
6. *Previous concussion with prolonged recovery (>21 days).*

******Reduced impact threshold describes where the team doctor, player or ACCD deem that in prior concussions the player sustained a concussion from impacts where a concussion was not normally expected.**

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