Cardiac Screening for Pediatric Athlete with Suspected or Confirmed COVID-19 Infection

Our knowledge of COVID-19 infections is rapidly changing and the effects in the pediatric population are largely unknown.

In the adult population, COVID-19 infections appear to impact the heart at a higher rate than other viruses, while in the pediatric population, the virus can cause multi-system inflammatory syndrome (MIS-C) involving the heart.

Due to the lack of evidence for cardiac injury from COVID-19 infections in the pediatric population and the low number of pediatric cases, recommendations are made from expert opinion from the sports medicine, infectious disease and cardiology departments and are subject to change.

The process on the right column is intended for COVID-19 positive patients and those who have presumed positive infections. Growing athletes must be asymptomatic (no fever equal to or higher than 100.4 degrees for 24 hours without fever-reducing medications, resolution of symptoms such as cough, shortness of breath, sore throat, etc.), AND be at 10 days since the initial onset of their symptoms; OR have been asymptomatic throughout the entire 14 days of quarantine.

### ATHLETES UNDER 10 YEARS OF AGE

#### Asymptomatic/Mild Symptoms
- No exercise for 14 days from symptom onset or positive test, under parental/clinical observation
- Consider medical evaluation for any concerns prior to return to activity, if concerns obtain an ECG
- Gradual return to play while observing for cardiac symptoms

#### Moderate Symptoms
- Fever, and/or more than 5 days of symptoms, requiring bed rest
- No exercise is safe until evaluated by physician
- Gradual return to play to observe for cardiac symptoms
- Consider ECG with any cardiac symptoms or physical exam finding concerning for a cardiac condition

#### Severe Symptoms
- Hospitalization, MIS-C ongoing symptoms for more than 14 days
- Evaluate by pediatric Cardiologist prior to the return to exercise, competition or sports participation
- Consider ECG, Echo, +/- Cardiac MRI
- Consider Holter Monitor/Exercise stress test
  - If abnormal, follow return to sport guidelines for myocarditis/pericarditis or abnormality present on work-up
  - If normal, gradual return to play while observing for cardiac symptoms

### ATHLETES OVER 10 YEARS OF AGE

#### Asymptomatic/Mild Symptoms
- Cleared to do light exercise, while monitoring for cardiac signs and symptoms during the quarantine period under parental/clinical observation for cardiac symptoms
- Consider ECG with any cardiac symptoms or physical exam finding
- Gradual return to play while observing for cardiac symptoms

#### Moderate Symptoms
- Fever and/or more than 5 days of symptoms, requiring bed rest
- Evaluate by physician prior to the return to exercise, practice or sport participation
- ECG
  - If normal: Gradual return to play, to observe for cardiac symptoms
  - If abnormal: Obtain Echo and refer to pediatric cardiology

#### Severe Symptoms
- Hospitalization, MIS-C ongoing symptoms for more than 14 days, any initiation of anti-platelet medication such as Aspirin or Plavix
- Evaluate by pediatric Cardiologist
- ECG, Echo, +/- Cardiac MRI
  - If abnormal: Follow return to sport guidelines for myocarditis/pericarditis or abnormality present on work-up
  - Consider exercise stress test; Holter monitor prior to return to sport
  - If normal, gradual return to play to observe for cardiac symptoms and clearance by pediatric cardiology

References:


* Cardiac symptoms include: shortness of breath, shortness of breath with activity, chest pain, palpitations, fatigue, decreased exercise performance or tolerance.