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Title	Concussion in adolescent rugby union players: comprehensive acute assessment protocol and development of the SSC concussion passport to monitor long-term health
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UCC
University College Cork, Ireland
Coláiste na hOllscoile Corcaigh

CONCUSSION/HEAD INJURY FOLLOW UP QUESTIONAIRRE

This questionnaire is designed to detect, assess and predict the risk of various long-term brain health problems that may affect athletes, particularly following head injuries and concussion. In some cases, athletes may continue to play with these problems however these problems can occasionally lead to the end of a sports career and more importantly, may result in long term problems. The questionnaire covers general health issues, concussions and other injuries, diet and lifestyle; sleep patterns, stress, quality of life and mental health issues as well as other areas of concern. The questionnaire is also designed to examine issues and problems that may not be apparent on simple face-to-face questioning. We also have a separate questionnaire for your partner or spouse to complete to help understand issues from their perspective as well. All information will be kept confidential and will form part of your medical file to assist in your management.

Any comparison of your information to other athletes will be 'de-identified' so that any information provided remains confidential. Your assistance with the research component is completely voluntary and you can chose to withdraw at any time. The person leading the Athlete Brain Health Study is Associate Professor Paul McCrory from the University of Melbourne. If you have any further questions regarding this he can be contacted on 9500 8366 or at the address below.

I consent to my participation in the Athlete Brain Health Study.

Name: ……

Signed ……

Date: ……

Please send form back to A/Professor Paul McCrory

Fax:	**03-8679 3341 or**
Scan and email to	**paulmccr@bigpond.net.au or**
Post to	**A/Professor Paul McCrory**
	Suite 2.02, Ekera Medical Building,
	116-118 Thames Street, Box Hill, Victoria 3128

CONCUSSION/HEAD INJURY FOLLOW UP QUESTIONAIRRE

Please complete the following questions to the best of your ability. Try to answer all questions as accurately, honestly and completely as possible as this information will be used to develop the best care for your health.

1. What is your **current** sporting status?

- ☐ Current student athlete
- ☐ Current amateur athlete
- ☐ Current professional athlete
- ☐ Retired amateur athlete
- ☐ Retired professional athlete

If retired from sport, main reason(s) for retirement

……..

……..

……..

Part A: Background Information

2. What is your name? ……..

3. What is your age? ……..

4. What is your nationality? ……..

5. What is your gender?

☐ Male ☐ Female ☐ Other

6. What is your **current** relationship status?

- ☐ Single
- ☐ Married / civil partnership
- ☐ Living with partner (not married)
- ☐ Separated / divorced
- ☐ Widowed

7. Are you **currently** receiving welfare, disability or injury insurance benefits from any source?

- ☐ Yes
- ☐ No
- ☐ No, but have applied / planning to apply
- ☐ Not applicable

8. What is your **CURRENT** weight? ……kgs.

9. If you **have retired** from sport, what was your approximate weight during your **LAST YEAR** of competition? ……kgs.

10. What is your **CURRENT** height (without shoes)? ……cm

11. What is the **highest** level of schooling you have **completed**?

- ☐ Primary or middle school (under or up to age 16 years)
- ☐ High school / secondary school
- ☐ University / College degree
- ☐ Other postgraduate qualification e.g. diploma, etc.
- ☐ Trade qualification
- ☐ Other qualification

12. Are you **currently employed** or **still at school**/college?

☐ Yes

If yes, what is your main occupation, or if at school, what year / grade level? ……

☐ No

If no, are you retired?

☐ Yes

☐ No

13. Has your doctor or other medical professional ever **diagnosed** you with any of the following conditions that may have affected your school, sport or work performance?

Attention deficit disorder (ADHD)	☐Yes	☐No	☐Not sure
Learning disorder e.g. dyslexia	☐Yes	☐No	☐Not sure
Hearing or Auditory processing problem	☐Yes	☐No	☐Not sure
Migraine or chronic headaches	☐Yes	☐No	☐Not sure
Depression, anxiety or other mental health problem	☐Yes	☐No	☐Not sure
Epilepsy or seizures	☐Yes	☐No	☐Not sure
Memory problems	☐Yes	☐No	☐Not sure
Alzheimer's disease or other dementia	☐Yes	☐No	☐Not sure
Permanent brain injury/damage from sport	☐Yes	☐No	☐Not sure

14. What is your **current level** of physical activity?

☐ I regularly participate in organised or school sport

☐ I do general physical activity on more than 3 days (or more than 150 minutes per week (e.g. walking, jogging, gym, etc.)

What is your main type of exercise or physical activity?

……

☐ I am not physically active (I exercise less than 3 days or less than 150 minutes total per week)

15. What is or was the **main sport (s)** that you played?

☐ Australian Football

☐ Boxing

☐ Equestrian (show jumping, eventing, etc.)

☐ Football (soccer)

☐ GAA sports

☐ Horseracing (professional & amateur)

☐ Martial Arts

☐ Motor sports

☐ NFL & American Football

☐ Rugby Union

☐ Rugby League

☐ Snow & Alpine sports

☐ Wrestling

☐ Other sports *specify*……

16. For your main sport(s), at what age did you start taking part in regular or organised competition?

……

17. With regard to sports activity, which is your dominant / preferred arm and leg?

Arm	☐ Right	☐ Left
Leg	☐ Right	☐ Left

18. For your **main sport(s)**, what was / is your position on the field (e.g. hooker, full back, etc.) or sub-category within sport (e.g. jump jockey, 60kg boxer, F1 driver, slalom skier, etc.)

……

19. For your **main sport only**, in your sporting career approximately how many rides, games, bouts, matches or events did you participate in?

Level	**Approximately how many games, rides, bouts, matches or events**
School, age grade or underage sport	
Local club, community, under 21 senior club, amateur jockey, amateur boxing, club level motor and alpine sport	
Professional sport, including AFL, SANFL, WAFL, rugby provincial level, super rugby, county level competitions, professional jockey, professional boxing, national level motor and alpine sports	
International representative competitions, international level motor and alpine sport (or inter county GAA)	

20. During your **PLAYING CAREER or SINCE YOUR RETIREMENT**, have you had surgery for a sporting injury?

☐ Yes → Specify number of times in table below

☐ No

Surgery	**During your playing career**	**Since your retirement**
Hip joint		
Hip Joint replacement		
Hip arthroscopy		
Other type of hip operation		
Knee joint		
Knee arthroscopy		
Cartilage knee surgery		
Knee Joint Replacement		
ACL surgery		
Other type of knee operation		
Ankle/foot surgery		
Shoulder surgery		
Elbow surgery		
Hand surgery		
Back or neck surgery		
Face surgery (incl nose)		
Other (specify)		

Part B: Concussion & Head Injuries

The following questions deal specifically with any concussions or head injuries that you may have had during your life and any risk factors for these injuries. If you cannot remember the exact number make an estimate or guess.

21. Have you had any concussions or head injuries during your life **NOT from sport** (e.g. car accidents, falls, assaults etc.)?

☐ Yes

Approximate number of times ……

Approximate date of most recent injury ……

☐ No

22. Have you had any severe **facial or dental injuries** (e.g. facial fractures requiring surgery or specialist treatment, lost or permanently damaged teeth)?

☐ Yes

Approximate number of times ……

☐ No

23. Has anyone in your family been diagnosed with **dementia or Alzheimer's Disease**?

☐ Yes

Please give details (i.e. which relative - mother, grandfather, etc.)

☐ No

24. Have you ever had a **sports related concussion**?

☐ Yes

☐ No ***If no, go to Question 36***

25. How **worried** are you about the possible effect of concussion(s), head injuries or head impacts sustained during your career on your memory or thinking skills, as you get older?

(select one only)

Not worried		Moderately worried			Very worried	
☐1	☐2	☐3	☐4	☐5	☐6	☐7

26. We are trying to determine the total number of concussions (mild and severe) that you may have experienced in your career. The most obvious concussions are where you are knocked out cold or are unconscious. You may also have experienced milder concussions where you were briefly dazed or stunned after a collision or where you has some dizziness, confusion, balance problems, blurred vision, slowed reactions, nausea, difficulty concentrating or headache after a collision or impact.

How many sports related concussions have you had? *Please enter the details in the table below. If none, put "0" in the appropriate column. Use your best guess if not sure of the precise number.*

	Estimated number of severe concussions where you were **knocked out or unconscious**	Estimated number of times you had a mild concussion where you were **dazed or stunned** or had other symptoms (as above) but were **NOT knocked out**
School; age grade or underage sport		
Local club, community, amateur jockey, amateur boxing, club level motor and alpine sport		
Professional sport, including rugby provincial level, super rugby, county level competitions, professional jockey, professional boxing, national level motor and alpine sports		
International representative competitions, international motor and alpine sport (or inter county GAA competitions)		

27. From the concussions listed in the table above, approximately how many times did you return to the sport on the **same day** as the concussion occurred?

……

28. If a doctor was on duty at the event or after, did you usually **tell** them when you had a concussion or significant head knock?

☐ No

☐ Yes

29. Answer as much as you can about the **WORST CONCUSSION** that you can remember as a result of your sport?

a. Year occurred ……

b. Approximately how many days did it take to recover? ……

c. Are you still affected by the concussion? ……

e. Approximately how many games or events did you miss as a result of the concussion? ……

30. Do you think the sports concussions have had a **permanent or lasting effect** on your memory or thinking skills?

☐ Yes

☐ No ***If no, go to Question 37***

☐ Unsure ***If unsure, go to Question 37***

31. If you answered 'yes' to Q30, then...

a. What **age** were you when you started having symptoms? ……

b. Approximately how many **years** between your retirement from professional sport and the development of these symptoms?

……

32. If you answered 'yes' to Q30, were these symptoms a **continuation** of the last concussion (i.e. never fully recovered) or were they '**new'** symptoms that developed some time after your last concussion?

- ☐ Continuation of symptoms from last concussion
- ☐ New symptoms
- ☐ Unsure

33. What were the **symptoms** that alerted you to the problem? *(select all that apply)*

- ☐ Memory problems
- ☐ Lack of Concentration/Attention
- ☐ Confusion
- ☐ Getting lost when driving/walking
- ☐ Personality change e.g. irritability, mood swings, explosive temper
- ☐ Loss of ability to do everyday tasks
- ☐ Other *specify*……..

34. If you have **already retired** from sport, do your memory problems interfere with your normal daily activities?

- ☐ Yes
- ☐ No
- ☐ Not applicable

35. If you have **already retired** from sport, do family members or friends seem to think your memory is getting worse over time?

- ☐ Yes
- ☐ No
- ☐ Not applicable

36. Over the past month, did you have trouble controlling your anger to the point where you threatened someone with physical violence or got into a fight?

☐ Yes

☐ No

Part C: Current Level of Function

37. Score yourself on the following symptoms, based on how you feel **RIGHT NOW**.

(select one only from each row – all rows must be answered)

	none		mild		moderate		severe
Headache	☐	☐	☐	☐	☐	☐	☐
"Pressure in head"	☐	☐	☐	☐	☐	☐	☐
Neck Pain	☐	☐	☐	☐	☐	☐	☐
Nausea or vomiting	☐	☐	☐	☐	☐	☐	☐
Dizziness	☐	☐	☐	☐	☐	☐	☐
Blurred vision	☐	☐	☐	☐	☐	☐	☐
Balance problems	☐	☐	☐	☐	☐	☐	☐
Sensitivity to light	☐	☐	☐	☐	☐	☐	☐
Sensitivity to noise	☐	☐	☐	☐	☐	☐	☐
Feeling slowed down	☐	☐	☐	☐	☐	☐	☐
Feeling like "in a fog"	☐	☐	☐	☐	☐	☐	☐
"Don't feel right"	☐	☐	☐	☐	☐	☐	☐
Difficulty concentrating	☐	☐	☐	☐	☐	☐	☐

Difficulty remembering	☐	☐	☐	☐	☐	☐	☐
Fatigue or low energy	☐	☐	☐	☐	☐	☐	☐
Confusion	☐	☐	☐	☐	☐	☐	☐
Drowsiness	☐	☐	☐	☐	☐	☐	☐
Trouble falling asleep	☐	☐	☐	☐	☐	☐	☐
More emotional	☐	☐	☐	☐	☐	☐	☐
Irritability	☐	☐	☐	☐	☐	☐	☐
Sadness /Depressed	☐	☐	☐	☐	☐	☐	☐
Nervous or Anxious	☐	☐	☐	☐	☐	☐	☐
Difficulty speaking	☐	☐	☐	☐	☐	☐	☐
Explosive temper	☐	☐	☐	☐	☐	☐	☐
Lack of interest in life	☐	☐	☐	☐	☐	☐	☐
Difficulty with planning things	☐	☐	☐	☐	☐	☐	☐

38. Do **any** of these symptoms get worse with activity?

Physical activity	☐Yes	☐No
Mental activity	☐Yes	☐No

39. During the past **month**, how would you rate your **sleep quality** overall?

(select 1 only)

- ☐ Fairly bad
- ☐ Average
- ☐ Fairly good

40. During the past month, have you needed to take any **sleeping pills or other tablets** (either prescribed or 'over the counter') to help you sleep?

- ☐ Yes
- ☐ No

41. Have you ever been medically diagnosed with a **sleep disorder** (e.g. obstructive sleep apnoea, restless legs syndrome, etc.)

- ☐ Yes
- ☐ No

42. In general, would you say your **health** is … *(select 1 only)*

- ☐ Excellent
- ☐ Very good
- ☐ Good
- ☐ Fair
- ☐ Poor

43. During the past **month**, to what extent has any **EMOTIONAL PROBLEMS** (e.g. depression or sadness etc.) interfered with your normal social activities with family, friends, neighbours or groups? *(select 1 only)*

- ☐ Not at all
- ☐ Slightly
- ☐ Moderately
- ☐ Quite a bit
- ☐ Extremely

44. During the past month, how much did **pain** from previous sporting injuries interfere with your normal work (including both inside and outside the home)? *(select 1 only)*

- ☐ Not at all
- ☐ Slightly
- ☐ Moderately
- ☐ Quite a bit
- ☐ Extremely

45. How **stressful** do you consider your life to be? *(select 1 only)*

- ☐ Low
- ☐ Moderate
- ☐ High

46. Do you take **medications** prescribed by a doctor?

- ☐ No
- ☐ Yes

List medications below

……

……

……

……

……

47. List all **other (non prescription) medications** such as vitamins, tonics, supplements, protein powders etc that you take (including any naturopathic, homeopathic or traditional Chinese medicine preparations)

……

……

……

……

48. Do you have a GP that you see regularly? ☐ Yes ☐ No

49. Do you have any allergies? ☐ Yes ☐ No

50. Do you see any other health professionals regularly? ☐ Yes ☐ No

If yes, specify type of health professional (e.g. physiotherapist, chiropractor etc)

……

……

……

……

51. Do you drink **alcohol**?

☐ Yes

☐ No ***If no, go to Question 55***

52. In the past month, on average how many **days a week** did/do you consume alcohol?

- ☐ None
- ☐ 1 - 2 days a week
- ☐ 3 - 4 days a week
- ☐ 5 - 7 days a week

53. In the past month, on average how many alcoholic drinks **per week** did/do you consume?

- ☐ None
- ☐ 1 - 2 drinks
- ☐ 3 - 5 drinks
- ☐ 6 - 7 drinks
- ☐ 8+ drinks

54. Has your drinking ever resulted in any legal or disciplinary issues, relationship problems or have you ever needed counselling or rehabilitation due to a drinking problem?

- ☐ Yes
- ☐ No

55. How often do you use medications, alcohol, or other substances to help you relieve stress and relax? *(select 1 only)*

- ☐ Frequently (several times a week)
- ☐ Occasionally (once or twice a week)
- ☐ Seldom (once or twice a month)
- ☐ Almost never
- ☐ Never

56. In the past 12 months, did you take any of the drugs listed below more than once, to get high, to feel elated, to get a buzz, or to change your mood?

Amphetamines speed, crystal meth Dexedrine, Ritalin, diet pills, rush THC, marijuana, cannabis, hashish, cocaine, crack steroids, GHB Valium, Xanax Ativan barbiturates, heroin morphine, methadone, opium, Demerol® codeine, Percodan, OxyContin, Vicodin, LSD, mescaline, PCP, angel dust, ecstasy MDA, MDMA ketamine, inhalants, glue, ether etc.

- ☐ Yes
- ☐ No
- ☐ Do not wish to reply

57. In the past 12 months, have you taken any performance enhancing drugs such as anabolic steroids?

- ☐ Yes
- ☐ No
- ☐ Do not wish to reply

58. How would you describe your smoking history?

- ☐ Current smoker
- ☐ Ex-smoker
- ☐ Never smoked ***If never smoked, go to Question 60***

59. Answer only if you are a current or ex-smoker

a. What age did you start smoking? …….

b. If an ex-smoker, what age did you quit smoking? …….

c. On average, how many cigarettes do / did you smoke a day? …….

The following questions are related to your stress and mental well-being. Choose one response from the four given for each of the 7 questions. You should give an immediate response and do not try to think too long about the answers. You should answer how it CURRENTLY describes your feelings.

60. I feel tense or 'wound up'?

- ☐ Most of the time
- ☐ A lot of the time
- ☐ Occasionally
- ☐ Not at all

61. I get a sort of frightened feeling as if something awful is about to happen?

- ☐ Very definitely and quite badly
- ☐ Yes, but not too badly
- ☐ A little, but it doesn't worry me
- ☐ Not at all

62. Worrying thoughts go through my mind?

- ☐ A great deal of the time
- ☐ A lot of the time
- ☐ From time to time, but not too often
- ☐ Only occasionally

63. I can sit at ease and feel relaxed

- ☐ Not at all
- ☐ Not often
- ☐ Usually

- ☐ Definitely

64. I get a sort of frightened feeling like butterflies in my stomach

- ☐ Very often
- ☐ Quite often
- ☐ Occasionally
- ☐ Not at all

65. I feel restless and I have to be on the move

- ☐ Very much indeed
- ☐ Quite a lot
- ☐ Not very much
- ☐ Not at all

66. I get sudden feelings of panic

- ☐ Very often indeed
- ☐ Quite often
- ☐ Not very often
- ☐ Not at all

67. I still enjoy the things I used to enjoy

- ☐ Hardly at all
- ☐ Only a little
- ☐ Not quite so much
- ☐ Definitely as much

68. I can laugh and see the funny side of things

- ☐ Not at all
- ☐ Definitely not so much now
- ☐ Not quite so much now
- ☐ As much as I always could

69. I feel cheerful

- ☐ Not at all
- ☐ Not often
- ☐ Sometimes
- ☐ Most of the time

70. I feel as if I am slowed down

- ☐ Nearly all the time
- ☐ Very often
- ☐ Sometimes
- ☐ Not at all

71. I have lost interest in my appearance

- ☐ Definitely
- ☐ I don't take as much care as I should
- ☐ I may not take quite as much care
- ☐ I take just as much care as ever

72. I look forward with enjoyment to things

- ☐ Hardly at all
- ☐ Definitely less than I used to
- ☐ Rather less than I used to
- ☐ As much as I ever did

73. I can enjoy a good book or radio or TV program

- ☐ Very seldom
- ☐ Not often
- ☐ Sometimes
- ☐ Often

Thank you for completing this questionnaire