Rehabilitation for Clients with Post COVID-19 Condition (Long COVID)

Guidance for Canadian Rehabilitation and Exercise Professionals
Purpose: There is an urgent need for Canadian rehabilitation and exercise professionals to identify a new illness called Long COVID and guide safe rehabilitation interventions including therapeutic exercise prescription. Informed by the World Physio Briefing Paper, key references and consultation with the clinical community and stakeholders this living document consolidates resources to inform clinical decision making. Current as of August 2021, visit (LINK) for updates.

What is Post COVID-19 Condition (Long COVID)?

Long COVID is an emerging health condition that occurs following an acute infection of COVID-19 that can occur in both hospitalized or non-hospitalized clients, and even in those who had a mild initial infection. At least 10-30% of clients will continue to have symptoms 12 weeks after their acute infection. Long COVID affects multiple body systems and can include impairments of multiple body systems including the respiratory, cardiac, renal, endocrine and neurological systems.

Clients present with a cluster of signs and symptoms in an episodic and unpredictable manner. Clients may be referred to, or seek rehabilitation or exercise in an attempt to manage symptoms.

Common Symptoms:

- Fatigue/Exhaustion
- Cognitive dysfunction/brain fog
- Shortness of breath
- Headache
- Dizziness upon standing
- Palpitations
- Chest pressure
- Joint or muscle pain

Clients report a wide variety of symptoms.

Screen all clients for a past medical history of a COVID-19 infection (confirmed or suspected) before assessment and management in a rehabilitation or exercise setting.

Why?

Evidence is still emerging, and it is not known when physical activity (including exercise) is safe/beneficial in people living with Long COVID, and it may be harmful. A cautious approach is required to prevent clients from experiencing worsening symptom and/or worsening of function due to physical activity. World Physio Rehab and Long COVID Infographic
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<td><strong>Post Exertional Symptom Exacerbation</strong>&lt;br&gt;Worsening of symptoms 24-72 hours following exertion. Exertion refers to cognitive, physical, emotional, or social activity and is often minimal or at a threshold previously tolerated.</td>
<td>Monitor and teach clients to self-monitor for increased symptoms during and in the days following physical activity, exercise, or following emotional/cognitive/communicative exertion. Utilize Questionnaires. Establish baseline symptoms pre-exercise. Ask clients about tolerance in the days after sessions before progressing. Use Pacing for treatment. Refer to a physiotherapist or occupational therapist.</td>
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<td><strong>Cardiac Impairment</strong>&lt;br&gt;COVID-19 can cause early or delayed onset of myocarditis and pericarditis or cardiac impairments. It is important to be aware of these conditions and how they present during exercise.</td>
<td>Exercise testing and intervention should be closely supervised. Monitor, and teach clients to self-monitor for symptoms suggestive of cardiac involvement: disproportionate breathlessness, tachycardia, palpitations, chest pressure or pain at rest or exercise. Medical clearance may be necessary. Utilize readiness questionnaires. Stop exercise if client is in distress.</td>
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<td><strong>Oxygen Desaturation</strong>&lt;br&gt;Dysfunction of the respiratory or pulmonary system can be present following COVID-19.</td>
<td>Exercise testing and intervention should be closely supervised. Monitor, and teach clients to self-monitor for symptoms suggestive of respiratory distress: rate &gt; 20 breaths/min, shortness of breath, accessory muscle use, chest pain, fatigue, dizziness, tachycardia or syncope. If available, monitoring using pulse oximetry may be helpful (noting limitations in accuracy and racial bias). Medical clearance may be necessary. Stop exercise if client is in distress.</td>
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<td><strong>Dysautonomia</strong>&lt;br&gt;Some clients present with the inability to regulate the autonomic nervous system. This presents as variable heart rate, blood pressure, digestive issues, and temperature dysregulation.</td>
<td>Clients may self-report lightheadedness, fainting, unstable blood pressure, abnormal heart rate in response to activity. Clinicians can assess orthostatic intolerance (in adults, sustained increase of HR more than 30 bpm with normal BP from lying to standing within 10 min) using the Canadian Guidelines. Medical evaluation may be necessary. In clients with dysautonomia, recumbent, semi recumbent or horizontal exercise therapy is recommended.</td>
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<td><strong>Functional Cognition &amp; Cognitive Communication</strong>&lt;br&gt;Some clients experience “brain fog” or difficulties with thinking, attention and/or memory. These difficulties can cause cognitive-communication disorders, which may affect talking, understanding conversations, reading, written expression and social interaction.</td>
<td>Cognition and communication may be affected by many factors such as medical conditions, psychological status, fatigue, medication, and social/productive roles. Cognitive screens can identify need for neuropsychological, occupational therapy or speech-language pathology assessment.</td>
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<td><strong>Voice &amp; Swallowing</strong>&lt;br&gt;Some clients may experience hoarse voice or difficulty swallowing.</td>
<td>Clients complaining of, presenting with, a hoarse voice or difficulty swallowing food or liquid need referral to a speech-language pathologist. Clients with voice problems also need referral to an Ear, Nose, Throat Specialist.</td>
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<td><strong>Hearing &amp; Tinnitus</strong></td>
<td>Clients complaining of new onset of impaired hearing or tinnitus need referral to an <strong>audiologist</strong>.</td>
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<td>Some clients may experience a change in hearing or tinnitus (perception of ringing or other types of noise in the ear) in one or both ears.¹⁵</td>
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<td><strong>Psychological, Social &amp; Spiritual Considerations</strong></td>
<td>Clinicians making assessments should take a holistic, person-centred, and empathic approach. Assessment and treatment should encompass physical, cognitive, communication, psychological, and psychiatric symptoms, as well as functional abilities.¹ Ask questions about how Long COVID affects work, education, and physical or social wellbeing. Utilize <strong>Questionnaires</strong>. Offer resources from <strong>Wellness Together Canada</strong>, or the <strong>Canadian Psychological Association</strong>.</td>
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<td>The onset of a new illness, loss of social roles or lack of social connection are stressful events which can cause anxiety and/or low mood.</td>
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General Considerations for Management of Patients with Long COVID

- Due to the risk of worsening symptoms listed above on exertion and in the days following exertion, physical activity including exercise, needs to be prescribed with caution and clinical decision making.
- Educate clients with Long COVID on conservative activity and energy maximization.
- Ensure patients begin with monitoring activities of daily living, and only progress through gentle low intensity physical activity including exercise, once it is known how much is tolerated.
- Consider whether the selected management approach will contribute to function & recovery or result in an exacerbation or decline in function (including cognitive, communication, emotional and social function).
- Recognition, validation, and inclusion of patient experiences can help facilitate a therapeutic relationship.
- Some clients will require integrated, interprofessional rehabilitation, consider referrals to publicly-funded programs and services available at some hospitals, rehabilitation facilities, primary health care settings or use the tools for “Find a Physio”, “Find an OT”, “Find a SLP/Audiologists”, or “Find a Registered Dietician”.
- Detailed considerations can be found in guidelines developed by Alberta Health Services or the Chartered Society of Physiotherapists (Version 2).

Specific Consideration for Strength & Conditioning and Return to Sport

- Canadian Olympic and Paralympic Sport Institute Network have detailed Return to Health and Performance following COVID-19 Infection for those asymptomatic, with a course of illness > 10 days and for a graduated return to sport.
- All athletes need to progress symptom-free (including fatigue) through a Graduated Return to Play Protocol.
- Follow strength and conditioning principles in those without post exertional symptom exacerbation (see above) with a slow, progressive increase in intensity and volume.
- Ongoing monitoring of symptoms and vitals may be necessary due the unpredictable and relapsing nature of Long COVID.

Link to Resources

Long COVID Physio: https://longcovid.physio/
World Physiotherapy: https://world.physio/covid-19-information-hub/long-covid
Physiopedia: https://www.physio-pedia.com/Long_COVID
Rehab Care Alliance: http://www.rehabcarealliance.ca/covid-19-rehab-resources

We would like to acknowledge the rapid feedback from 24 stakeholders from (AB, NS, ON, QB, SK) in the professions of PT (including Cardiac and Pulmonary Rehab), OT, SLP, Audiology, Kinesiology, Medicine, Strength and Conditioning with input from the Canadian Physiotherapy Association, Speech-Language and Audiology Canada, the Rehab Care Alliance, and a clinician with presumed Long COVID.

References


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