Return to Sports after COVID-19.

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Source American Academy of Pediatrics

Individuals who test positive for SARS-CoV-2 should not exercise until they are cleared by a medical provider.

In a child or adolescent who is SARS-CoV-2–positive, who is either asymptomatic or mildly symptomatic (<4 days of fever >100.4°F, < 1 week of myalgia, chills, and lethargy), there are limited data available and recommendations are based on expert opinion. After their isolation time is completed, it is suggested they visit with their primary care physician (PCP) who will review the American Heart Association (AHA) 14-element screening evaluation with special emphasis on cardiac symptoms including chest pain, shortness of breath out of proportion for upper respiratory tract infection, new-onset palpitations, or syncope and perform a complete physical examination. If the preparticipation screening evaluation and examination are normal, no further testing is warranted. The patient may begin a gradual return to physical activity after 10 days have passed from date of the positive test result and a minimum of 24 hours symptom free off-fever reducing medications has elapsed. If the PCP identifies any new or concerning cardiac history or physical examination findings at this visit, an ECG should be considered, and referral should be made to a pediatric cardiologist for evaluation and further testing.

For those with moderate symptoms of COVID-19 (≥4 days of fever >100.4°F, ≥ 1 week of myalgia, chills, or lethargy, or a non-ICU hospital stay and no evidence of MIS-C), an evaluation by their primary care physician (PCP) is recommended after symptom resolution and at a minimum of 10 days past the date of the positive test result. The PCP will review the AHA 14-element screening evaluation as mentioned above. If cardiac workup is negative, gradual return to physical activity may be initiated after 10 days have passed from the date of the positive test result, and a minimum of 10 days of symptom resolution has occurred off fever-reducing medicine. If cardiac sign / symptom screening is positive, or EKG is abnormal, referral to a cardiologist is recommended.

For children and adolescents with severe COVID-19 symptoms (ICU stay and/or intubation), it is recommended they be restricted from exercise for a minimum of 3 to 6 months and obtain cardiology clearance prior to resuming training or competition.

For children and adolescents 12 years and older, a graduated return-to-play protocol can begin once an individual has been cleared by a physician, the minimum amount of time without symptoms of COVID-19 has passed, and the individual does not exhibit cardiorespiratory symptoms when performing normal activities of daily living. The progression should be performed over the course of a 7-day minimum. Consideration for extending the progression should be given to individuals who experienced moderate COVID-19 symptoms.

All individuals and their parents/caregivers should be educated to monitor for **chest pain, shortness of breath out of proportion for upper respiratory tract infection, new-onset palpitations, or syncope** when returning to exercise. If any of these signs and/or symptoms occur, the AAP recommends another evaluation by the PCP, and consideration should be given for pediatric cardiology consultation

The 14 Element AHA Cardiovascular Screening Checklist for Congenital and Genetic Heart Disease (Recommended for Pre-Participation Screening of Competitive Athletes)

Personal History

Yes	No	
☐	☐	1. Chest pain/discomfort/tightness/pressure related to exertion
☐	☐	2. Unexplained syncope/near-syncope*
☐	☐	3. Excessive exertional 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

Yes	No	
☐	☐	8. Premature death (sudden and unexpected, or otherwise) before age 50 attributable to heart disease in ≥1 relative
☐	☐	9. Disability from heart disease in close relative <50 y of age
☐	☐	10. Hypertrophic or dilated cardiomyopathy, long-QT syndrome, or other ion channelopathies, Marfan syndrome, or clinically significant arrhythmias; specific knowledge of certain cardiac conditions in family members

Physical Examination

Yes	No	
☐	☐	11. Heart murmur**
☐	☐	12. Femoral pulses to exclude aortic coarctation
☐	☐	13. Physical stigmata of Marfan syndrome
☐	☐	14. Brachial artery blood pressure (sitting position)***

* When determined to be not of neurcardiogenic (vasovagal) in origin. Of particular concern is syncope post-strenous activity.

** Auscultation should be performed in both sitting and standing positions (or with Valsalva maneuver). Objective is to identify murmurs of dynamic LV outflow tract obstruction.

*** Should be taken in both arms.

Post SARS-CoV-2 Medical Evaluation

Student Name:_____ **DOB:**_____

Date symptoms began and ended: _____through_____
Date of positive test: _____

According to AAP guidelines how severe were symptoms:

Asymptomatic
Mild (<4 days of fever >100°F, short duration of myalgia, chills, and lethargy)
Moderate (≥4 days of fever >100°F, myalgia, chills, or lethargy or those who had a non-ICU hospital stay and no evidence of MIS-C)
Severe (ICU stay and/or intubation or MIS-C)

Physical Examination: Date completed:_____
Cardiac screening including auscultations: WNL Abnormal
Abnormal ECG: Not Indicated WNL Abnormal
Cardiologist referral: No Yes
Additional Information:_____
_____
_____

Return to play:
Date athlete may begin RTP:_____
Additional information for RTP: _____
_____
_____

Provider Name (MD/NP):_____
Provider Signature:_____
Date:_____

Return to Play Progression after COVID-19.

The following progression was adapted from Elliott N, et al, infographic, *British Journal of Sports Medicine*, 2020:

Stage 1: Day 1 and Day 2 - (2 Days Minimum) - 15 minutes or less: Light activity (walking, jogging, stationary bike), intensity no greater than 70% of maximum heart rate. NO resistance training.

Stage 2: Day 3 - (1 Day Minimum) - 30 minutes or less: Add simple movement activities (eg. running drills) - intensity no greater than 80% of maximum heart rate.

Stage 3: Day 4 - (1 Day Minimum) - 45 minutes or less- Progress to more complex training - intensity no greater than 80% maximum heart rate. May add light resistance training.

Stage 4: Day 5 and Day 6 - (2 Days Minimum) - 60 minutes - Normal training activity - intensity no greater than 80% maximum heart rate.

Stage 5: Day 7 - Return to full activity/participation (i.e., contests/competitions).