## **Abstracts**

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### Session 1: Return to play

# A1 Return to play from an eating disorder

Carolyn Nahman

Child and Adolescent Psychiatry, Oxford Health NHS Foundation Trust, Nottingham, United Kingdom Correspondence to Carolyn Nahman; caz.nahman@oxfordhealth.nhs.uk

#### Introduction

RED-S is common in athletes and while it might be accidental, frequently occurs as a result of disordered eating or an eating disorder. Sometimes it is hard to differentiate at what point the disordered eating represents a clinically significant eating disorder – a mental illness with significant physical and mental health risks. Currently there is limited consensus on screening for RED-S or eating disorders in athletes. Current RED-S guidelines include a clinical assessment tool and traffic light system which can be used to categorise return to play – depending on the traffic light rating it might suggest "Red risk – no training or competing" or "Amber – modified training/contract" or "Green – full return to training and competition" and this can be used with the athlete and the team around the athlete to make decisions around training and competition.

#### Methods

Current return to play guidelines and RED-S CAT tool are summarised and presented. However, need to consider psychiatric risks from the illness which add to complexity of decision making. Safe exercise at every stage for athletes guidelines which look at risk assessment, exercise recommendations and return to competition will also briefly be shared.

#### Results

Two clinical case examples will be touched on to share complexity of decision modifiers. The factors taken into account in decision making around return to play will be shared with the audience to illustrate some of the factors considered as well as external sporting pressures outside the psychiatrist control.

#### Conclusion

Decisions about return to play are complex when an eating disorder is present and both physical health and psychiatric risks need to be considered. Individual formulation, risk assessment and risk management plans take time and need an MDT approach.

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# A2 Sport related traumatic brain injury and return to play

Thomas McCabe

NHS Greater Glasgow & Clyde, Gartnavel General Hospital, Glasgow, United Kingdom; School of Medicine, Dentistry & Nursing, University of Glasgow, United Kingdom Correspondence to Thomas McCabe; thomas.mccabe5@ggc.scot.nhs.uk

#### **Case Study**

R.P. is a rugby player with a history of undiagnosed sports related brain injury. He suffers a further brain injury during training. The patient proceeds through standard return to play protocols however symptoms of anxiety and low mood present two weeks after injury – these remain untreated for two months and adversely affect his social interactions and university work. Playing at a semi-professional level, he has limited access to professional help and doesn't know who to approach for assistance. He subsequently retires from rugby due to only partial resolution of symptoms and fear for his future brain health.

#### Discussion

The Sport Concussion Assessment Tool Version 5 (SCAT5) considers mental health symptomology such as sadness, irritability, more emotional, nervousness/anxiety and fatigue [1]. This is assessed as part of self-report questionnaire 'at this point in time.' Sports related brain injury can evolve or present 'late' [2]. There is no clear optimal time to administer the SCAT5 or standardised period of time following injury for this to be repeated.

Symptoms of depression are reported to be associated with concussion exposure [3] as well as being higher in contact sport (NCAA) athletes at 'pre-season baseline' when compared to that of non-contact sport athletes [4]. The evolving nature of sports related brain injury and the possibility of subthreshold symptoms make identification by way of existing methods challenging and raise the possibility of a significant subset of patients not receiving adequate assessment.

#### Implications and summary

SCAT5 alone is inadequate to fully consider the complexity of evolving mental health symptomology in brain injury. Added this, SCAT5 does not factor in wider symptoms of mental health disorders such as is seen in Attention Deficit Hyperactivity Disorder. Use of the Patient Health Questionnaire 9 has been suggested as a way to supplement overall brain injury assessment [5].

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### A3 Return to Play (RTP) after depressive episode

Tim Rogers

PERFORM-r, London, United Kingdom Correspondence to contact@perform-r.com

#### Introduction

Many factors that remove athletes from training or competing e.g. injury, non-selection are associated with depression. Removal is also associated with precipitants for depressive disorder: separation from teammates; reduced physical activity; financial and relationship problems. Depression can also be the primary reason for withdrawal. Many athletes continue to play with depression. This creates clinical risk, highlights the importance of screening and requires barriers to help seeking to be addressed.

#### Methods

There is a limited literature to guide practice and to operationalize RTP criteria for sport. Practice must extrapolate from existing guidance out with sports but applied with knowledge and experience of the sporting context and from other RTP guidance in sport (e.g., after musculoskeletal injury or concussion)

#### Results

Helping athletes return to play begins with a bio-psychosocial formulation with consideration of precipitating, predisposing and maintaining factors [1]. This should include stressors unique to elite sport such as the threatened loss of a strong athletic identity; media scrutiny; extrinsic motivation (such as parental proxy achievement); sport related injury and concussion; psychological safety within the team; overtraining; low levels of mental health literacy.

In addition, some injured athletes are no longer able to use sport to manage pre-existing mood symptoms.

Assessment for RTP should cover: asking about injury coping and re-injury fears; exploring attitude to rehabilitation; understanding motivation; a cross-check of physiotherapy assessment with the athlete's self-report; exploring appetite and eating; assessing anger, self-harm and suicidal thoughts; considering substance use and gambling together with any issues around doping; enquiring about nature and availability of support. Availability of sports specific treatment may also be a factor [2] and the athlete's engagement can be a key decision modifier.

Some risks to be considered in RTP are those of premature return; recurrence risk and managing a 'failed RTP'; delayed return; specific situations such as travel and media appearances.

#### **Discussion**

Strategies to support RTP should include simple measures such as adequate sleep and nutrition alongside sports specific prescribing (if medication is being utilised) [3] and psychological therapy that is adjusted to the sporting environment but remains faithful to the therapy model [4]. Information sharing needs to balance athlete confidentiality with the helpfulness of an informed team of supporters around the athlete. Risk management can be addressed through modification of dynamic risk factors and the use of safety and contingency planning. There is a balance too between keeping athletes involved in sport (e.g., providing the buffering effects of social support and realistic optimism of return) but avoiding premature return (and e.g., re-injury and further disappointment).

With these measures in place most athletes who experience depression can be supported to a positive outcome both for their health and their sporting performance.

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### A4 Return to Play following a Psychiatric Emergency

Carla Edwards

Department of Psychiatry and Behavioural Neuroscience, McMaster University, Hamilton, Canada

Correspondence to edwardcd@mcmaster.ca

#### Introduction

Most individuals and organizations in the sports world are not equipped with the skills or knowledge needed to respond to a mental health emergency. Acute events witnessed by non-mental health professionals can be shocking, scary, and traumatizing. Behavioural manifestations of a psychiatric emergency can include extreme behavioral disturbance (e.g. psychomotor agitation, mania, anger, severe dysphoria, violence), psychosis, self-harm, suicidal behavior, aggression, or catatonia). The decision to provide clearance for an athlete to return to play (RTP) following an acute exacerbation of mental illness is not as clear as an RTP protocol following recovery from a musculoskeletal injury or surgical repair. Sport-specific circumstances can lead to divergent agendas between team officials and mental health practitioners, particularly if an athlete's contribution to their sport is deemed essential for a desired outcome, or if there are high stakes involved (i.e. medals or playoffs). Psychological considerations for return to sport are not always sport or performance-related, and the more serious circumstances will likely involve safety and appropriate support systems. When mental illness is the primary contributor to the interruption in training or competition, the major issues that are essential to review prior to the athlete being cleared to return to the sport environment include: the situation (i.e. whether or not the team/coach/environment contributed to the challenge), sport-specific circumstances (i.e. the sport and the athlete's role), symptoms (i.e. ongoing active symptoms), safety (i.e., emotional stability, presence of suicidal or homicidal thoughts), the system (i.e. supports) and risks of return (i.e., reflective of the athlete's ability to tolerate potential adversity).

#### Methods

Although there is a paucity of best practice guidelines around return to play post psychiatric emergency, concrete elements related to psychiatric emergencies are extrapolated to sport environments to highlight important considerations. Three clinical case examples are used to illustrate various complexities that can be encountered in the sport environment when an athlete experiences a psychiatric emergency.

#### Results

The sports world is ill-equipped to respond to psychiatric emergencies. Divergent agendas may arise in consideration of return to play timelines. Guidance from general management of psychiatric emergencies can be applied in the sports setting to enhance decision-making.

#### Conclusion

Management of mental health emergencies in sports (including RTP) is complicated by lack of mental health literacy and training in the sports world. Sports Psychiatrists can play a pivotal role in prevention, education, preparation and RTP planning following a mental health emergency. Considerations should include the situation, sport, symptoms, safety, system, and risks.

## **Session 2: Research presentations**

#### **A5**

# Evaluating the public's perceptions of football players living with mental health symptoms and disorders

Paul Gorczynski<sup>1,2</sup>\*, Tom Webb<sup>2</sup>

<sup>1</sup>School of Human Sciences, University of Greenwich, London, United Kingdom <sup>2</sup>Department of Sport and Exercise Science, University of Portsmouth, United Kingdom \*Correspondence to Paul Gorczynski; paul.gorczynski@greenwich.ac.uk

#### Introduction

We examined changes in public perceptions of football players before and after disclosure of a mental disorder.

#### Methods

Individuals 18 years old and over participated in a cross-sectional survey study. Participants were asked to assume the role of a Premier League manager. Participants were first presented with a neutral vignette of a fictitious player who was of exceptional ability and who had not disclosed a mental disorder. Participants were then presented with three separate vignettes, each referring to the same player who then disclosed different disorders (major depressive disorder (MDD), generalized anxiety disorder (GAD), substance use disorder (SUD)). Following the presentation of each vignette, participants were asked whether they would sign the player to their team.

#### Results

376 individuals participated in the study. Participants were most knowledgeable about MDD, and least knowledgeable about GAD. Repeated measures ANOVAs compared the effects of disclosure of a mental disorder on the likelihood of being signed to the team. After disclosure of each mental disorder, participants indicated they were significantly less likely to sign a player (p<.01). Of the three disorders, participants were least likely to sign a player who disclosed SUD.

#### Conclusion

Disclosure of mental disorders by an elite athlete may carry career related consequences, like not being signed to a team. Mental health literacy strategies for key front office staff may address the effects of public stigma related to mental health symptoms and disorders.

# A6 Symptom overlap of acute mountain sickness and lithium toxicity: a case report

Amy Uber\* and Claire Twark

Department of Psychiatry, Brigham and Women's Hospital, Boston, United States \*Correspondence to Amy Uber; auber@bwh.harvard.edu

#### Introduction

Mild lithium toxicity and acute mountain sickness (AMS) share multiple overlapping features. AMS typically presents with headache and often dizziness, malaise, and/or nausea/vomiting, which may progress to psychomotor slowing, incoordination, memory impairment, and death [1]. Lithium, a common treatment for bipolar disorder, when toxic can cause hand tremor, nausea/vomiting, confusion, incoordination/ataxia, and at higher levels, seizures and death [2]. Even mild lithium toxicity can damage organs and is therefore important to prevent.

#### Methods

We report a case of a bipolar patient on lithium who hiked to 4,418 m and experienced symptoms that are shared by both conditions. As she climbed, she experienced headache and nausea, for which she twice took 800 mg ibuprofen. She noted psychomotor changes with mild slowing of cognition and reaction time and worsening of her lithium-associated hand tremor. We further tested this patient's lithium levels; on a rest day, serum lithium levels were drawn at 12 and 16 hours after taking her nightly 900 mg lithium. This test was repeated the following day with the patient completing a 10 km run between the two blood draws.

#### Results

The patient showed accelerated lithium clearance during exercise, consistent with other case reports on this topic.

#### Conclusion

Minimal research suggests that altitude raises lithium levels [3] and sweating may lower levels [4,5]. We advise individualized testing of athletes' lithium levels in response to exercise and altitude, and recommend educating patients on maintaining therapeutic lithium levels during their athletic pursuits.

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#### **Author note**

The case report was published in "High Altitude Medicine & Biology" in April 2022: Uber A, Twark C. Symptom Overlap of Acute Mountain Sickness and Lithium Toxicity: A Case Report. High Alt Med Biol. 2022.

The Journal has approved the publication of a different version of the abstract in *Sports Psychiatry*.