



COVID-19 Interim Guidance: Return to Sports

Approximately 35 to 45 million youth 6 to 18 years of age participate in some form of athletics. The coronavirus disease 2019 (COVID-19) pandemic has affected many aspects of the lives of children and families, including youth sport activity. As children present for health supervision visits and preparticipation physical evaluations, parents and athletes likely will ask questions about how best to ensure safety when considering a return to sports participation. This guidance is intended for pediatricians to inform families on how to mitigate risk and prevent the spread of severe acute respiratory syndrome-coronavirus 2 (SARS-CoV-2), the virus that causes COVID-19, to others both within sports and within families and the community. Pediatricians should also refer to their state regulations and guidance associated with return to sports as states are allowing practice and competition to resume at different stages.

What are the benefits of returning to sports for children and adolescents?

Re-engaging in sports activity with friends has both physical and psychological health benefits for children and adolescents. Participating in sports allows youth to improve their cardiovascular health, strength, body composition, and overall fitness. Mentally, youth may experience benefits from the increased socialization with friends and coaches as well as from the return to a more structured routine. These psychological and physical benefits can help support their developmental growth. Exercise also has immune system benefits.

What are the risks of returning to sports for youth?

Policy makers and school administrators must consider the mounting evidence regarding COVID-19 in children and adolescents, including the role they may play in transmission of the

infection. SARS-CoV-2 appears to behave differently in children and adolescents than other common respiratory viruses, such as influenza, on which much of the current guidance regarding school closures is based. Although children and adolescents play a major role in amplifying influenza outbreaks, to date, this does not appear to be the case with SARS-CoV-2. Although many questions remain, the preponderance of evidence indicates that children and adolescents can become infected and are less likely to be symptomatic and less likely to have severe disease resulting from SARS-CoV-2 infection. We continue to learn more about the role children play in transmission of SARS-CoV-2. At present, it appears that children younger than 10 years may be less likely to become infected and less likely to spread infection to others, although further studies are needed. More recent data suggest children older than 10 years may spread SARS-CoV-2 as efficiently as adults. Additional in-depth studies are needed to truly understand the infectivity and transmissibility of this virus in anyone younger than 18 years, including children and adolescents with disabilities and medical complexities.

Because prolonged, close contact with a person infected with SARS-CoV-2 is the main driver of transmission, the sport (number of players, spacing, and frequency and duration of contact) and setting (indoor versus outdoor, size and ventilation of facility) will likely influence risk of infection. Although it is not likely the main form of transmission, it is possible for SARS-CoV-2 to be transmitted on surfaces; therefore, sports with shared equipment, facilities, or common surfaces may pose additional risk.

How do families balance the risk versus benefit of returning to sports for children and adolescents?

Weighing the risk versus benefit of return to sport is driven by the sport and setting, local disease activity, and individual circumstances, including underlying health conditions that place the athlete or household contacts at high risk of severe disease should they contract SARS-CoV-2 infection. See the CDC for a [list of high-risk conditions](#). Parents should review the school/league COVID-19 policies and discuss them with their children so they are aware of the expectations. Risk can be decreased but not eliminated by athletes, parents, coaches, and officials following safety protocols. Ultimately, the decision falls on a parents/guardians to decide whether they will allow their children to participate in sports.

Should children have a COVID-19 test before attending sports?

Testing for COVID-19 before participating in sports is discouraged unless an athlete is symptomatic or has been exposed to someone known to be recently infected with SARS-CoV-2. Antibody testing is not currently recommended. Current testing recommendations can be found in the AAP [COVID-19 Testing Guidance](#).

What modifications/strategies should be considered to reduce risk of youth sports participation?

To reduce risk, state and local governments as well as sports governing bodies will be recommending modifications to practices, competitions, and events. The Centers for Disease Control and Prevention (CDC) [recommendations](#) for youth sports should be consulted when developing this guidance. Compliance by athletes, parents, spectators, coaches, and officials will affect the success of the reduction strategies. Key modifications that are recommended include prioritizing noncontact activity, such as conditioning and drills where physical distance can be maintained, and proper use of a cloth face covering. In addition, it is important to reinforce appropriate hygiene and respiratory etiquette through the use of signage, parent/athlete education, and use of handwashing stations or hand sanitizer.

Maintaining practice groups in consistent pods of small sizes that do not mix youth athletes may help limit team-wide outbreaks of SARS-CoV-2 infection. Small pods allow for easier contact tracing and fewer numbers of athletes needing to be quarantined should someone test positive for SARS-CoV-2. Minimizing travel to other communities and regions is another reduction strategy. Frequently touched surfaces on the field, court, or play surface (eg, drinking fountains) should be cleaned and disinfected at least daily or between uses as much as possible. Sharing of equipment and use of communal spaces, such as locker rooms, should be reduced. When possible, athletic areas with poor ventilation (ie, weight rooms) or small spaces where distancing cannot be maintained should be avoided, because they bear greater risk for transmission of SARS-CoV-2. Considerations should be made for increased ventilation via opening doors or windows when safe. Athletes should not share food or drink. Participants should be encouraged to bring their own water bottles. Individuals with any signs or symptoms of SARS-CoV-2 infection should not attend practices or competition. They should consult their physician for testing guidance and notify their coach, athletic trainer, and/or school administrator of their signs/symptoms.

The AAP anticipates sports organizations/school districts may choose to not operate sports programs given the new and frequently changing safety recommendations. Sports organizations/school systems may find the safety requirements difficult to enact, fear liability

issues, or have concern for operating sports teams and increase risk of COVID-19 spread. Individuals may choose to seek out other options for participating in sports within different settings or through another organization. As outlined in the AAP's [Organized Sports for Children, Preadolescents, and Adolescents](#) clinical report, fees for registration and equipment can be barriers for sports participation. Pediatricians are encouraged to become familiar with the local programs that have mechanisms for children to play for a reduced cost or for parents to volunteer in exchange for lower fees.

When should cloth face coverings be worn?

Cloth face coverings have been shown to decrease transmission rates of SARS-CoV-2; therefore the AAP encourages that athletes wear them at all times for group training, competition, and on the sidelines. Individual sports performed outside, such as golf and singles tennis, are lower risk for transmission of SARS-CoV-2, and a cloth face covering may not be necessary for these activities. Cloth face coverings have been shown to be well tolerated by the majority of individuals who wear them for exercise, but we acknowledge that the covering may need to be removed under certain circumstances.

Cloth face coverings should not be worn for competitive cheerleading (tumbling/stunting/flying) and gymnastics (while on the different apparatuses), because the covering may get caught on objects and become a choking hazard or accidentally impair vision. Likewise, during wrestling contact, a cloth face covering could become a choking hazard and is discouraged. Individuals who swim/dive/participate in water sports should not wear a cloth face covering while they are in the water, because a wet cloth face covering may be more difficult to breathe through. Any cloth face covering that becomes saturated with sweat should be changed immediately.

Athletes should always wear a cloth face covering when between practice drills, while not on the playing field, on the sidelines, arriving at or departing from the playing facility, in a locker room, and during shared transportation to/from an event. It is important that the cloth face covering fits the athlete well and is worn over the nose and below the chin at all times when in use. If the cloth face covering is removed for a break, the athlete should remain at least 6 feet away from all other individuals. [Cloth face coverings](#) should be worn by coaches, officials, spectators, and volunteers at all times. Coaches and other club/school officials should monitor proper use and encourage all athletes to have a properly worn cloth face mask in place in accordance with the above guidance.

Indoor sports bear a greater risk of transmission of SARS-CoV-2, and certain sports (eg. ice hockey) carry higher relative risk. The risks and benefits of indoor sports, in addition to the current community prevalence of COVID-19, should be carefully considered when making decisions about continuing or resuming indoor sports. If indoor sports take place, proper use of a cloth face covering for all indoor sports training and competition (except in the examples noted above) is strongly recommended.

Special considerations may be appropriate when there is an increased risk of heat-related illness. Individuals younger than 2 years old should not wear a cloth face covering. Younger athletes may find wearing a [cloth face mask](#) challenging and may need to be reminded and/or assisted by parents/coaches. People should be reminded not to touch the front of the face mask and remove it from the straps whenever possible. Cloth face coverings should be routinely washed daily in hot water and not reused until cleaned.

What if the youth or a family member exhibits signs or symptoms of COVID-19 or tests positive?

All parents/guardians need to report if the athlete or any household contact is exhibiting any signs or symptoms of COVID-19 or tests positive for SARS-CoV-2, even if asymptomatic. These individuals should be held out of ALL practices and games until the [CDC-recommended isolation or quarantine](#) period has expired. If the test result for SARS-CoV-2 is positive, team officials and the health department should be notified so contact tracing and appropriate quarantining can be performed. The local health department can assist in determining when it is safe for athletes and exposed contacts to return to practice, and [guidelines from the CDC](#) should be followed to determine clearance.

What to do if a participant had COVID-19 or has it during the season?

In a SARS-CoV-2–positive child who is either **asymptomatic** or **mildly symptomatic** (<4 days of fever >100.4°F, short duration of myalgia, chills, and lethargy), there are limited data available and recommendations are based on expert opinion. Individuals who test positive for COVID-19 should not exercise until they are cleared by a physician. It is suggested they visit with their primary care physician (PCP) who will review the local 14-point preparticipation 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 and the patient may begin a gradual return to play after 10 days have passed from date of the positive test result and a minimum of 24 hours symptom free off-fever reducing medications. If the PCP identifies any new or concerning history or physical examination findings at this visit, an ECG should be performed 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 $>100.4^{\circ}\text{F}$, myalgia, chills, or lethargy or those who had a non-ICU hospital stay and no evidence of MIS-C), an ECG and cardiology consult is currently recommended after symptom resolution, and at a minimum of 10 days past the date of the positive test result. Individuals who test positive for SARS-CoV-2 should not exercise until they are cleared by a physician. The cardiologist may consider ordering a troponin test and an echocardiogram at the time of acute infection. Depending on the patient's symptoms and their duration, additional testing including a Holter monitor, exercise stress testing, or cardiac magnetic resonance imaging (MRI) may be considered. If cardiac workup is negative, gradual return to physical activity may be allowed 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.

For patients with **severe** COVID-19 symptoms (ICU stay and/or intubation) or **multisystem inflammatory syndrome in children (MIS-C)**, it is recommended they be restricted from exercise for a minimum of 3 to 6 months and definitely require cardiology clearance prior to resuming training or competition. Coordination of follow-up cardiology care should be arranged prior to hospital discharge. Extensive cardiac testing should include but is not limited to: troponin tests, echocardiogram, and cardiac MRI.

A graduated return-to-play protocol can begin once an athlete has been cleared by a physician (cardiologist for **moderate** to **severe** COVID-19 symptoms) and is asymptomatic 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 athletes who experienced **moderate** COVID-19 symptoms as outlined above.

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 (ie, - Contests/competitions).

Should parents and other spectators attend their children's sports practices and games?

Parents/guardians should follow current local regulations for social distancing and use of cloth face coverings when considering game attendance. Attending outdoor events may bear less risk than indoor events with less space and ventilation. No one should attend any sports function as a spectator if they are exhibiting signs or symptoms of COVID-19. Parents and other spectators with high-risk health conditions should strongly consider not attending indoor events or events held outdoors where appropriate social distancing cannot be maintained. Live streaming or recording of athletic events, when available, may allow individuals who are unable to attend to participate in viewing events.

What if children's sports are disrupted or canceled? How can parents support their athletes?

Disruptions in normal routines can be challenging for everyone, especially children and adolescents. Time away from teammates and coaches can be hard on athletes both physically and mentally. If prolonged breaks occur in sports, athletes should be encouraged to maintain their fitness with regular physical activity. Consistent activity will help athletes stay in shape for when sports return, and this can help prevent injuries. Exercise can also help serve as a coping mechanism during this stressful time. Routine is important, so consideration should be given to establishing a consistent workout schedule.

Individuals who are unable to participate in milestone events, such as their final high school sports season or a state championship tournament, may be emotionally affected more than

other individuals. This loss can also have a significant emotional impact on parents of athletes who may be heavily invested in their children's sports. All athletes should be monitored for signs and symptoms of depression and anxiety if their sports participation is disrupted. Individuals with a prior history of depression or anxiety may be at greater risk.

What about the sports preparticipation examination and preparing for the season?

All children should have an annual health supervision visit, which ideally incorporates the [preparticipation physical evaluation](#) (sports examination). Individuals who have not been physically active prior to the restart of sports may be at higher risk of an overuse injury. A gradual increase in frequency, duration, and intensity of exercise should be encouraged to help avoid injury. With a return to sports in summer months, athletes should also take time to acclimate to exercising in warm weather.

AAP Resources

- [Preparticipation Physical Evaluation, 5th Edition Monograph](#)
- [Organized Sports for Children, Preadolescents, and Adolescents](#)
- [Overuse Injuries, Overtraining, and Burnout in Child and Adolescent Athletes](#)
- [Physical Activity Assessment and Counseling in Pediatric Clinical Settings](#)
- [COVID-19 Planning Considerations: Guidance for School Re-entry](#)
- [COVID-19 and Safe Transportation in Motor Vehicles](#)
- [COVID-19 Testing Guidance](#)
- [Cloth Face Coverings](#)
- [Supporting Healthy Nutrition and Physical Activity During the COVID-19 Pandemic](#)

Information for Families from HealthyChildren.org

- [Cloth Face Coverings During Sports](#)
- [Mask Mythbusters: 5 Common Misconceptions about Kids & Cloth Face Coverings](#)
- [Youth Sports & COVID-19: Understanding the Risks](#)
- [Youth Sports Participation During COVID-19: A Safety Checklist](#)

Additional Information

- [Interim Guidance on the Pre-participation Physical Exam for Athletes during the SARS-CoV-2 Pandemic](#) (AMSSM)
- [Consideration for Youth Sports](#) (CDC)
- [COVID-19 and Staying Active](#) (WHO)
- [Returning To Play After Coronavirus Infection: Pediatric Cardiologists' Perspective](#) (ACC)

Interim Guidance Disclaimer: The COVID-19 clinical interim guidance provided here has been updated based on current evidence and information available at the time of publishing. Guidance will be regularly reviewed with regards to the evolving nature of the pandemic and emerging evidence. All interim guidance will be presumed to expire on June 30, 2021 unless otherwise specified.

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