Infographic. Graduated return to play guidance following COVID-19 infection


Published in:
British Journal of Sports Medicine

Document Version:
Publisher's PDF, also known as Version of record

Queen's University Belfast - Research Portal:
Link to publication record in Queen's University Belfast Research Portal

Publisher rights
Copyright 2020 the authors.
This is an open access article published under a Creative Commons Attribution License (https://creativecommons.org/licenses/by/4.0/), which permits unrestricted use, distribution and reproduction in any medium, provided the author and source are cited.

General rights
Copyright for the publications made accessible via the Queen's University Belfast Research Portal is retained by the author(s) and / or other copyright owners and it is a condition of accessing these publications that users recognise and abide by the legal requirements associated with these rights.

Take down policy
The Research Portal is Queen's institutional repository that provides access to Queen's research output. Every effort has been made to ensure that content in the Research Portal does not infringe any person's rights, or applicable UK laws. If you discover content in the Research Portal that you believe breaches copyright or violates any law, please contact openaccess@qub.ac.uk.
Infographic. Graduated return to play guidance following COVID-19 infection

Niall Elliott,1,2 Rhodri Martin,3,4 Neil Heron,5,6 Jonathan Elliott,7 Dan Grimstead,3 Anita Biswas8

COVID-19 AND SPORT
With risk of cardiological, renal, respiratory and haematological complications,1–5 it is best practice to follow steady resumption of training, paying attention to physical and psychological factors after COVID-19 infection.

SCOPE OF THIS INFOGRAPHIC
This guidance takes into account public health guidelines in the UK (although we hope its content is relevant more widely) and available expert opinion at time of publication and is for use by healthcare practitioners. It is applicable to performance athletes who have had mild to moderate illness. Those requiring hospital admission merit further assessment.

COVID-19 CLINICAL GUIDANCE
If an athlete develops an illness with symptoms of COVID-19, they should follow national guidance, speak to their sports medicine doctor, and undertake appropriate quarantine, testing and tracing.

They should maintain good hydration, a balanced diet and, if symptoms worsen or persist beyond 7 days, seek further medical review.

Quarantine when living with others includes practical aspects such as isolating within rooms not accessed by other persons, maintaining supplies of food and water, use of a different toilet and washing dirty linen and clothes regularly.

GRADUATED RETURN TO PLAY (GRTP) PROTOCOL
A GRTP is a progressive programme that introduces physical activity and sport in a stepwise fashion.

Key considerations
► Before considering GRTP, the athlete must be able to complete activities of daily living and walk 500 m on the flat without excessive fatigue or breathlessness.
► They should have at least 10 days’ rest and be 7 days symptom-free before starting.
► Less aerobically intense sports like golf may progress quicker. Experience suggests that some athletes take over 3 weeks to recover.

Some monitoring may add value, which could includes
► Resting heart rate.
► Rated perceived exertion.
► Sleep, stress, fatigue and muscle soreness.
► Injury-Psychological Readiness to Return to Sport.

If any symptoms occur (including excessive fatigue) while going through GRTP, the athlete must return to the previous stage and progress again after a minimum of 24 hours’ period of rest without symptoms.

ATHLETES WITH COMORBIDITIES
Athletes diagnosed with COVID-19 and who have medical conditions such as diabetes, cardiovascular disease or renal disease should have a medical assessment before commencing GRTP.

FURTHER ASSESSMENTS
Athletes who have a complicated or prolonged COVID-19 illness may need further investigations, including

INFOMRATIVE CREATED BY UK HOME COUNTRIES INSTITUTES OF SPORT. ELLIOTT N, ELLIOTT J, BISWAS A, MARTIN R, HERON N.
Infographic

► Blood testing for markers of inflammation (high sensitivity-Troponin, Brain Natriuretic Peptide and C reactive protein).3 4
► Cardiac monitoring (12-lead ECG, echocardiogram, exercise tolerance test and cardiac MRI).3 4
► Respiratory function assessment (spirometry).
► Renal and haematological monitoring.

1Sports Medicine, Sportscotland Institute of Sport, Stirling, UK
2Sports Medicine, NHS Tayside, Dundee, UK
3Sports Medicine, Sport Wales, Cardiff, UK
4Sport and Exercise Medicine, Cwm Taf Morgannwg University Health Board, Abercynon, UK
5Sports Medicine, Sports Institute Northern Ireland, Newtownabbey, UK
6Queen’s University Belfast Centre for Public Health, Belfast, UK
7Faculty of Medicine Health and Life Sciences, Queen’s University Belfast, Belfast, UK
8Sports Medicine, English Institute of Sport, Manchester, UK

Correspondence to Dr Niall Elliott, Sports Medicine, Sport Scotland Institute of Sport, Stirling FK9 5PH, UK; niall.elliott@sispport.com
Twitter Niall Elliott @dundeesportsmed and Jonathan Elliott @jelliott1989

Acknowledgements CMcC: Sportscotland Institute of Sport; CR: English Institute of Sport.

Contributors RM, NH, JE, AB and DG provided material and edits to the documents from the outset of the guidance creation. Lead authorship by NE.

Funding The authors have not declared a specific grant for this research from any funding agency in the public, commercial or not-for-profit sectors.

Competing interests NE, RM, NH, DG and AB received remuneration from sporting organisations as per author affiliations.

Patient consent for publication Not required.

Provenance and peer review Not commissioned; externally peer reviewed.

Open access This is an open access article distributed in accordance with the Creative Commons Attribution Non Commercial (CC BY-NC 4.0) license, which permits others to distribute, remix, adapt, build upon this work non-commercially, and license their derivative works on different terms, provided the original work is properly cited, appropriate credit is given, any changes made indicated, and the use is non-commercial. See: http://creativecommons.org/licenses/by-nc/4.0/.

© Author(s) (or their employer(s)) 2020. Re-use permitted under CC BY-NC. No commercial re-use. See rights and permissions. Published by BMJ.

To cite Elliott N, Martin R, Heron N, et al. Br J Sports Med Epub ahead of print: [please include Day Month Year]. doi:10.1136/bjsports-2020-102637 Accepted 31 May 2020
Br J Sports Med 2020;0:1–2
doi:10.1136/bjsports-2020-102637

ORCID ids
Niall Elliott http://orcid.org/0000-0002-5394-975X
Jonathan Elliott http://orcid.org/0000-0002-1087-9720

REFERENCES