

DYSPNEA

This provides suggestions as you engage in shared health care decision-making with Veterans. It is not intended to replace clinical judgement.

Post-COVID-19 dyspnea is common with multiple etiologies including cardiac, pulmonary, and neuromuscular issues. Prevalence is likely proportional to initial severity with dyspnea reported in ~5-10% of mild (outpatient) cases,¹⁹ (Sudre CH, 2021)²⁰ (Nehme M, 2021) but up to 15-50% of those hospitalized.²¹ (Carfi A, 2020)²² (Froidure A, 2021)²³ (Jutant EM, 2022) Patients who initially had mild COVID-19, and did not experience hypoxemia or require hospitalization, are less likely to have post-acute pulmonary function or imaging abnormalities.²⁴ (AAPM&R, 2022)

Things to Keep in Mind

- A functional assessment evaluating ADLs and recovery time after activity is helpful for triaging severity and creating a titrated return to individualized activity program ([Appendix B](#))
- Differentiate between dyspnea at rest (forgetting to breathe), dyspnea with movement (bending forward), dyspnea with exertion with or without hypoxemia, and post-exertional malaise (disproportionately long recovery time after exertion)
- Consider evaluation for pulmonary embolism (PE)²⁵ (Li P, 2021), coronary artery disease (CAD)²⁶ (Xie Y, 2022), interstitial lung disease and myocarditis²⁷ (Puntmann VO, 2020)²⁸ (Daniels CJ, 2021) if clinically indicated given higher rates after COVID-19
- Assess pregnancy/lactation status, review teratogenic medications

Evaluation

Labs to Consider

- Complete blood count (CBC)
- If on oral contraceptive pill (OCP) with relevant Wells or modified Geneva score, consider D-dimer to screen for pulmonary thrombosis
- Troponin if suspicious for myocarditis

Tests to Consider

- Assess oxygen saturation at rest and with exertion
- If lasting more than 8 weeks, consider:
 - 2-view chest x-ray (CXR)
 - Electrocardiogram (EKG)
 - Pulmonary function tests (PFT)

PACT Management to Consider

- ICD-10 Code: U09.9, Post-COVID-19 condition, unspecified
- Supplemental oxygen
- Pharmacologic therapies, including oral corticosteroids, inhaled bronchodilators, and inhaled corticosteroids, are not *routinely* recommended for breathing discomfort in the absence of a specific diagnosis such as asthma
- [Heart healthy diet](#)
- [Stress management](#)
- [Diaphragmatic Breathing](#)

Consults to Consider

- Pulmonary: Persistent hypoxia at 6 weeks or abnormal work-up; otherwise >12 weeks with persistent symptoms
- Cardiology: Abnormal EKG, stress test, or highly suspicious for cardiac etiology
- Pulmonary rehabilitation: After prerequisite clinical assessment for CAD, hypoxia, and participation (orthostatic hypotension) while excluding post-exertional malaise
- Ear, Nose, Throat (ENT) or Speech Language Pathology: concurrent dysphonia or dysphagia
- Physical Therapy: titrated return to individualized activity program ([Appendix B](#)) if no post-exertional malaise
- Occupational Therapy: regulated breathing during daily task engagement in home and the community
- Whole Health System approach: health coaching

¹⁹ Sudre CH. Attributes and predictors of long COVID. Nature Medicine. 2021 Apr;27(4):626-631. doi: 10.1038/s41591-021-01292-y

²⁰ Nehme M, CoviCare Study T. Prevalence of Symptoms More Than Seven Months After Diagnosis of Symptomatic COVID-19 in an Outpatient Setting. Annals of Internal Medicine 2021;174:1252-60. doi: 10.7326/M21-0878.

²¹ Carfi A. Persistent Symptoms in Patients After Acute COVID-19. JAMA 2020;324:603-5.

²² Froidure A, Mahsouli A, Liistro G, et al. Integrative respiratory follow-up of severe COVID-19 reveals common functional and lung imaging sequelae. Respiratory Medicine 2021;181:106383. doi: 10.1016/j.rmed.2021.106383.

²³ Judant EM. Respiratory symptoms and radiological findings in post-acute COVID-19 syndrome. European Respiratory Journal Open Res 2022;8 (2):00479-2021. doi: 10.1183/23120541.00479-2021.

²⁴ American Academy of Physical Medicine and Rehabilitation (AAPM&R). <https://www.aapmr.org/members-publications/covid-19/pasc-guidance>

²⁵ Li P. Factors Associated With Risk of Postdischarge Thrombosis in Patients With COVID-19. JAMA Network Open. 2021 Nov 1;4(11):e2135397. doi: 10.1001/jamanetworkopen.2021.35397

²⁶ Xie Y. Long-term cardiovascular outcomes of COVID-19. Nat Med 28, 583–590 (2022). <https://doi.org/10.1038/s41591-022-01689-3>

²⁷ Puntmann VO. Outcomes of Cardiovascular Magnetic Resonance Imaging in Patients Recently Recovered From Coronavirus Disease 2019 (COVID-19). JAMA Cardiology. 2020 Nov 1;5(11):1265-1273. doi: 10.1001/jamacardio.2020.3557

²⁸ Daniels CJ. Prevalence of Clinical and Subclinical Myocarditis in Competitive Athletes With Recent SARS-CoV-2 Infection: Results From the Big Ten COVID-19 Cardiac Registry. JAMA Cardiology. 2021;6(9):1078–1087. doi:10.1001/jamacardio.2021.2065