

PHYSICIAN GUIDANCE FOR RETURN TO PLAY CLEARANCE FOR ATHLETES AGED 18 AND YOUNGER



Many youth in Texas participate in some form of athletics, organized sports, or other exercise of moderate or vigorous intensity.¹ SARS-CoV-2, the novel coronavirus causing the COVID-19 pandemic, presents unique health issues that should be considered prior to a young athlete’s return to sports and exercise.

While most youth infected with SARS-CoV-2 have mild symptoms or remain asymptomatic, the infection can cause direct injury or inflammation to the myocardium and lung tissue, especially in patients with moderate or severe disease including those that require hospitalization. Cardiopulmonary concerns from COVID-19 arise from data in severely ill adult patients; approximately 1 in 5 hospitalized patients suffer from cardiac, pulmonary, thromboembolic (clotting) complications, and/or unknown long-term effects.

Evidence remains limited on the prevalence and risks of complications in children and adolescents who have had a milder form of the illness. While the incidence of myocarditis is lower in pediatric populations compared to adults, myocarditis is known to be a cause of sudden death during exercise in young athletes.

RETURN TO PLAY GUIDANCE FOR PHYSICIANS

Based on currently available evidence, health care professionals evaluating children for Return to Play (RTP) after COVID-19 infection should observe the following recommendations, depending on disease severity.

ASYMPTOMATIC OR MILD

Fewer than 4 days of fever above 100.4°F, short duration of myalgia, chills, and lethargy²

Asymptomatic or mild illness in the pediatric population does not require cardiac testing during acute infection, but children should be evaluated by a physician prior to returning to athletics, organized sports, or other exercise.

Physical exam should include a cardiac screen for myocarditis/myocardial ischemia (answer ALL questions below):

▪ Chest pain/tightness with exercise	YES	<input type="checkbox"/>	NO	<input type="checkbox"/>
▪ Unexplained syncope/near syncope	YES	<input type="checkbox"/>	NO	<input type="checkbox"/>
▪ Unexplained/excessive dyspnea with exertion	YES	<input type="checkbox"/>	NO	<input type="checkbox"/>
▪ Unexplained/excessive fatigue with exertion	YES	<input type="checkbox"/>	NO	<input type="checkbox"/>
▪ New palpitations	YES	<input type="checkbox"/>	NO	<input type="checkbox"/>
▪ New heart murmur on exam	YES	<input type="checkbox"/>	NO	<input type="checkbox"/>

If the history or physical exam is concerning for myocarditis as indicated by YES to any question, a child should receive a 12-lead electrocardiogram (EKG) with rhythm strip to assess arrhythmia prior to clearance. If an abnormal EKG result is obtained, the youth should be referred to a pediatric cardiologist for further evaluation.

¹ Centers for Disease Control and Prevention [Physical Activity Guidelines for Americans, 2nd Edition](#) defines moderate-intensity activities as requiring 3.0 to 5.9 metabolic equivalents of task (METs). Vigorous-intensity activities are defined as requiring 6.0 METs or more. Refer to [General Physical Activities Defined by Level of Intensity](#) and [Youth Compendium of Physical Activities](#) for examples of physical activities generally classified as moderate to vigorous.

MODERATE

More than 4 days of fever above 100.4°F, myalgia, chills, or lethargy or those who had a non-ICU hospital stay and no evidence of MIS-C²

Young athletes with moderate disease should have a standard 12-lead EKG before being cleared to return to athletics or exercise. An abnormal EKG should prompt the physician to refer the patient to a pediatric cardiologist to evaluate for possible myocarditis before clearing the young athlete to return to athletics or exercise. The American Academy of Pediatrics currently recommends an ECG and cardiology consult after symptom resolution for all children recovered from moderate disease.² Abnormal results during this evaluation may prompt further evaluation for possible myocarditis with repeat troponin and/or cardiac MRI before clearing the young athlete to return to athletics or exercise.

SEVERE

ICU stay and/or intubation, or multisystem inflammatory syndrome in children (MIS-C)²

Young athletes who had severe COVID-19 disease requiring hospitalization, evidence of myocarditis and/or were diagnosed with MIS-C, should **NOT** be cleared to return to any athletics or exercise for 3 to 6 months post-infection and must be cleared by a pediatric cardiologist.

RETURN TO PLAY PROGRESSION

Once cleared by a physician, youth athletes may initiate **RTP progression**^{3,4} when the following is met:

- At least 14 days have passed from the date of positive COVID-19 test, if asymptomatic.
- At least 14 days have passed from the date of resolution of symptoms, if mild disease.
- At least 14 days have passed from the date of resolution of symptoms for moderate disease **AND** should have a **NORMAL EKG with rhythm strip** once symptom free for 14 days.

RTP progression is a six-step process that includes a series of graduated exercises of increasing physical exertion performed over several days.⁵ Progression through the six RTP stages permits assessment of recovery progress. Difficulty with progression may indicate need for further evaluation.

It is important for a young athlete's parent(s) and coach(es) to watch for symptoms such as chest pain, chest tightness, shortness of breath, palpitations, lightheadedness, and pre-syncope or syncope after each day's RTP progression activity. A young athlete should only move to the next step if they do not have any new symptoms at the current step. If any of these symptoms develop, they should not be allowed to continue the exercises and should be reevaluated by a physician.

Young athletes must complete the progression without development of symptoms to be allowed to fully return to play sports. An athlete's return to play progression should be monitored by a certified athletic trainer if available, and if not available, by another non-coach adult who is responsible for compliance with the school's Return to Play protocol. If symptoms develop, the patient should be referred to the evaluating physician who signed the form.

2 American Academy of Pediatrics. (2020). [COVID-19 Interim Guidance: Return to Sports](#). Accessed Dec. 16, 2019.

3 Dean PN, Jackson LB, Paridon SM. [Returning To Play After Coronavirus Infection: Pediatric Cardiologists' Perspective](#). July 14, 2020. Accessed Dec. 16, 2020.

4 Maron BJ, Udelson JE, Bonow RO, et al. Eligibility and disqualification recommendations for competitive athletes with cardiovascular abnormalities: task force 3: hypertrophic cardiomyopathy, arrhythmogenic right ventricular cardiomyopathy and other cardiomyopathies, and myocarditis. *J Am Coll Cardiol* 2015;66:2362–71

5 Elliott N, Martin R, Heron N, Elliott J, Grimstead D, & Biswas A. (2020). Infographic. Graduated return to play guidance following COVID-19 infection. *British journal of sports medicine*, 54(19), 1174-1175.

RETURN TO PLAY AFTER COVID-19 INFECTION IN PEDIATRIC PATIENTS



Physicians Caring for Texans



Pediatric Patient With History of COVID-19 Infection and Asymptomatic 14 Days or More

Asymptomatic or Mild Symptoms

Clear for Participation

Moderate Symptoms (No Hospitalization or Cardiac Symptoms)

EKG With Rhythm Strip Prior to Participation

Normal EKG

Clear for Participation

Abnormal EKG

NO SPORTS Until Evaluation by Pediatric Cardiologist

Concerns of Myocarditis

Severe Symptoms, Including Cardiac (Hospitalized, MIS-C or Evidence of Myocarditis)

Exercise/Sport Restriction for 3 to 6 Months

**Should be cleared by pediatric cardiologist*

ADAPTED BY PHYSICIAN MEMBERS OF THE TMA SCHOOL REOPENING WORKGROUP FROM:

Dean PN, Jackson LB, Paridon SM. [Returning To Play After Coronavirus Infection: Pediatric Cardiologists' Perspective](#). July 14, 2020. Accessed Dec. 16, 2020.

Maron BJ, Udelson JE, Bonow RO, et al. Eligibility and disqualification recommendations for competitive athletes with cardiovascular abnormalities: task force 3: hypertrophic cardiomyopathy, arrhythmogenic right ventricular cardiomyopathy and other cardiomyopathies, and myocarditis. *J Am Coll Cardiol* 2015;66:2362-71

RETURN TO PLAY **FORM A**

COVID-19 MEDICAL CLEARANCE

For Physician Use

Per the University Interscholastic League, if an athlete has tested positive for COVID-19, he/she must be cleared for progression back to activity by an approved health care professional (MD/DO/APRN/PAC).

Athlete's name: _____ DOB: _____

Date of (+) COVID-19 test: _____ Date of Symptom Onset: _____

Date of Symptom Resolution _____ Date of Evaluation: _____

MEDICAL CLEARANCE

Criteria to return (Please check below as applies)

- Athlete was not hospitalized due to COVID-19 infection **AND**
- At least 14 days have passed since resolution of symptoms **OR**
- If asymptomatic, At least 14 days have passed since date of positive test **OR**
- All cardiac screen questions negative for myocarditis/myocardial ischemia**

<input type="checkbox"/> Chest pain/tightness with exercise	YES	<input type="checkbox"/>	NO	<input type="checkbox"/>
<input type="checkbox"/> Unexplained syncope/near syncope	YES	<input type="checkbox"/>	NO	<input type="checkbox"/>
<input type="checkbox"/> Unexplained/excessive dyspnea with exertion	YES	<input type="checkbox"/>	NO	<input type="checkbox"/>
<input type="checkbox"/> Unexplained/excessive fatigue with exertion	YES	<input type="checkbox"/>	NO	<input type="checkbox"/>
<input type="checkbox"/> New palpitations	YES	<input type="checkbox"/>	NO	<input type="checkbox"/>
<input type="checkbox"/> New heart murmur on exam	YES	<input type="checkbox"/>	NO	<input type="checkbox"/>

NOTE TO PHYSICIAN: If moderate disease **OR** any cardiac screening question is positive, further workup is indicated: 12 lead EKG with rhythm strip (at minimum), echocardiogram, cardiology consult, chest x-ray, spirometry, chest CT, cardiac magnetic resonance (CMR)

Athletes with severe disease who were hospitalized or diagnosed with MIS-C, should NOT return to play for 3 to 6 months and should be cleared by pediatric cardiologist.

- Athlete **HAS** satisfied the above criteria and **IS** cleared to start the return to activity progression.
- Athlete **HAS NOT** satisfied the above criteria and **IS NOT** cleared to return to activity.

Additional Comments/Recommendations:

Medical Office Information (Please Print/Stamp):

Physician Name/Signature: _____

Office Address: _____ Office Phone: _____

RETURN TO PLAY **FORM B** COVID-19 MEDICAL CLEARANCE

For Athletic Trainer Use

Athlete Name: _____ **DOB:** _____

Student ID#: _____ **Sport:** _____

Date of Positive COVID-19 Test: _____ **Date of Medical Clearance:** _____

- Student-athlete (SA) must have medical clearance from COVID-19 on file to initiate Return to Play Progression.
- An athlete's Return to Play Progression should be monitored and recorded on this form by a certified athletic trainer (AT) if available, and if not available, by another non-coach adult who is responsible for compliance with the school's Return to Play protocol.
- SA must complete the progression below without development of chest pain, chest tightness, palpitations, light-headedness, pre-syncope, or syncope. If these symptoms develop, patient should be referred to the evaluating physician who signed Form A.

STAGE 1: (TWO DAYS MINIMUM) Light activity (walking, stationary bike) for 15 minutes or less at intensity no greater than 70% of maximum heart rate. NO resistance training.

DAY 1 | Date: _____ Pass: _____ Fail: _____ AT INITIALS: _____ SA INITIALS: _____

DAY 2 | Date: _____ Pass: _____ Fail: _____ AT INITIALS: _____ SA INITIALS: _____

STAGE 2: (ONE DAY MINIMUM) Add simple movement activities (EG. running drills) for 30 minutes or less at intensity no greater than 80% of maximum heart rate.

Date: _____ Pass: _____ Fail: _____ AT INITIALS: _____ SA INITIALS: _____

STAGE 3: (ONE DAY MINIMUM) Progress to more complex training for 45 minutes or less at intensity no greater than 80% maximum heart rate. May add light resistance training.

Date: _____ Pass: _____ Fail: _____ AT INITIALS: _____ SA INITIALS: _____

STAGE 4: (ONE DAY MINIMUM) Normal training activity for 60 minutes or less at intensity no greater than 80% maximum heart rate.

Date: _____ Pass: _____ Fail: _____ AT INITIALS: _____ SA INITIALS: _____

STAGE 5: (ONE DAY MINIMUM) Return to team activities, strength & conditioning, skill work, and non-contact practice.

Date: _____ Pass: _____ Fail: _____ AT INITIALS: _____ SA INITIALS: _____

STAGE 6: Return to team activities and full team practice.

Student is cleared for full participation by school athletic trainer (minimum seven days spent on RTP):

Athletic Trainer: _____

Date: _____

NOTICE: This document provides general information regarding COVID-19 and returning to play. It does not constitute medical advice and does not substitute for the advice of your physician. Consulting your personal physician is recommended in order to take into consideration your medical condition and individual circumstances. You should not rely on this information when dealing with personal health matters; rather medical advice from your personal physician should be sought.

This publication is not intended to establish medical standards of care for the purposes of litigation, including expert testimony. The standard of care is dependent upon the particular facts and circumstances of each individual case and no generalization can be made that would apply to all cases.

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