

Return to Sports Post COVID-19 Isolation Clearance

2.2.2021

Graduated Return to Play (GRTP) Guide for Coaches

Stage	Day	Amount of allowed practice time	Recommended Activity	% Maximum Heart Rate <small>< 18 years of age - 200 = max HR ≥ 18 years of age - 220-age = max HR</small>
0	COVID-19 <i>isolation clearance</i> from local health department (10 days have passed from date of first symptom, all symptoms improving, 24 hours symptom free off-fever reducing medications) AND return to <i>play clearance</i> from physician (PCP for mild symptoms, cardiologist for moderate to severe symptoms) AND athlete is asymptomatic when performing normal activities of daily living.			
1	Days 1 and 2	≤ 15 min	Light activity (walking, light jogging, stationary bike). NO resistance training.	< 70% (140 bpm)
2	Day 3	≤ 30 min	Add simple movement activities (eg. running drills). No resistance training.	<80% (160 bpm)
3	Day 4	≤ 45 min	Progress to more complex training. May add light resistance training.	<80% (160 bpm)
4	Days 5 and 6	≤ 60 min	Normal training activity.	<80% (160 bpm)
5	Day 7	Entire practice/game	Return to full activity/participation including games/competitions	100% (200 bpm)

- Some athletes take over 3 weeks to recover.
- If symptoms start or re-occur (including excessive fatigue) while going through GRTP, consider returning to the previous stage and progress again after a minimum of 24 hours rest without symptoms. Re-evaluation may be necessary.
- Athletes diagnosed with COVID-19 and who have medical conditions such as diabetes, cardiovascular disease or renal disease may need extended rest or testing prior to commencing GRTP.

The following gradation was adapted from American Academy of Pediatrics guidelines and British Journal of Sports Medicine

PCP vs. Cardiology Clearance for the Post-COVID Athletes

Degree of Symptoms	Symptoms*	Clearance required	Tests
Asymptomatic-Mild	< 4 days of temperature >100.4°F, myalgia, chills, and lethargy	Yes – PCP in person exam	14 point pre-participation screening evaluation, no tests needed
Moderate	≥4 days of temperature >100.4°F, myalgia, chills, lethargy, OR non-ICU hospital stay	Yes - cardiologist in person or phone consult	ECG, further testing per cardiology input
Severe	ICU stay and/or intubation or multisystem inflammatory syndrome in children (MIS-C)	Yes - cardiologist	per cardiology

*Cough, nasal congestion, runny nose, sore throat, loss of taste/smell, conjunctivitis, diarrhea and other mild COVID-like symptoms are not used by the AAP for the evaluation for classification of mild, moderate or severe disease. American College of Cardiology Sports and Exercise section recommended hypoxia, pneumonia, dyspnea and chest pain/tightness/pressure at rest or exertion as a moderate symptom. **Provider discretion to determine what stage/day to start GRTP. Most athletes are recommended to start at Stage 1/Day 1 for a recent COVID illness.**

American Academy of Pediatrics (AAP) guidelines (12/17/20):

Mild Symptoms: (asymptomatic or <4 days of temperature >100.4°F, short duration of myalgia, chills, and lethargy)

- Clearance by a physician. **14-point pre-participation screening evaluation**, including evaluation for chest pain, shortness of breath out of proportion for upper respiratory tract infection, new-onset palpitations, syncope.
- If the PCP identifies any concerning history or physical examination findings, or there is a 'Yes' answer in the 14 point pre-participation screening, recommend ECG and referral to a pediatric cardiologist for evaluation and further testing.
- If the 14 point screening evaluation and examination are normal, no further testing is warranted and the patient may begin a GRTP after COVID clearance. Athlete must also be asymptomatic when performing normal activities of daily living.

Moderate Symptoms: (≥4 days of temperature >100.4°F, myalgia, chills, or lethargy OR non-ICU hospital stay or those who had a non-ICU hospital stay and no evidence of MIS-C)

- ECG and cardiology consult (in person or per phone) recommended after 10 days have passed from the date of positive test result AND athlete is asymptomatic when performing normal activities of daily living AND 10 days symptom resolution (symptoms of moderate disease) off fever-reducing medicine.
- Consider further testing per cardiology input (troponin, echocardiogram, Holter monitor, exercise stress testing, or cardiac magnetic resonance imaging (MRI) may be considered).
- If cardiology recommends clearance to return to play, cardiologist to determine the recommended GRTP schedule.

Severe Symptoms: severe COVID-19 symptoms (ICU stay and/or intubation) or multisystem inflammatory syndrome in children (MIS-C),

- Restricted from exercise for a minimum of 3 to 6 months
- Cardiology clearance prior to resuming training or competition
- Troponin tests, echocardiogram, and cardiac MRI.
- A GRTP protocol can begin once an athlete has been cleared by a physician AND is asymptomatic when performing normal activities of daily living.

Additional (not AAP):

- Athletes should have at least 10 days' rest (typical time of isolation) and consider recommending 7 days symptom-free before starting.
- Less aerobically intense sports like golf may progress quicker at the discretion of the provider.
- Clearance for a patient with moderate symptoms < age 12 by the PCP (not a cardiologist) has been recommended by some organizations.

14-Point Pre-Participation Screening Evaluation (recommended by AAP)

Medical History (Parental verification recommended for high school and middle school athletes)

Personal History

1. Chest pain/discomfort/tightness/pressure related to exertion
2. Unexplained syncope/near-syncope
3. Excessive and unexplained dyspnea/fatigue or palpitations, associated with exercise
4. Prior recognition of a heart murmur
5. Elevated systemic blood pressure
6. Prior restriction from participation in sports
7. Prior testing for the heart, ordered by a physician

Family history

8. Premature death (sudden and unexpected, or otherwise) before 50 years of age attributable to heart disease in ≥ 1 relative
9. Disability from heart disease in close relative < 50 years of age
10. Hypertrophic or dilated cardiomyopathy, long-QT syndrome, or other ion channelopathies, Marfan syndrome, or clinically significant arrhythmias; specific knowledge of genetic cardiac conditions in family members

Physical examination

11. Heart murmur
12. Femoral pulses to exclude aortic coarctation
13. Physical stigmata of Marfan syndrome
14. Brachial artery blood pressure (sitting position, preferably taken in both arms)

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