Return to Play after MIS-C and/or Myocarditis

The authors of the JAMA Cardiology article have indicated that if the athlete has MIS-C and/or Myocarditis, then follow the 2015 AHA/ACC Recommendations on Myocarditis and Return to Play.

Those recommendations are as follows:

- Restriction from sports for 3–6 months from diagnosis
- 3–6 months from diagnosis, undergo the following tests:
  - Echo
  - Exercise Stress Test
  - No evidence of clinically relevant arrhythmias by Holter & ECG
  - Serum markers of myocardial injury, heart failure & inflammation have returned to normal levels
  - Normal ventricular systolic function

*Although heart rate monitoring is suggested, the functional exercise activity will achieve the target heart rate.

Updates to this document can be found at: HopkinsAllChildrens.org/Health-Professionals/Clinical-Pathways

What to do if a pediatric patient had COVID-19 or has it during the sports season?

Background

This is a frequent question facing parents, primary care clinicians and our team. This document is based on currently published literature as of 4/30/2021 and is a summary of recommendations agreed upon by the Pediatric Cardiologists of the Johns Hopkins All Children’s Heart Institute and Dr. Patrick Mularoni, Director of Sports Medicine for Johns Hopkins All Children’s Hospital.

Definitions of COVID-19 Illness Severity:

Asymptomatic COVID-19 Patient:

This is a patient who tested positive for COVID-19 but did not display any symptoms consistent with COVID-19.

Mildly Symptomatic COVID-19 Patient:

This is a patient who tested positive for COVID-19 and had at least one of the following:

- Fever (≥ 100.4°F) for < 4 days
- Myalgia, Chills and Lethargy for < 7 days

Moderately Symptomatic COVID-19 Patient:

This is a patient who tested positive for COVID-19 and had at least one of the following:

- Fever for ≥ 4 days
- Myalgia, chills or lethargy for ≥ 7 days
- Cardiac symptoms (any one or more of the following):
  - Chest pain/tightness/pressure at rest/exercise
  - Palpitations
  - Syncope
- May have been hospitalized in a non-ICU setting without Multisystem Inflammatory Syndrome in Children (MIS-C).

Severely Symptomatic COVID-19 Patient:

This is a patient who had severe symptoms and hospitalized in an ICU for any duration.
The following algorithm is recommended in determining the timing of when adolescents can return to play sports after having COVID-19. The following algorithm stratifies adolescents based on age. RTP = Return to Play; MIS-C = Multisystemic Inflammatory Syndrome in Children.

**FIGURE 1**: Return to Play Algorithm for Adolescent Competitive Athletes

As noted in the diagram, children > 5 yrs of age with pubertal development follow the adult competitive athlete decision making algorithm. RTP = Return to Play; MIS-C = Multisystemic Inflammatory Syndrome in Children.

**FIGURE 2**: Return to Play Algorithm for Adult Competitive Athletes

As noted in the diagram, children > 15 yrs of age with pubertal development follow the adult competitive athlete decision making algorithm. RTP = Return to Play; MIS-C = Multisystemic Inflammatory Syndrome in Children.