



Return to Play After COVID-19 Infection with Major Symptoms

When you get a viral infection, the muscles in your body can become inflamed and sore. Your heart, which is also a muscle, can similarly become inflamed or swollen. This is called myocarditis. While many cases of myocarditis are mild, in some cases the heart may become weak and is prone to electrical changes that can lead to sudden death.

There is new evidence that the SARS-CoV-2 virus, which causes COVID-19, may affect the heart more than other viruses and has the potential to cause myocarditis. One way to test for myocarditis is with a cardiac MRI. While there is some emerging information that shows evidence of myocarditis on the MRIs of college athletes, we do not know for certain what this means in terms of actual risk of sudden death. However, in those who had significant symptoms with their COVID-19, the risk is likely higher than those who were asymptomatic or minimally symptomatic. Because myocarditis is so serious, it is

very important to be careful when allowing our student athletes to return to play after symptomatic COVID-19.

We consider an athlete symptomatic with COVID-19 if they were ever hospitalized for COVID-19 or have had the following symptoms at home:

Fever of 100.4°F for more than 3 days And 1 or more of the following:
<ul style="list-style-type: none">• Shortness of breath• General discomfort, exhaustion, or feeling unwell• Rash• Deep muscle pain or muscle aches• Chills/shivering during fever

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An MRI machine is a large magnet that surrounds the body. It uses magnetic images and radio frequencies instead of X-rays to produce images. Your child is not exposed to radiation during an MRI. An MRI is the best evaluation for myocarditis. Echocardiography, EKG, and/or bloodwork may be normal despite the presence of myocarditis. We recommend a referral to cardiology with normal cardiac MRI prior to starting the gradual return to play progression or returning to full competitive activity. A satisfactory physical examination will still be needed from your primary care provider or Sports Medicine provider. For any child with the above symptoms of COVID-19, Nationwide Children's recommends a consult with a pediatric cardiologist prior to considering a gradual, supervised, return to play protocol.

Regardless of any testing, the only life-saving treatment for an athlete with myocarditis having a sudden event is an automated external defibrillator (AED). During the gradual return to play and following full return, parents should speak with their child's athletic trainer, coach, and team doctor to confirm that:

- an AED (automated external defibrillator) and staff trained in its use are present during sports participation; and
- the coach, athletic trainer, team doctor and parent will watch their athlete/child for any of the following symptoms

At rest or worsens with physical activity:

- fainting, near-fainting or dizziness
- chest pain or tightness, especially with exertion
- heart racing out of proportion to activity (palpitations), feeling abnormal heart rhythms or "skipped beats" (arrhythmias)
- shortness of breath, trouble breathing or fast breathing

General symptoms:

- fluid retention/extremity swelling (arms, legs, hands, fingers feet)
- dizziness at rest
- chest pain at rest
- trouble breathing or fast breathing at rest
- feeling tired
- fever over 100.4

If your child has any of these symptoms they should be removed from play and their doctor should be contacted immediately.



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