

Introduction to the Survey

PURPOSE: The purpose of this survey is to determine the perceptions of and practices put in place by the Medical & Sports Science Department of the referees who competed in the Brazil 2014 World Cup regarding injury prevention.

THE FINDINGS: A report of the overall findings will be sent to each participant. The survey is voluntary and there is no obligation to participate. Completed individual responses will remain anonymous. Any publications and presentations concerning this survey will consist of overall results only and no identifying information will be shown.

The overall findings of this survey could be published in congress, courses and scientific articles.

SPECIFIC OBJECTIVES:

- 1) To establish the most important perceived risk factors for non-contact injuries in referees at a major international tournament.
- 2) To identify the assessment methods employed to determine non-contact injury risk in referees competing in an international tournament
- 3) To determine the preventative based strategies implemented to reduce / limit non-contact injury occurrence during an international tournament.

The survey contains 4 sections with 30 questions in total and should take approximately 15 to 20 minutes to complete

1. Please select one of the following

- I consent to participate
- i do not consent to participate

Personal details

2. To be completed by the person responsible for the injury prevention of the referees

Name

Email

Phone

3. Could you please highlight in your experience, in order, the most common non-contact injuries affecting referees

1st

2nd

3rd

4th

5th

Section 1: Non-contact injury risk factors

In this section we aim to discover your perceptions regarding risk factors for non-contact injuries in referees competing in an international tournament

4. Can you please specify your perceived importance of the following as INTRINSIC risk factors for non-contact injury in referees competing in an international tournament

	Very important	Important	Somewhat important	Not important	Not sure
Previous injury	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Age	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Maximal muscle strength	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Strength endurance (i.e. resistance to fatigue)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Muscle imbalance (side to side difference)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Muscle imbalance (Agonist:Antagonist)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Balance / coordination	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Acute fatigue (e.g. following intense actions in a match)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Accumulated fatigue (i.e. towards end of halves)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Accumulated fatigue (i.e. throughout a season / congested match periods)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Joint mobility and function	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Flexibility	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Movement efficiency	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sleep	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Wellness (mood, fatigue, muscle soreness)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Psychological factors (e.g. stress, anxiety)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Physical fitness	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Biochemical markers (i.e. blood, saliva)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

5. Can you please specify your perceived importance of the following as EXTRINSIC risk factors for non-contact injury in referees competing in an international tournament

	Very important	Important	Somewhat important	Not important	Not sure
Congested match schedule	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Reduced recovery time between matches	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Number of matches played during club playing season	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Training load prior to World Cup	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Training load during World Cup period	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Footwear	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Poor pitch quality	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Change in grass type (even if pitch quality good)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Hot climate	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Frequent Travel	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Training facilities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Recovery facilities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Importance of tournament	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

6. Are there any other risk factors that you considered in your referees? Please state and specify the level of importance

Section 2: Assessing Non-contact injury risk: Testing & Monitoring

In this section we aim to determine your perceptions and practices concerning testing and monitoring of non-contact injury risk in your referees

7. Did you assess referees individual injury risk profile?

8. If yes, did you provide specific training recommendations/modifications to referees identified with high risk for non-contact injuries?

- Yes
- No

9. Please state the overall compliance from referees with these recommendations

- Perfect
- High
- Moderate
- Low
- None

10. In your opinion, how important is compliance from referees in reducing / controlling non-contact injuries?

- Essential (we cannot prevent injuries without it)
- Very important (but we can still prevent some injuries)
- Somewhat important (It can help but it is not essential)
- Not important (It doesn't make any difference to preventing injuries)

11. What were the biggest challenges to getting compliance from your referees?

12. Please select which of the following tests you implemented to identify non-contact injury risk in your referees

- Functional Movement Screen
- Adapted 'in-house' functional movement screen
- Evaluation of muscle peak strength
- Evaluation of muscle endurance strength
- Evaluation of muscle activation / patterns
- Physical fitness
- Balance / proprioception
- Flexibility
- Joint mobility / function
- Psychological evaluation
- Other: please specify in the box below

13. Did you use any other tests? Please specify

14. Please outline the 5 most important tests you used in the development of your referees' non-contact injury risk profile

Test 1	<input type="text"/>
Test 2	<input type="text"/>
Test 3	<input type="text"/>
Test 4	<input type="text"/>
Test 5	<input type="text"/>

15. Which of the following monitoring tools did you employ to assess non-contact injury risk in your referees throughout the World Cup period?

- Rating of perceived exertion (RPE)
- Heart rate
- Subjective wellness (sleep, fatigue, stress, muscle soreness)
- Objective wellness (e.g. sleep actigraphy)
- Recovery of muscle force
- Biochemical markers (e.g. blood, saliva)
- Daily medical screening
- Number and/or minutes of matches played

16. Did you use any other monitoring tools? please specify

Section 3: Injury prevention strategies (Non-contact injuries)

Throughout this section we aim to discover your perceptions concerning preventative strategies for non-contact injuries and gain an insight into the implementation of these strategies in an international tournament context

17. Did you implement an exercise based injury prevention program for your referees during the World Cup?

- Yes
- No

18. Please select when you implemented exercise based injury prevention strategies?

- During World Cup training camp only
- During World Cup tournament only
- Both

19. Did you individualise the program according to individual risks?

- Yes
- No

20. If you performed the exercise based injury prevention program during the World Cup tournament, please specify the variables you modified?

- Reduced frequency
- Reduced load
- Reduced sets & repetitions
- Exercise type

21. Please specify the exercise mode/s you implemented in your referees to prevent an injury to the corresponding body part

	Eccentric	Isometric	Concentric	Combination of contraction types	Balance / Proprioception	Core	Muscle control & activation	Static flexibility	Dynamic flexibility
Hamstring	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Adductor	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Knee	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ankle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Calf	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Quadricep	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Achilles tendon	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Patellar tendon	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

22. List in order of importance, the 5 most effective exercises in your injury prevention exercise program?

1st

2nd

3rd

4th

5th

23. Did you use any other exercises in your preventative program? please specify

24. Did you implement any preventative strategies aimed at the psychology of the referee?

- Yes
- No

25. If yes, can you please specify the most common psychological stressors that you targeted?

- Anxiety
- Stress
- Motivation
- Depression
- Coping

26. Other most common psychological stressors targeted

27. Can you specify the specific strategies that you implemented for psychological stressors?

Section 4: Personal Reflection

In this final section, we ask you to reflect on your World Cup experience and your injury prevention practices, challenges and future perspectives

28. Do you believe that your injury prevention practices were successful at reducing / limiting non-contact injury occurrence?

- Yes, could not have been better
- Yes, but could have been better
- No
- Not sure

29. What were the main challenges you faced during the preparation for and competing of the World Cup in Brazil in regards to injury prevention?

30. How can future Sports Medicine and Sports Science research help you in terms of injury prevention for referees competing in an international tournament format