



WORLD RUGBY *Putting players first*

Cardiac Screening

The information in this Cardiac Screening Guideline is presented as guidance for Unions, Medical Practitioners and Rugby athletes. The Cardiac Screening recommendations will not be mandated for Unions to provide unless outlined specifically in a Terms of Participation document that requires signing by players to participate in a World Rugby controlled and managed Tournament or Competition.

INTRODUCTION

There is increasing awareness of sudden cardiac death (SCD) in the young and especially in sport. It has been reported that the risk of sudden cardiac death may be increased up to 2.8 times in competitive athletes compared with nonathletes¹. Despite this increased risk, the incidence of SCD is low in this young athletic population (< 35 years), and a recent review estimated it to be between 1 - 3 athletes per 100 000, per year².

The Lausanne Cardiac Screening Recommendations³ reported that in athletes under 35 years of age, 50% of sudden cardiac death (SCD) was due to congenital anatomical heart disease and cardiomyopathies and 10% had early-onset atherosclerotic heart disease. Forty percent of SCD occurred in athletes under 18 years, 33% under 16 years and the male/female ratio was 9/1.

It is acknowledged that between 15 - 30% of athletes suffering sudden cardiac death will not be identified even with intensive cardiac screening⁴. It has also been reported that approximately 33% of athletes suffering sudden cardiac arrest will not respond to resuscitation even with immediate access to an AED (Automated External Defibrillator)⁵.

These World Rugby 2012 Cardiac Screening Guidelines have been developed by the World Rugby Cardiac Screening Working Group with support from an independent cardiac expert. The recommendations have given due consideration to the different geographical, economical, medical expertise and social levels that exist across and within the member Unions of World Rugby. As a result of these logistical differences, a tiered approach to cardiac screening in Rugby is recommended. However, where practical, World Rugby recognizes that best practice cardiac screening should **include cardiac questionnaire, physical examination and ECG.**

ASSESSMENT GROUPS

These Guidelines for cardiac screening in Rugby cover Community Rugby, National and International Tournaments and Competitions (Non-World Rugby managed) including Professional Clubs and World Rugby controlled and managed Tournaments and Competitions.



GROUP 1: COMMUNITY RUGBY RECOMMENDATIONS

World Rugby recommendations regarding cardiac screening for Community Rugby are:

1. Cardiac screening is recommended for players between ages 14 and 35 who participate in a regular Rugby competition or a structured Tournament and should as a minimum include a cardiac screening questionnaire. The World Rugby Cardiac Screening questionnaire which is presented as a base cardiac questionnaire is available on line at worldrugby.org/playerwelfare.
2. Repeat cardiac screening is ideal every 2 years for athletes under 20 years of age. For all athletes, cardiac screening is recommended if at any time cardiac symptoms develop or become evident.
3. An athlete answering YES to any question in the cardiac screening questionnaire should discuss the finding with their family doctor.
4. For athletes less than 18 years of age, the cardiac screening questionnaire should be completed under the supervision of or in conjunction with a parent or guardian.

GROUP 2: NATIONAL AND INTERNATIONAL TOURNAMENTS (NON-WORLD RUGBY MANAGED) AND PROFESSIONAL CLUBS RECOMMENDATIONS

World Rugby recommendations regarding cardiac screening for this Group are as follows:

1. Cardiac screening is recommended for Rugby players under age 20. Over 20 years of age, cardiac screening is recommended if previous cardiac screening has not been completed, if there are concerns from previous screening or if the player develops symptoms or signs suggestive of possible cardiac disease. As a minimum completion of a cardiac screening questionnaire is recommended and the World Rugby Cardiac Questionnaire is available on line at worldrugby.org/playerwelfare.
 2. Repeat screening is ideal every 2 years for athletes under 20 years of age. For all athletes cardiac screening is recommended if at any time cardiac symptoms develop or become evident.
 3. A cardiovascular physical examination is recommended in conjunction with the cardiac screening questionnaire for this Group as they are most likely to have access to a Team physician. An ECG should also be considered as part of this screening process if logistically possible.
 4. For athletes less than 18 years of age the cardiac screening questionnaire should be completed under the supervision or in conjunction with a parent or guardian.
 5. Cardiac screening should be undertaken at a reasonable distance from the start of a Tournament or Competition.
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6. It is recommended that all athletes sign a consent form prior to undergoing a cardiac screening evaluation (see example consent form below). This consent form should include information about the chance of detecting a cardiac abnormality and information regarding the possible outcome if an abnormality is detected. A cooling off period following the signing of this consent form is recommended prior to the cardiac screening being undertaken.
7. If an abnormality is suspected following cardiac screening an additional investigation(s) to clarify the diagnosis is recommended prior to further sports participation.
8. High risk sudden cardiac death groups should be considered for more detailed and more frequent cardiac screening processes.

For this Group it is recommended that where economically and geographically possible an AED and oxygen should be available at Rugby games. A person or persons experienced in the use of this equipment should also be in attendance.

GROUP 3: WORLD RUGBY CONTROLLED AND MANAGED TOURNAMENTS AND COMPETITIONS

These Tournaments include but are not limited to Rugby World Cup, Rugby World Cup Sevens, Sevens World Series, Junior World Championship, Junior World Rugby Trophy, Nations Cup and Pacific Nations Cup. The Terms of Participation of these Tournaments identifies that the sole responsibility of each Participating Union is to ensure that all players are medically, dentally and physically fit to attend and to participate in the Tournament / Series and that only players that are medically, dentally and physically fit shall participate in any Match in the Tournament / Series.

The following will apply to all World Rugby Tournaments and Competitions:

1. Cardiac screening must be completed on all players prior to participation in a World Rugby controlled and managed Tournament or Competition.
 2. Cardiac screening must include the World Rugby Cardiac Screening questionnaire (see below) and a cardiovascular physical examination.
 3. The ECG is recommended as part of any cardiac screening process. The ECG may be mandated in certain Tournaments or Competitions as specifically identified in the relevant Terms of Participation for such Tournaments or Competitions.
 4. If logistically possible, it is recommended that the ECG be interpreted by a medical practitioner experienced in reading sports ECG and who has access to the player's cardiac screening questionnaire, family history and information from the cardiac examination.
 5. Cardiac screening should be undertaken at a reasonable distance from the start of a Tournament or Competition
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6. All athletes must sign a consent form to undergo a cardiac screening evaluation. This consent form should include information about the chance of detecting a cardiac abnormality and information regarding the possible outcome if an abnormality is detected. A cooling off period, prior to cardiac screening and following the signing of this consent form is recommended.
7. If an abnormality is suspected following cardiac screening, the Team Physician is responsible for initiating a further investigation(s) and the final decision regarding the player's ability to play rests with the Team Physician and Union. Ideally an experienced cardiologist with an interest and expertise in sports cardiology will be involved in further investigation(s) and the decision regarding fitness to play.
8. High risk sudden cardiac death groups should be considered for more detailed and more frequent cardiac screening processes.

All World Rugby Controlled and Managed Tournaments **must** have an AED and oxygen available at all games. A person or persons experienced in the use of this equipment should also be in attendance.

References

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Acknowledgement

This guideline was prepared by the World Rugby Screening Work Group comprising:

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