











COVID-19 MEDICAL MANAGEMENT AND GRTP PROTOCOLS

Reviewed and updated in consultation with the South African URC Rugby Medical Doctors, with special input by Dr Leigh Gordon, Professor Jon Patricios, and Professor Mpiko Ntsekhe











COVID-19 MEDICAL MANAGEMENT PROTOCOLS

- COVID-19 is not just a respiratory infection, but is a multi-system disease that can potentially be associated with several significant clinical complications;
- The consequences for the elite athlete may only become evident after an apparent recovery from the infection, when the athlete returns to high intensity exercise;
- As a result, even the mildest cases, including the asymptomatic PCR-positive or Rapid Antigen Test positive cases, will require some level of investigation;
- This investigation will be aimed at excluding possible consequences of the infection in any of the cardiovascular, respiratory, neurological, renal or hepatic systems
- Investigations may include a physical examination, a resting ECG and blood tests to exclude ongoing inflammation (i.e., WCC and CRP) and heart muscle damage (i.e., hs-Trop);
- The investigation of other cases will be informed by the clinical presentation of the patient and will be conducted by the attending specialist these investigations will follow the current, peer-reviewed medical literature:
- Once a decision has been made to permit a return-to-training, the athlete will be put through a graduated program (GRTP), conducted and closely monitored by the qualified medical doctor or biokineticist;
- Team medical doctors will manage these athletes conservatively, exercising a high level of suspicion such that any abnormal finding during the graduated return-to-training will prompt specialist consultation and further investigation of the athlete









CLASSIFICATION OF POST-COVID-19 PATIENTS

- The following system of classifying patients according to their "SARS-CoV-2 status" has been developed for the ease of managing the different clinical scenarios which can be faced during the pandemic. This system is based on the published literature, including (but not restricted to the following) as well as consultation with experts in the field:
- Phelan D, Kim JH, Chung EH. A Game Plan for the Resumption of Sport and Exercise After Coronavirus Disease 2019 (COVID-19) Infection. JAMA Cardiol. Published online May 13, 2020. doi:10.1001/jamacardio.2020.2136
- Elliott N, Martin R, Heron N, et al. Infographic. Graduated return to play guidance following COVID-19 infection. BJSM. Published Online First: 22 June 2020. doi: 10.1136/bjsports-2020-102637
- This system provides a practical guideline for the safe return-to-training of at-risk players. It includes guidelines on time away from training, investigations required prior to the return-to-training, the requirement for additional medical consultation and a structured, safe exercise protocol for the returning athlete.
- This guideline will be updated as and when information regarding the return-to-training of elite athletes post-COVID-19 is published.



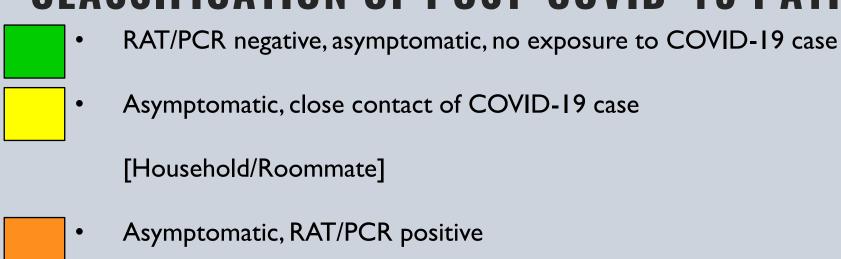








CLASSIFICATION OF POST-COVID-19 PATIENTS



- Symptomatic Confirmed with positive RAT/PCR
- Minimal symptoms*
 Mild-moderate symptoms (home management)
 - Time moderate symptoms (nome management)
 - ☐ Severe symptoms (hospital management)

* Minimal symptoms = patient has only clinically insignificant symptoms, of < 5 days duration and remains ambulant throughout the course of the illness









COMMENCEMENT DAY OF GRADUATED GRTP



No restriction



 Day I RAT (Negative); Remains out of contact from team but continues to train, RAT Day 5 – if negative reintegrates with team



 Stays away from team for 5 days, RAT on Day 5 – if negative joins team. GRTP can start on day 6 if player remains asymptomatic



• 7 days isolation then GRTP and examination and investigations (see details)



7-days isolation + at least 7 days symptom-free rest** +
 examination and investigations (see details)



7 days isolation + at least 2 weeks symptom-free rest**
 + comprehensive cardiology assessment









EVALUATION PRIOR TO GRADUATED RTP



• Nil



Nil



 No investigations, or minimal investigations if medical doctor feels the need



 Examination + bloods (CRP, WCC, hs-Trop) + urinalysis + resting ECG + sub-maximal test*



 Examination + investigations (directed by clinical findings) + consultation with specialist + sub-maximal test*



 Extensive consultation with appropriate specialists + prolonged convalescence + sub-maximal test*

^{*} Any abnormality or change from baseline/previous results of any measurement warrants investigation











SUB-MAXIMAL TEST PRIOR TO GRADUATED RTP









- Conducted by biokineticist in controlled environment
- Aerobic exercise at 60-70% intensity for 10-20 minutes*
- Document**:
 - symptoms (including excessive fatigue, SOB, chest pain, dizziness, palpitations, myalgia, etc.)
 - HR (resting, exercise & recovery)
 - rating of perceived exertion
 - dyspnoea rating
 - temperature

^{**} Any abnormality or change from baseline/previous results of any measurement warrants investigation







^{*}This is equivalent to 'stage 2' of the GRTP table overleaf



STAGES OF GRADUATED RTP PROTOCOL









	STAGE I	STAGE 2	STAGE 3	STAGE 4	STAGE 5	STAGE 6
Timing (days)	7 Days — Symptomatic 5 Days Asymptomatic	<u>></u> I	<u>></u> I	≥	<u>></u> I	<u>></u> I
Activity	Rest	Light activity	Increase training frequency	Increase training duration	Increase training intensity	Normal training
Exercise allowed	Walking; ADL's	Jogging; cycling	Running drills	More complex training activities	Normal training activities	Normal training
% of max HR		< 70%	< 80%	< 80%	< 80%	
Duration (mins)		< 15	< 30	< 45	< 60	<60
Objective		Increase HR	Gradual load increase	Skills and tactics	Confidence & functional skills	Normal training
Monitoring		Symptoms; HR; RPE	Symptoms; HR; RPE	Symptoms; HR; RPE	Symptoms; HR; RPE	Symptoms; HR; RPE

^{*} GRTP takes a minimum of 5 days from commencement to unrestricted training











GRTP FOR SEVERE COVID-19 CASES



- Indicated for:
 - hospitalized patients
 - any other patients with abnormal findings on clinical, laboratory, ECG or training-associated assessment
- Management will include:
 - assessment and regular follow-up with a cardiologist or other specialist
 - various specialist investigations (as directed by the clinical presentation)
 - a very gradual RTP over some months (as informed by the published medical literature)













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