

CORONAVIRUS

COVID-19

Table 1 Considerations and recommendations for recreational athletes returning to activity after COVID-19

Considerations

Each patient with COVID-19 is unique. Although general patterns in COVID-19 have been reported, there is a wide variance of disease expression. Each patient with COVID-19 recovers at a unique rate. There is currently no algorithm guiding a patient's stepwise return to activity. The severity of disease appears to affect the duration of recovery, although this has yet to be proven. Return to activity after COVID-19 should be guided by a body-system approach that includes the cardiac, pulmonary, hematologic, musculoskeletal, and gastrointestinal systems.

Clinicians should advise patients to return to activity in a slow, gradual, stepwise manner.

Patients should be given instructions to speak with their health care provider should they develop symptoms in the body systems listed above.

Recommendations

Exercise should not resume if a patient with COVID-19 has persistent fever, dyspnea at rest, cough, chest pain, or palpitations.

Any COVID-19 patient with an underlying cardiovascular or pulmonary condition should consult a physician prior to resumption of exercise, even if asymptomatic.

An otherwise healthy patient with a self-limited course of COVID-19 who has been asymptomatic for 7 days may begin resuming physical activity at 50% of normal intensity and volume.

Consultation with a physician is recommended if patients who have had COVID-19 develop chest pain, fever, palpitations, or dyspnea on the resumption of exercise.

Ref. Jordan D. Metz, Kathryn McElheny, James N. Robinson, Daphne A. Scott, Karen M. Sutton, Brett G. Toresdahl. Considerations for Return to Exercise Following Mild-to-Moderate COVID-19 in the Recreational Athlete. HSSJ Journal. DOI 10.1007/s11420-020-09777-1. Published online: 10 August 2020.



“O exercício físico de intensidade moderada a elevada realizada quase diariamente melhora a atividade de vigilância

patogénica e reduz a morbidade e a mortalidade da doença respiratória aguda¹. Pelo contrário, participar num exercício físico não habitual de elevada intensidade, com o stress fisiológico inerente, está associado a disfunção transitória do sistema imunológico e a risco elevado de doença respiratória aguda.⁷

Uma grande preocupação para os sujeitos muito ativos e para os atletas de competição é o potencial para lesões cardíacas de

SARS-CoV-2.^{9,10} A lesão cardíaca aguda e a miocardite foram observadas numa proporção significativa de



	Influenza Virus Flu	SARS-CoV-2 COVID-19
Incubation	1-4 days	2-14+ days
Cases in the U.S. (Updated Aug. 2, 2020)	35.5M	4.6M
Mortality Rate	0.1-0.2%	1-1.5%
Treatment	<ul style="list-style-type: none"> • Supportive Care • Antiviral Medication • Seasonal Flu Vaccine 	Supportive Care

Infections Source: [cdc.gov/flu/about/burden/preliminary-in-season-estimates.htm](https://www.cdc.gov/flu/about/burden/preliminary-in-season-estimates.htm), [cdc.gov/coronavirus/2019-ncov/cases-updates/cases-in-us.html](https://www.cdc.gov/coronavirus/2019-ncov/cases-updates/cases-in-us.html)
Mortality Rate Sources: [cdc.gov/flu/about/burden/index.html](https://www.cdc.gov/flu/about/burden/index.html), [nature.com/articles/d41586-020-01738-2](https://www.nature.com/articles/d41586-020-01738-2)

Table. Comparison Between Seasonal Influenza and SARS-CoV-2

Characteristics	Seasonal influenza viruses	SARS-CoV-2
Primary route of transmission	Droplet	Droplet (airborne, fomite, and fecal-oral transmission possible but less important)
Overall infectivity	Less contagious	More contagious
Dynamics of infectivity	The basic reproduction number (R_0) of both viruses is highly dependent on NPIs effective in decreasing transmission	
	Patients are most infectious after symptom onset	
	Both viruses capable of asymptomatic transmission, but less than during presymptomatic and symptomatic phases	
Incubation period	1-4 d (median, 2 d)	2-14 d (median, 5 d)
Risk factors for severe disease	<ul style="list-style-type: none"> • Age >65 y and <2 y • Immunosuppression • Pregnancy (through 2 weeks postpartum) • Morbid obesity • Chronic lung disease, cardiac disease, advanced liver disease, chronic kidney disease • Residence in nursing home or long-term care facilities • American Indian/Alaska Native heritage 	<ul style="list-style-type: none"> • Advanced age (risk increases with age) • Male sex • Obesity • Hypertension • Chronic lung disease, cardiac disease, type 2 diabetes, cancer, chronic kidney disease, advanced liver disease • Surgery during incubation period • Residence in nursing home • Structural racism, poverty⁷
Most common clinical manifestations	Fever, chills, headache, myalgias, cough, nasal congestion, sore throat, fatigue	Fever, chills, headache, myalgias, cough, shortness of breath, fatigue, anosmia
	For both viruses, the majority of infections are either subclinical or mild	
Pediatric disease	<ul style="list-style-type: none"> • Common, especially high risk in children <2 y • Children play a leading role in propagating outbreaks 	<ul style="list-style-type: none"> • Uncommon, with typically mild disease • Multisystem inflammatory syndrome has been observed in children, but is rare • Limited evidence on children as a source of infection
Case-fatality rate	≈0.1%	≈0.25%-3.0% ⁶
Dynamics of symptoms	Symptoms typically peak during first 3-7 d of illness	Symptoms can peak during week 2 or 3 of illness
Vaccine	Multiple approved	No vaccine currently licensed
Clinical diagnostics	Nucleic acid amplification and antigen-based assays from respiratory samples	<ul style="list-style-type: none"> • Nucleic acid amplification and antigen-based assays from respiratory samples • Serologies
Available antiviral agents	<ul style="list-style-type: none"> • Neuraminidase inhibitors • Cap-dependent endonuclease inhibitors • M2 channel blockers 	Nucleoside analogue (remdesivir)

Abbreviations: NPI, nonpharmacologic intervention; SARS-CoV-2, severe acute respiratory syndrome coronavirus 2.

Daniel A. Solomon, Amy C. Sherman, Sanjat Kanjilal. Influenza in the COVID-19 Era. JAMA. Published online August 14, 2020. doi:10.1001/jama.2020.14661

doentes hospitalizados por COVID-19, e o exercício pode acelerar a replicação do vírus e a agressão cardíaca cardíaco.

Sugerem-se alguns conselhos:

- Incentivar os indivíduos saudáveis a começarem ou continuarem a praticar exercício físico de intensidade moderada durante 150 a 300 minutos/semana, embora durações inferiores sejam também benéficas.
- Manter a saúde imunológica, participando 150 a 300 minutos/semana em exercício físico de intensidade moderada a elevada

e mantendo o peso corporal em níveis recomendados.

- Aconselhar o repouso e não realizar exercício físico durante duas semanas a partir da resolução do COVID-19 leve ou moderado ou do resultado positivo de teste, seguido de lenta retoma da atividade física, com monitorização próxima da eventual deterioração clínica.^{9,10}
- Implementar o uso de máscaras e realização de testes para minimizar o contágio e evitar o contato próximo na ausência de uso de máscara.”

Ref. Keri L. Denay, et al. ACSM Call to Action Statement: COVID-19 Considerations for Sports and Physical Activity. Current Sports Medicine Reports August 2020; 326 V 19(8):326-328.

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