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 affect 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 in 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 least 10 days since the initial onset of their symptoms; OR have been asymptomatic throughout the entire 14 days of quarantine.

The information in 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 least 10 days since the initial onset of their symptoms; OR have been asymptomatic throughout the entire 14 days of quarantine.

Athletes and COVID-19 Care Assessment:

**ATHLETES OVER 12 YEARS OF AGE**

**Asymptomatic**
(Zero 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*
- Consider ECG if:
  1. High School aged athlete OR
  2. Clinical concerns of cardiac symptoms*
     - If normal: Gradual return to play while observing for cardiac symptoms*
     - If abnormal†: Refer to pediatric cardiology

**Mild Symptoms**
(Less than 3-5 days of symptoms and/or no fever)
- Evaluate by physician prior to return to exercise, practice or sport participation
- Gradual return to play while observing for cardiac symptoms*
- ECG IF:
  1. High School aged athlete OR
  2. Clinical concerns of cardiac symptoms*
     - If normal: Gradual return to play while observing for cardiac symptoms*
     - If abnormal†: Refer to pediatric cardiology

**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†: 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 Cardiology
- 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 recommended.
- Confirmed cases of myocarditis, pericarditis or any other cardiopulmonary condition should be managed and return to sport with medical guidance and clearance.

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

†ECG Changes include: Diffuse ST elevation, ST depression, T wave inversion, pathologic Q waves and PR depression

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**Cardiac Screening for High School/Middle School Athlete with Suspected or Confirmed COVID-19 Infection**

**References:**