

Cleveland Clinic Sports Medicine Athletic Training COVID-19 Updates and Return to Play Protocol

PART I: COVID-19 MEDICAL, POLICY, AND CLEARANCE UPDATES

Diagnosis, Illness, & Convalescence

- **Symptoms**—The current diagnostic symptoms of COVID-19 are fever or chills, cough, shortness of breath and/or difficulty breathing, fatigue, muscle or body aches, headache, new loss of taste or smell, sore throat, congestion or runny nose, nausea or vomiting, diarrhea. Loss of sense of taste and smell is much more characteristic of COVID-19 than the common cold. Symptoms can develop 2 to 14 days after exposure to the virus, and symptom presentation can vary greatly, with some people exhibiting no symptoms at all.
- **Testing**—The gold standard test at this time is a polymerase chain reaction (PCR) test, which is obtained by testing a nasal or oropharyngeal sample. This tests for the presence of the virus in the body. Rapid antigen testing uses a swab obtained from the mouth or nasal cavity and tests for the body's antigens created in response to being infected. The body must have already started to mount an immune response before antigens can be present, which is why these tests are negative early in the course of illness and why the PCR test is considered the gold standard at this time.
- **Date of Illness**—The date a student-athlete is diagnosed with COVID-19 is either the first day of symptoms or, in the case of asymptomatic student-athletes, the date a positive test was taken.
- **Isolation & Quarantine** —Positive student-athletes should remain in isolation for 10 days starting with the first day of their illness course as defined above. The isolation period is when a sick student-athlete stays away from others as they are contagious during this period. This is different than quarantine, which is when someone who may have been exposed to the virus is kept away from others in case they become sick. The timing and protocol for contact tracing and quarantining should be determined by the student-athlete's individual school in accordance with recommendations by the Ohio Department of Health and other state and federal guidance.

Student-athletes should not exercise or engage in any type of training during the isolation period even if they are asymptomatic. Student-athletes in quarantine may continue to engage in exercise as long as they can maintain quarantine (i.e. utilizing a stationary bicycle in their own home).

Clearance for Athletic Participation after COVID-19

According to the Ohio High School Athletic Association, all student-athletes that test positive for COVID-19 (symptomatic or asymptomatic), must be evaluated by a physician or licensed medical provider prior to returning to practice or competition.¹ This requires an examination, which though not explicitly stated on the form, would have to be in-person in order to obtain a cardiac examination. The medical provider will determine if the student-athlete is cleared to start a return to play progression or if there is further evaluation and additional testing needed.

¹ The required form can be found at <https://ohsaaweb.blob.core.windows.net/files/Sports/2020/RTPCoronavirus.pdf>.

Medical Clearance Recommendations

The following are the most updated recommendations for medical clearance and evaluation after being diagnosed with COVID-19:

Severity of COVID-19	Rest Period (No Exercise)	Cardiac Testing (i.e EKG, echo, lab work)
Asymptomatic	10 days from positive test.	None
Mild	10 days from first day of symptoms. Exercise may not start until complete resolution of symptoms. [§]	None
Moderate*	10-14 days of convalescence (recovery without exercise) after symptom resolution.	Likely
Severe		Likely

*Moderate disease is characterized by have clinical or radiographic evidence of lower respiratory tract disease with oxygen saturation remaining about 94%.

[§]Exercise may be initiated prior to full return of smell or taste per the recommendation of the individual clearance provider.

Please note that these are recommendations and actual testing and clearance is determined by the individual medical provider.

PART II: Return to Play Progression

Once the student-athlete is cleared to exercise, the following Return to Play (RTP) progression should be utilized under the supervision of an Athletic Trainer. If the student-athlete was diagnosed with myocarditis, a RTP progression must be managed by a physician, preferably a sports cardiologist, and will likely be a much longer progression.

Student-athletes may progress to the next stage in the progression after completing the minimum time required in each stage with no symptoms present. If there are any symptoms, the student-athlete should rest for 24 hours and then go back to the previous stage.

Return to Play Progression for COVID-19 Positive Student-Athletes

STAGE 1: Diagnosis, Illness, & Convalescence (10 Days Minimum)

Must be cleared out of this stage by a physician or licensed medical provider as noted above.

STAGE 2: Light Exercise (2 Days Minimum)

Walking, light jogging, stationary cycle, no resistance training (<70% maximum heart rate)
Duration of exercise: <15 minutes

STAGE 3: Light-Moderate Exercise (1 Day Minimum)

Increase intensity of cardiovascular exercise and add in simple movement activities (i.e. running drills, body weight circuit training) (<80% maximum heart rate)
Duration of Exercise: <30 minutes

STAGE 4: Moderate Exercise (1 Day Minimum)

Duration of cardiovascular exercise increases with progression to more complex training activities (<80% maximum heart rate)
Duration of Exercise: <45 minutes

STAGE 5: Moderate-Intense Exercise (2 Days Minimum)

Increase intensity of exercise using normal training activities, but limit total time of exercise (<80% maximum heart rate)

Duration of Exercise: <60 minutes

STAGE 6: Resume Normal Training (1 Day Minimum)

Must complete one day of normal training prior to participating in competition.

STAGE 7: Return to Competition

Monitoring

The Athletic Trainer should monitor for the following signs and symptoms during and after exercise. It is recommended that the heart rate is measured prior to exercise and again after exercise and during recovery. If there are any symptoms, the student-athlete should rest for 24 hours and then go back to the previous stage.

- Chest pain/discomfort
- Palpitations
- Unexpected or excessive tachycardia (increased heart rate) out of proportion to perceived level of exertion
- Prolonged heart rate recovery after exertion
- Dizziness
- Shortness of breath out of proportion to exertion
- Difficulty catching breath
- Tachypnea (increased breathing rate)
- Excessive fatigue
- Swelling in the extremities
- Syncope or near-syncope (signs include acute lightheadedness, dizziness, nausea, tunnel vision or loss of vision, pallor, headaches)

It is often difficult to distinguish normal deconditioning from new onset of shortness of breath or exercise intolerance, so it is important to monitor these athletes closely and repeat any steps of the progression at the discretion of the Athletic Trainer if there are any concerns.

If symptoms persist beyond the 24-48 hour period, prevent exercise initiation, lead to early termination, or are associated with abnormal objective factors (see above), the Athletic Trainer should stop the student-athlete from activity and the RTP progression and refer the student-athlete back to their physician for further evaluation and management.

REFERENCES

1. Elliott N, Martin R, Heron N, Elliott J, Grimstead D, Biswas A. Infographic. Graduated return to play guidance following COVID-19 infection. *Br J Sports Med.* 2020 Oct;54(19):1174-1175. doi: 10.1136/bjsports-2020-102637. Epub 2020 Jun 22. PMID: 32571796; PMCID: PMC7371566.
2. Gandhi RT, Lynch JB, Del Rio C. Mild or Moderate Covid-19. *N Engl J Med.* 2020 Oct 29;383(18):1757-1766. doi: 10.1056/NEJMcp2009249. Epub 2020 Apr 24. PMID: 32329974.
3. Kim JH, Levine BD, Phelan D, Emery MS, Martinez MW, Chung EH, Thompson PD, Baggish AL. Coronavirus Disease 2019 and the Athletic Heart: Emerging Perspectives on Pathology, Risks, and Return to Play. *JAMA Cardiol.* 2020 Oct 26. doi: 10.1001/jamacardio.2020.5890. Epub ahead of print. PMID: 33104154.