

GUIDANCE
LONG COVID EVALUATION AND TREATMENT



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Purpose	<p>To provide guidance on evaluating and treating patients with Long COVID.</p> <p>Please note that the understanding of post-COVID conditions remains incomplete and guidance for healthcare professionals will likely change over time as the evidence evolves.</p>
Scope	NYC Health + Hospitals System (H+H)
Requirements	Centers for Disease Control and Prevention (CDC)
Clinical and Epidemiological Case Definition	<p>Long COVID [other terms can include post-acute sequelae of COVID-19 (PASC) or Post-COVID Conditions] is an umbrella term for the wide range of physical and mental health consequences experienced by some patients that are present four or more weeks after SARS-CoV-2 infection, including by patients who had initial mild or asymptomatic acute infection.</p>
Process	<p>Key Points</p> <ul style="list-style-type: none"> • Objective laboratory or imaging findings should not be used as the only measure or assessment of a patient’s well-being; lack of laboratory or imaging abnormalities does not invalidate the existence, severity, or importance of a patient’s symptoms or conditions. • Healthcare professionals and patients are encouraged to set achievable goals through shared decision-making and to approach treatment by focusing on specific symptoms (e.g., headache) or conditions (e.g., dysautonomia); a comprehensive management plan focusing on improving physical, mental, and social well-being may be helpful for some patients. <p>Patient Management</p> <p>General Clinical Considerations</p> <ul style="list-style-type: none"> • Post-COVID symptoms are common with studies showing one-third to greater than one-half of survivors of acute COVID-19 disease experience one or more symptoms four weeks or more after initial acute infection. There are over two dozen symptoms identified, and any organ system may be involved. The most common of these symptoms include fatigue, cough, psychological and neurocognitive changes, chest discomfort, anosmia, and dyspnea. • Generally, symptom prevalence correlates with acute disease severity; however, even those experiencing asymptomatic infection may experience Long COVID symptoms and impaired quality of life.

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Most symptoms resolve within 6 months of initial infection, but some patients have persistent symptoms.

- Post-COVID symptoms and management may be challenging for both patients and their providers due to uncertainty around symptom duration, limited treatment options, and quality of life impact. Empathic provider communication is paramount for engaging and supporting people living with Long COVID.

Whom to Assess

- All patients hospitalized for acute COVID-19 disease should have outpatient follow-up scheduled for after hospital discharge, timed to be no later than three to four weeks after diagnosis of initial SARS-CoV-2 infection or within 1-2 weeks if hospitalization length is beyond 3-4 weeks post-initial diagnosis. Non-hospitalized patients who had mild-to-moderate COVID-19 disease and who also have underlying comorbidities (e.g., diabetes, hypertension) should have follow-up three to four weeks after their initial diagnosis. In younger, non-hospitalized patients without comorbidities, follow-up after acute COVID-19 disease can generally be patient-driven based on persistent or new symptoms; if needed, they should follow-up three to four weeks after their initial diagnosis.

Note: Patients hospitalized in the intensive care unit during acute infection may be at the greatest risk for developing Long COVID. These individuals should also be evaluated for post-intensive care syndrome – which may overlap with Long COVID – and be treated accordingly.

Patient History and Physical Exam

- For new patients, collect past medical and surgical histories, family history, social history (including social health determinants), medications, and perform a full review of symptoms.
- Obtain date of diagnosis of acute SARS-CoV-2 infection and ask about recovery course including symptoms during and after acute infection, paying attention to symptoms that limit, impair, and/or result in a patient needing assistance in activities of daily living.
- If a patient was hospitalized, obtain and review hospitalization records. Note patient comorbidities at time of hospital admission, hospitalization course, including the need for supplemental oxygen, intubation, occurrence of thrombosis, and any other potential complication. Also note if the patient was discharged with

supplemental oxygen or new medications, including those for anticoagulation.

- The patient exam should include vital signs, including orthostatic blood pressure and pulse for patients with dizziness or malaise; resting and ambulating pulse oximetry (e.g., for patients with fatigue, exertional malaise, etc.); and a full physical exam given the impact on multiple organ systems from COVID-19 disease. Screening exams, including the Patient Health Questionnaire-9 (PHQ-9), General Anxiety Disorder-7 (GAD-7), and Mini-Mental State Exam (MMSE), should be considered based on a patient's psychological and neurocognitive symptoms and concerns.

Assessment and Testing

- Laboratory testing should be tailored and guided by the patient history and clinical exam in the post-acute period based on new or persistent symptoms, or, if there are known laboratory abnormalities during the acute infection period requiring follow-up and monitoring.
- Additional testing, imaging, and diagnostic assessment should be guided by acute disease complications and/or new or persistent symptoms following acute disease. Testing may include pulmonary function testing for pulmonary symptoms, electrocardiogram for cardiac symptoms, and exercise capacity testing for post-exertional malaise. Review whether patient is up-to-date on age appropriate preventative screenings, as many of those tests may have been delayed due to the pandemic.

Management of Post-COVID Conditions

- For the majority of patients, Long COVID symptoms will resolve. In general, most patients with a mild acute COVID-19 disease course with mild new or persistent symptoms should slowly start to resume activity as tolerated.
- Long COVID symptoms and conditions should be managed and followed symptomatically and specialists consulted after initial workup. Potential conditions and symptoms to address are numerous, and we recommend clinicians review the first two "References" below for more in-depth symptomatic management recommendations organized by organ system and/or symptom. These resources are updated regularly by their respective website hosts as research continues to be published on Long COVID and post-COVID conditions.

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- In general, clinicians and patients should approach symptom management using shared decision-making, discussing and setting realistic goals and using screening tools where possible to assess progress in managing persistent symptoms. Patients may consider using a calendar/diary or take notes to assess their progress between appointments.
- Fatigue, one of the most common symptoms, can be clinically challenging to manage and profoundly impact patient quality of life. As discussed in the second resource below, clinicians may discuss the “four-P” model for energy modulation among patients with Long COVID: planning, pacing, prioritizing, and positioning. Throughout the recovery journey, ensure access to social services and behavioral health to support patient needs.

Patient Resources

- NYC Health + Hospitals, Test& Trace AfterCare <https://www.nychealthandhospitals.org/test-and-trace/after-care/>
- NYC Health + Hospitals/Gotham, COVID Centers of Excellence <https://www.nychealthandhospitals.org/covid-19-center-of-excellence/>
- Body Politic COVID-19 Support Group <https://www.wearebodypolitic.com/covid19>
- Survivor Corps <https://www.survivorcorps.com/>

Infection Prevention and Control Considerations

Practice standard precautions and universal masking with eye protection for all clinical care encounters.

In addition, specific transmission-based precautions are to be followed as applicable.

References

Centers for Disease Control and Prevention, Evaluating and Caring for Patients with Post-COVID Conditions: Interim Guidance (Updated June 2021) <https://www.cdc.gov/coronavirus/2019-ncov/hcp/clinical-care/post-covid-index.html>

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COVID-19: Evaluation and management of adults following acute viral illness (Updated November 10, 2021; updated routinely)
<https://www.uptodate.com/contents/covid-19-evaluation-and-management-of-adults-following-acute-viral-illness>

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