

**WORLD RUGBY
2021 CONCUSSION
RISK
STRATIFICATION
PROCESS**



World Rugby Return to Play Process

INTRODUCTION

Mandating an extended GRTP has previously led to under-reporting of head injuries. Experience supports that a return to play following a concussion is best managed on an individual basis, and that a return to play that accommodates players' unique circumstances is more likely to be accepted and will improve concussion reporting and management.

The process outlined in this document focuses on the safe return to play of players who have recovered from a recent concussion. It does not guide the management of symptomatic players or those with delayed recovery.

BACKGROUND

One of the most challenging and potentially contentious decisions regarding a return to play following a diagnosed concussion involves those players who are considered fit to return to game play within or on the 10th day from their injury (next week's game) and after completing a graduated return to play (GRTP).

The World Rugby concussion working group has sought opinion from experts in this area, including team doctors, Chief Medical Officers and player representatives. There is little evidence to support that once a player is asymptomatic and their cognitive, balance and symptom reporting scores have returned to baseline testing, they are at a higher risk of a complicated recovery from concussion or recurrence. This may be different in other players who have a previous history of concussion or a suboptimal recovery from a concussion. These players possibly require a more cautious return to play. Medical teams should follow the structure described below and stratify players' risk based on their clinical and concussion history.

World Rugby introduced an Independent Concussion Consultant (ICC) during the RWC 2015 for asymptomatic players following the GRTP wishing to return to play for the next game. The feedback from team doctors was overwhelmingly supportive. In RWC 2019 this was again successfully implemented.

Outlined below are the processes and procedures for accessing an Independent Concussion Consultant (ICC) opinion used during RWC 2019.

PROPOSAL

- 1. If a player has a confirmed concussion, completes the GRTP and is asymptomatic, and is expected to return to match play within or on the 10th day, then the Team Doctor must seek an Independent Concussion Consultant opinion regarding this return to play.**

2. **Concussed players identified as high risk for a complicated recovery or recurrence must seek an Independent Concussion Consultant opinion regarding their return to play irrespective of the expected time for a return to play.**
3. **It is important to note that the ICC process is not intended for players who are symptomatic or displaying delayed recovery from their recent concussion, but rather for asymptomatic players, who have recovered fully as assessed using current tools, but for whom an additional consultation should be sought based on desired rapid return and presence of risk factors for complications.**

CONCUSSION RISK STRATIFICATION PROCESS

Evidence in other medical fields suggests that individualised care improves outcomes. This requires specific management of players who have risk factors for potentially complicated returns to play or recurrence after concussion, as listed below. Rather than mandating a specific and inflexible 'stand down' period for this group, World Rugby recommends individual care programs using the support of the Independent Concussion Consultant. For those players with a higher risk of reoccurrence and complications upon return, the ICC process prior to return to activity would strengthen the process of graduated return to play while maintaining an individualised approach.

All players who are categorised below (1-3) should have an ICC review when they are deemed fit to return to match play:

1. Players who have a second concussion within the last 3 months
2. Players who have experienced a third (or more) concussion within the last 12 months.
3. If this the player's 5th (or more) concussion since starting to play rugby.

In addition to the above three risk categories, team physicians are advised to perform comprehensive concussion histories that investigate a player's recovery from past concussions, concussion thresholds and emotional state, with any concerns indicating a more conservative approach. These areas are described briefly below and may indicate a need for a referral to the ICC.

A comprehensive concussion history should investigate the following areas, and where the team physician has a concern, a conservative approach is advised, where there is doubt, referral to an ICC is recommended.

1. What was the recovery period for the player's last concussion? Longer recovery (> 21 days) may indicate a need for a more conservative approach and increases in this period in the same player also require a more conservative approach.
2. Has there been a perceived decrease in concussion threshold in the opinion of the treating team physician?
3. Has the player reported any concerns about their health e.g., mood disturbance, anxiety, or diminished motivation during recovery?

This risk stratification should be reviewed by medical teams on an ongoing basis. Any positive response to these questions implies that the player is potentially at risk of delayed recovery from concussion and therefore should be reviewed by an ICC prior to all return to play.

The ICC process is part of a safe return to play process and is not intended to oversee or contributed to the injury management process. An ICC review for a player who is stratified as 'high risk' for complicated recovery or recurrence should only enter the ICC process when fully recovered. If the player has a current delayed recovery and therefore current symptoms then this is a concussion management issue and should not be referred to an ICC.

It may also be appropriate to include players following a prolonged recovery from concussion in the ICC process, but they will likely have been reviewed by a concussion specialist during their recovery. If the player is seeing a specialist for management of their concussion and this specialist has the required qualifications of an ICC that specialist can provide an ICC opinion on return to play.

If referred to an ICC, that ICC may recommend imaging be undertaken before making a decision on a RTP. The final decision to undertake this imaging will rest with the TD as part of the injury management process therefore the costs of imaging will be the responsibility of the club and/or national Union.

To be clear, the ICC procedures do not mandate imaging as part of the return to play decision-making process as there is no current science to support this approach, particularly in asymptomatic players who are the candidate cases for the ICC process.

PROCESS PRIOR TO ICC CONSULTATION

The process to support this ICC intervention is as follows:

- Team Doctor completes HIA 2 within 3 hours of the injury and HIA 3 at 36-48 hours post injury. This HIA 3 is a SCAT 5 with a more detailed symptom checklist. Teams have been encouraged to also utilise a computer neuro-cognitive tool of their choice following the HIA 3 assessment.
- Once the process above is completed, if a player has a confirmed concussion, but is asymptomatic and a return to match play for the next match (typically 7 to 10 days from the injury) is expected, the Independent Concussion Consultant (ICC) must be consulted.
- If the concussed player is identified as a high risk based on the risk stratification protocol described above, then the Independent Concussion Consultant (ICC) must be consulted.

NOMINATED INDEPENDENT CONCUSSION CONSULTANT (ICC) CONSULTATION

For international tournaments, World Rugby will provide a nominated panel of experts who would act as ICCs. We invite nominations from Unions to include in this list (this process worked very well during the RWC) For national competitions, each Union may avail of the

World Rugby List or develop their own list according to minimum standard criteria outlined below.

Video-consultation has been used successfully in many medical scenarios and it was successfully used during RWCs 2015 & 2019 for ICC consultations. The advantages of using video-consultation with Independent Concussion Consultants is not only ease of access from geographically isolated locations, but it also overcomes the issue of language and offers the players the best opinions from leading international experts.

The procedure to obtain an ICC opinion is:

1. Team Doctor identifies an Independent Concussion Consultant (ICC) of their choice from referral list provided by World Rugby for international games, or as approved by World Rugby for national competition.
2. Team Doctor confirms via email an appropriate time for video-consultation with the ICC. If first choice ICC is not available due to other commitments the Team Doctor should select an alternate consultant.
3. Team Doctor forwards to the ICC and to World Rugby (ICCadministration@worldrugby.org) prior to the video-consultation, the application form and all key information related to the concussive injury that must include:
 - a. Video clip of incident (if not available within team, contact World Rugby for a copy)
 - b. Copies of all three HIA forms plus the result of any computer neuro-cognitive assessment result

The process to be used during the consultation with the Independent Concussion Consultant is:

1. Team Doctor with the player present commences the consultation with the ICC, discussing the results of all HIAs and any cognitive assessment completed.
2. The video is reviewed and discussed by all three participants
3. Team Doctor and player answer any and all questions asked by the ICC.
4. The ICC has a private consultation **with only the player present**.
5. Team Doctor returns to the room to complete a balance assessment under the view of the ICC plus any other clinical assessment as requested by ICC.
6. Team Doctor and ICC discuss the case **without the player present**, determining if the player:
 - Requires further investigation or follow-up consultation.
 - Is not fit to return to play or;
 - Is fit to continue the GRTP and if successful return to play in the next game.

In this process we aim for agreement, however if this is not possible the ICC has the ultimate decision.

7. Player returns to consultation and the Team Doctor outlines the agreed return to play opinion(s)
8. If follow-up consultation is required, an appointment date is agreed
9. The ICC complete ICC Referral / Report Form and forward to both the Team Doctor and World Rugby (ICCAadministration@worldrugby.org). Once report received and permission confirmed, World Rugby will pay fee to ICC.

WORLD RUGBY ICC CONTACT DETAILS – Team Doctor to choose whoever they decide from this list. Unions may also propose additions to this list based. We encourage elite participating competitions to form a panel of appropriate ICC candidates, these will be reviewed and agreed with World Rugby.

Doctor	Country	Language(s)	Email
Jon Patricios	South Africa	English	jpat@mweb.co.za
Tony Belli	England	English	a.belli@bham.ac.uk
Richard Sylvester	England	English	richard.sylvester@nhs.net
Michael Makdissi	Australia	English	mmakd@bigpond.net.au
John Martin	Wales	English	john.martin3@wales.nhs.uk
Eddie McCaig	Fiji	English	vaigalo_e@yahoo.com
Hamish Kerr	USA	English	kerrh@mail.amc.edu
Philippe Decq	France	French / English	philippe.decq@aphp.fr
Haruhiko Sato	Japan	Japanese / English	jojosato@sis.seirei.or.jp
Richard Kim	USA	English	richardkim300@gmail.com
Prof. Roberto Vagnozzi	Italy	Italian	vagnozzi@uniroma2.it
Fernando Salvat	Argentina	Spanish	fsalvat@fleni.org.ar

ICC Minimum Criteria

1. Medical Doctor with specialist qualifications such as - Neurologist, Neurosurgeon, Sports & Exercise Medicine Physician, Primary Care Emergency Medicine or speciality as agreed by World Rugby
2. Experienced in management of concussion in elite contact sports
3. Independent of Team(s) - holds no position within the extended team structure.
4. At international level or for cross border club competition, the ICC must be independent of the concussed player's Union.
5. If Union CMOs conform with this ICC Minimum Criteria, they are permitted to be nominated as an ICC (ensuring they comply with criteria 1-4).
6. In the event of any queries, please contact world rugby at Eanna.Falvey@worldrugby.org for clarification, prior to appointing the ICC.