AMERICAN COLLEGE of CARDIOLOGY

COVID-19

Sports, Exercise, and COVID-19: Proceed with Caution

Moderator: Dr. Kim

Panelists: Drs. Finnoff, Gounder, Levine, Phelan, and Thompson

Disclosures

- Jonathan H. Kim, MD, FACC
  - *Nothing to Disclose*
- Jonathan Finnoff, DO
  - *CONSULTANT FEES/HONORARIA - Aim Specialty Health, COVR Medical, Sanofi-Aventis*
  - *OTHER - Demos, Up To Date*
- *Celine Gounder, MD*
  - *Nothing to Disclose*

Disclosures (cont.)

- Benjamin D. Levine, MD, FACC
  - *OTHER - Amgen Inc.*
- Dermot M. J. Phelan, BAO, MB BCh, PhD, FACC
  - *Nothing to Disclose*
- Paul D. Thompson, MD, FACC
  - *CONSULTANT FEES/HONORARIA - Amarin, Amgen Inc., Kowa, Regeneron, Sanolfi Aventis*
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  - *SPEAKER'S BUREAU - Boehringer Ingelheim Pharmaceuticals, Inc*

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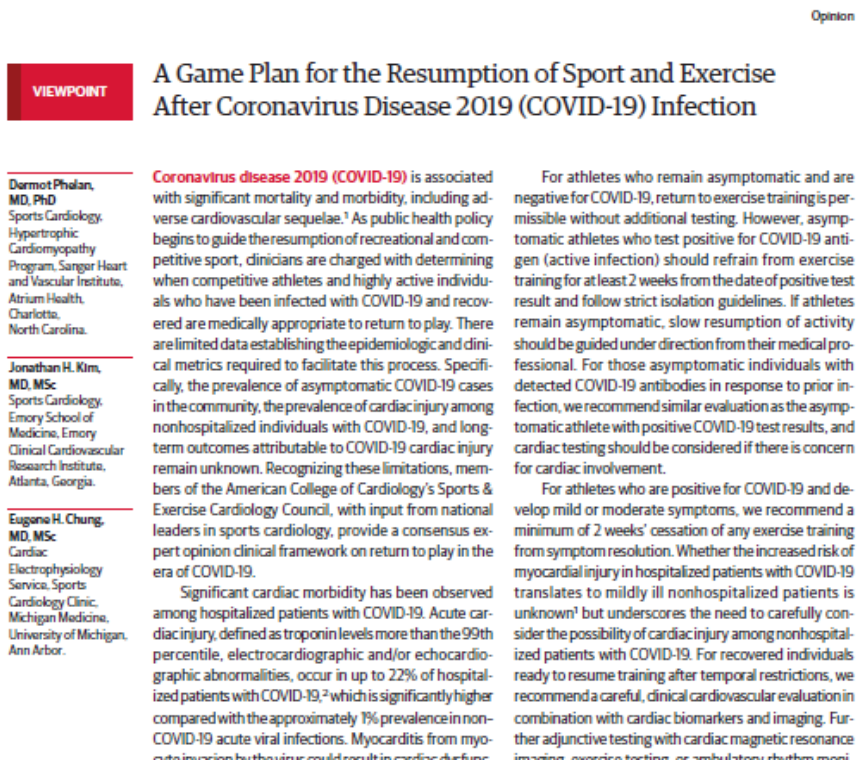
Key Takeaways

- Recommendations are based on *expert opinion*
- Conservative approach given embryotic understanding of virus
- COVID-19 should *not* be underestimated
- Recommendations based on observations in older inpatient population (sicker)



Opinion

VIEWPOINT

A Game Plan for the Resumption of Sport and Exercise After Coronavirus Disease 2019 (COVID-19) Infection

Dermot Phelan, MD, PhD
Sports Cardiology, Hypertrophic Cardiomyopathy Program, Sanger Heart and Vascular Institute, Atrium Health, Charlotte, North Carolina.

Jonathan H. Kim, MD, MSc
Sports Cardiology, Emory School of Medicine, Emory Clinical Cardiovascular Research Institute, Atlanta, Georgia.

Eugene H. Chung, MD, MSc
Cardiac Electrophysiology Service, Sports Cardiology Clinic, Michigan Medicine, University of Michigan, Ann Arbor.

Coronavirus disease 2019 (COVID-19) is associated with significant mortality and morbidity, including adverse cardiovascular sequelae.[1] As public health policy begins to guide the resumption of recreational and competitive sport, clinicians are charged with determining when competitive athletes and highly active individuals who have been infected with COVID-19 and recovered are medically appropriate to return to play. There are limited data establishing the epidemiologic and clinical metrics required to facilitate this process. Specifically, the prevalence of asymptomatic COVID-19 cases in the community, the prevalence of cardiac injury among nonhospitalized individuals with COVID-19, and long-term outcomes attributable to COVID-19 cardiac injury remain unknown. Recognizing these limitations, members of the American College of Cardiology's Sports & Exercise Cardiology Council, with input from national leaders in sports cardiology, provide a consensus expert opinion clinical framework on return to play in the era of COVID-19.

Significant cardiac morbidity has been observed among hospitalized patients with COVID-19. Acute cardiac injury, defined as troponin levels more than the 99th percentile, electrocardiographic and/or echocardiographic abnormalities, occur in up to 22% of hospitalized patients with COVID-19,[2] which is significantly higher compared with the approximately 1% prevalence in non-COVID-19 acute viral infections. Myocarditis from myo-

For athletes who remain asymptomatic and are negative for COVID-19, return to exercise training is permissible without additional testing. However, asymptomatic athletes who test positive for COVID-19 antigen (active infection) should refrain from exercise training for at least 2 weeks from the date of positive test result and follow strict isolation guidelines. If athletes remain asymptomatic, slow resumption of activity should be guided under direction from their medical professional. For those asymptomatic individuals with detected COVID-19 antibodies in response to prior infection, we recommend similar evaluation as the asymptomatic athlete with positive COVID-19 test results, and cardiac testing should be considered if there is concern for cardiac involvement.

For athletes who are positive for COVID-19 and develop mild or moderate symptoms, we recommend a minimum of 2 weeks' cessation of any exercise training from symptom resolution. Whether the increased risk of myocardial injury in hospitalized patients with COVID-19 translates to mildly ill nonhospitalized patients is unknown[1] but underscores the need to carefully consider the possibility of cardiac injury among nonhospitalized patients with COVID-19. For recovered individuals ready to resume training after temporal restrictions, we recommend a careful, clinical cardiovascular evaluation in combination with cardiac biomarkers and imaging. Further adjunctive testing with cardiac magnetic resonance

Key Takeaways

- Essential goal is to:
  - Protect athlete
  - Protect team including coaches and staff
- In the athlete, consider evaluating for subclinical myocardial injury post-symptomatic COVID
- A reasonable return-to-play cardiac workup includes:
  - Cardiac consultation
  - ECG, echocardiogram, troponin
- Be protective of sports becoming a major contagion

Daily self screen

Major Symptoms

Fever (>99.6 F)
Chills
Shortness of breath
Muscle aches
Loss of smell/taste

Any major → COVID testing indicated; contact employee health
(alternative – follow 10 + 3 rule)

Minor Symptoms

New cough
Headache
Sore throat
Diarrhea/Nausea
Fatigue

+

Risk factors

Known COVID contact
High risk exposure
(gym, restaurant, bars)
Travel
Nursing home visit
Public transit

=

≥ 2 minor symptoms
or
1 minor + risk factor

1 minor symptom → Isolate/monitor for 48 hours for improvement (WFH)

As background infection prevalence increases, we will have a lower threshold for testing

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