COVID-19 GRADUATED RETURN TO PLAY

This guidance is for student-athletes who are asymptomatic or have mild symptoms as outlined in the algorithm below. All treatment plans will be individualized based on symptom severity and sport. Stage I is 3 days of rest following symptom onset or a positive test. Stages II-V are at least one day each and outline a gradual ramp up of activity separated by 24 hours of rest. Please note that each stage may be extended on a case by case basis which would lengthen the return to play protocol.

Cardiac Considerations for College Student-Athletes during the COVID-19 Pandemic

*Recommendations for cardiac testing are based on expert consensus and informed by current evidence

Confirmed New Infection

Isolate and contact tracing per public health guidelines

Asymptomatic or Mild Illness
(common cold-like symptoms, GI symptoms, loss of taste/smell, no fever or <2 days of fever)

No medical evaluation required unless athlete has specific concerns
No specific cardiac testing; additional cardiac testing based on clinical concern or institutional requirements
Consider no exercise for 3 days from symptom onset or positive test; timeline of exercise progression should be individualized

Return to Play
Monitor for new symptoms with exercise*

Moderate Illness or Initial Cardiopulmonary Symptoms
(≥2 days of fever, chills, or flu-like symptoms; or chest pain, SOB, or palpitations)

Medical evaluation recommended
Consider ECG, Echo, and Troponin for initial cardiopulmonary symptoms
No exercise for 5 days from symptom onset; fever, flu-like and cardiopulmonary symptoms should be resolved before starting an exercise progression

Return to Play
Monitor for new symptoms with exercise*

Severe Illness or Hospitalization

A comprehensive medical evaluation and cardiology consultation is recommended
Consider ECG, Echo, and Troponin

Cardiology consultation and consider Cardiac MRI before a return to exercise progression

*Cardiopulmonary Symptoms with Return to Exercise
(chest pain, excessive SOB, palpitations, or unexplained exercise intolerance)

Medical evaluation and consider ECG, Echo, and Troponin

Considerations were developed by an expert panel with members from the American Medical Society for Sports Medicine and the American College of Cardiology
## Stages of return to play after COVID-19 infection

<table>
<thead>
<tr>
<th>Stage</th>
<th>Activity level</th>
<th>Objectives</th>
<th>Percent of maximum HR permitted</th>
<th>Duration of exercise session</th>
<th>Exercise intensity and examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stage I</td>
<td>Initial rest</td>
<td>Allow time for recovery</td>
<td>N/A</td>
<td>N/A</td>
<td>Activities of daily living.</td>
</tr>
<tr>
<td>Stage II</td>
<td>Light activity</td>
<td>Gradual increase in heart rate</td>
<td>&lt;70%</td>
<td>&lt;15 minutes</td>
<td>Begin light exercise (e.g., walking, light jogging, light stationary bicycle). No resistance training.</td>
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<tr>
<td>Stage III</td>
<td>Moderate activity</td>
<td>Increase in exercise frequency and duration</td>
<td>&lt;80%</td>
<td>&lt;45 minutes</td>
<td>More challenging aerobic activities (e.g., 2- to 3-km run at 12 to 15 minutes/mile [7 to 9 minutes/km] or at easy pace for elite runners; stationary bicycle at 50 to 125 watts; other activity at RPE 9 to 12). Begin resistance training (e.g., bodyweight exercises that can be performed for 15 to 20 repetitions without difficulty; weight training at 50% of 1RM or less).</td>
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<tr>
<td>Stage IV</td>
<td>Advanced activity</td>
<td>Increase in exercise intensity; restoration of functional skills</td>
<td>&lt;80%</td>
<td>&lt;60 minutes</td>
<td>More intense aerobic activities (e.g., 3- to 5-km run at 10 to 15 minutes/mile [6 to 9 minutes/km] or at moderate but not fast pace for elite runners; stationary bicycle at &gt;150 watts; other activity at RPE 11 to 14). More intense resistance training (e.g., full bodyweight exercises; weight training at 70% of 1RM or less).</td>
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<tr>
<td>Stage V</td>
<td>Normal training</td>
<td>Gradual resumption of standard fitness routine</td>
<td>N/A</td>
<td>N/A</td>
<td>Normal training”. Re-introduction of sprints, interval training, and agility (multi-directional) training”. Full resistance training”.</td>
</tr>
</tbody>
</table>

The table provides a general scheme for progressing to full play following infection with COVID-19. The duration of each stage will vary widely depending upon a range of patient factors, including severity of infection, comorbidities, age, baseline fitness, and goals. Clinicians must monitor patients appropriately and modify activity based on patient response and any symptoms or signs that may develop.

- HR: heart rate; N/A: not applicable; 1RM: one repetition maximum; RPE: rate of perceived exertion.
- * Training volume and intensity should be increased gradually. A good rule of thumb is that increases should not exceed 10% each week. For aerobic activities, increases in volume should precede increases in intensity.

References:

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