

## POST COVID-19 CONDITION

### OCSO BIWEEKLY SCAN OF EVIDENCE #19

*March 12-March 25, 2022*

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#### SCOPE

This biweekly update presents an analysis of new evidence, guidance and issues related to post COVID-19 condition (commonly referred to as 'long COVID') and synthesizes the current state of knowledge. Comprehensive lists of details and resources on this issue are available at the Office of the Chief Science Officer.

#### CURRENT STATE OF KNOWLEDGE

The typical duration of acute COVID-19 illness is two to four weeks. However, some patients have described debilitating symptoms persisting or recurring for weeks or months after acute illness. The range of symptoms reported is broad, and can vary from mild to more severe and debilitating effects that can affect both young and older individuals, regardless of the severity of their initial COVID-19 symptoms in the acute stage. These symptoms are often described as, Post COVID-19 condition (WHO terminology), post-acute sequelae of SARS-CoV-2 infection (PASC), and long COVID (used by patient groups). Affected individuals are commonly referred to as COVID-19 long-haulers. While scientific knowledge on these conditions is building, there is still much that is unknown about this condition. There have been reports of more than 100 symptoms or difficulties with everyday activities.

There is limited data suggesting that the condition may be more likely to develop in those:

- who were hospitalized during acute infection;
- had more than 5 COVID symptoms during the acute phase;
- have pre-existing respiratory disease;
- are older;
- are women; and
- have other co-morbidities or have higher BMI.

Typical therapeutic itinerary involves consultations with multiple specialists and puts emphasis on self-management (rest & relaxation, self-pacing, etc). Emerging evidence points to the importance of multidisciplinary care given the heterogeneity of symptoms associated with Post COVID-19 condition. Multidisciplinary teams in "long COVID" clinics have been set to include professionals from the following fields: rehabilitation, respiratory and cardiac consultants, physiotherapists, occupational therapists, psychologists, etc.

It is anticipated that [Post COVID-19 condition](#) will have medium and long-term impact on public health in Canada. Further research with an equity lens on the predisposing conditions and risk factors is needed. Based on research to date, and reviewed by the Public Health Agency of Canada as part of a living [systematic review](#), 56% of individuals who have had COVID-19 reported the presence of one or more symptoms 12 weeks after diagnosis. About [58%](#) of children had 1 or more symptoms 4 weeks or more after their initial COVID-19 infection. Post COVID-19 condition will have implications for the economy, as well as federal programs including disability benefits, employment related measures and sick pay, among others. It is reported that 10% of adults are unable to return to work in the long term. The [WHO](#) has said that about one in 4 people infected with COVID-19 have experienced a post-COVID-19 condition for at least 1 month. One in 10 people experience symptoms lasting beyond 12 weeks.

This week's scan includes a long COVID research [library](#) developed by Research-Aid Networks, a cohort [study](#) published in the *Lancet* on the risks of incident diabetes in long COVID, and a systematic [review](#) examining the effect of pulmonary rehabilitation for patients with post-COVID-19 published in *Frontiers in Medicine*.

## GUIDELINES OR STANDARDS

- WHO has developed a [clinical case definition](#) of post COVID-19 condition by Delphi methodology that includes 12 domains, available for use in all settings. This first version was developed by patients, researchers and others with the understanding that the definition may change as new evidence emerges and our understanding of the consequences of COVID-19 continues to evolve.
  - “Post COVID-19 condition occurs in individuals with a history of probable or confirmed SARS CoV-2 infection, usually 3 months from the onset of COVID-19 with symptoms and that last for at least 2 months and cannot be explained by an alternative diagnosis. Common symptoms include fatigue, shortness of breath, cognitive dysfunction but also others and generally have an impact on everyday functioning. Symptoms may be new onset following initial recovery from an acute COVID-19 episode or persist from the initial illness. Symptoms may also fluctuate or relapse over time.”
  - WHO: Q&A [page](#) on Post-COVID-19 Condition (February 2022).
- US CDC describes [Post-COVID conditions](#) as a range of new, returning, or ongoing health problems people experience four or more weeks after first being infected with the virus that causes COVID-19. The CDC highlights the various types of post-COVID conditions such as: Multiorgan Effects of COVID-19, Effects of COVID-19 Illness or Hospitalization, and ‘New or Ongoing Symptoms’. The CDC posted [Interim Guidance](#) for healthcare providers on Evaluating and Caring for Patients with Post-COVID Conditions. Post-COVID conditions can be considered a disability under the [Americans with Disabilities Act \(ADA\)](#). The CDC also released information on [Caring for People with Post-COVID Conditions](#).
- (UPDATED) UK NICE: Rapid [guidelines](#) for managing the long-term effects of COVID-19 (Updated March 2022).
- Chartered Society of Physiotherapy in UK published its COVID-19 [rehabilitation standards](#), which includes guidance about community-based rehab for people with COVID-19 and long COVID (July 2021).
- [Guidelines](#) to help doctors manage long COVID patients published in *British Journal of General Practice* (August 2021).
- UK NHS [guidance](#) for Post-COVID syndrome assessment clinics (April 2021).
- CIHI [guidance](#) for clinicians to ensure that data supports monitoring for Post-COVID conditions.
- [Guidance](#) for Canadian Rehabilitation and Exercise Professionals on Post COVID-19 condition and rehabilitation management strategies (August 2021).
- Government of Canada: [COVID-19 for health professionals - Post COVID-19 condition](#)
- Center for Effective Practice – [COVID-19: Clinical Guidance for Primary Care Providers - Long-term symptoms / Post-acute sequelae of COVID-19 \(PASC\)](#)
- [Guideline S1: Long COVID: Diagnostics and treatment strategies](#) (*Wiener klinische Wochenschrift*)
- American Academy of Physical Medicine and Rehabilitation (AAPM&R): [Cognitive Symptoms Guidance](#) and [Breathing Discomfort Guidance](#).
- Royal Australian College of General Practitioners (RACGP) [guidance](#) for GPs caring for ‘long COVID’ patients.
- European Society of Clinical Microbiology and Infectious Diseases (ESCMID): [Rapid guidelines for assessment and management of long COVID](#)
- (NEWLY ADDED): ACAS (UK-based Advisory, Conciliation and Arbitration Service): [Long COVID – advice for employers and employees](#)

## NATIONAL AND INTERNATIONAL DEVELOPMENTS (MAR 12-MAR 25)

### CANADA

- (NEW) Quebec announced in its [budget](#), released March 22, that it will fund 15 clinics throughout Quebec for people experiencing long COVID symptoms. The three-year plan will include \$20.5 million in funding for the specialized clinics and scientific research into the condition. The project will include 5 reference clinics in Montreal, Quebec City, and Sherbrooke as well as 10 other locations throughout the province. The province will also hire physiotherapists, social workers, nurses, coordinators, and administrative staff to work in the clinics. Quebec estimates 9,000 people province-wide are living with long COVID.

### UK

- (NEW) House of Commons Debate: [Briefing](#) on the impact of long COVID on the UK Workforce.

### US

- (NEW) Lawmakers want data from public health officials on prevalence of long COVID, but according to [reports](#), the CDC won't have it for another two years. Reps. Don Beyer and Ayanna Pressley asked the CDC in a January [letter](#) to publicly release their findings on how many people have long Covid and to break that data down by race, ethnicity, age, gender, previous disability, and other demographic characteristics. A spokesman for Beyer, said his office got a briefing from the Agency in response and were told the CDC "would not internally have a dataset from which they could publicly post disaggregated data for two years." Through its long Covid Initiative, non-profit organization Solve M.E. plans to release a white paper in the coming weeks that estimates 31.9 million adults in the U.S. have long Covid and 9.5 million of them are disabled by it.

## EMERGING SCIENTIFIC EVIDENCE (MAR 12-MAR 25)

### EVIDENCE PRODUCTS

TITLE AND AUTHOR	EVIDENCE TYPE	SUMMARY
<a href="#">Effect of Pulmonary Rehabilitation for Patients With Post-COVID-19: A Systematic Review and Meta-Analysis</a> (Chen et al)	Systematic Review (Available in <i>Front Med</i> )	5 databases were searched for all the published trials of pulmonary rehabilitation (PR) for patients with post-COVID-19 from 2019 to October 2021. Among 6,000 retrieved studies, 3 studies with 233 patients after COVID-19 were included. The pooled estimate of PR effect on 6-min walk test was in favor of the experiment group with clinical importance. It is found that PR could improve the symptom of dyspnea and QoL; however, its effect on pulmonary function test was inconsistent across studies. Risk of bias of included studies varied, with major concerns on the risk of blinding of participants and interventions performers.
<a href="#">Changes in cognitive functioning after COVID-19: A systematic review and meta-analysis</a> (Crivelli et al)	Systematic Review (Available in <i>Alzheimers Dement</i> )	Searches in Medline/Web of Science/Embase from January 1, 2020, to December 13, 2021, were performed following Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines. Of 6202 articles, 27 studies with 2049 individuals were included (mean age = 56.05 years, evaluation time ranged from the acute phase to 7 months post-infection). Impairment in executive functions, attention, and memory were found in post-COVID-19 patients. The meta-analysis was

		performed with a subgroup of 290 individuals and showed a difference in MoCA score between post-COVID-19 patients versus control.
<a href="#"><u>Prognostic Factors for Post-COVID-19 Syndrome: A Systematic Review and Meta-Analysis</u></a> (Maglietta et al)	Systematic Review (Available in <i>J Clin Med</i> )	MedLine and WebOfScience were last searched on 30 September 2021. Overall, 20 articles met the inclusion criteria, involving 13,340 patients. Associations were statistically significant for two factors: female sex with any symptoms, with mental health symptoms and with fatigue; acute disease severity with respiratory symptoms.

### SELECT PRIMARY RESEARCH

TITLE AND AUTHOR	SOURCE	SUMMARY
<a href="#"><u>Physical, psychological and cognitive profile of post-COVID condition in healthcare workers, Quebec, Canada</u></a> (Carazao et al)	medRxiv	In this case series and case-control study between December 2020 and May 2021, the prevalence and duration of post-COVID condition, including physical, psychological and cognitive symptoms, was assessed in healthcare workers in Quebec. Four-week and 12-week post-COVID condition prevalences of 46% (2,746/5,943) and 40% (653/1,746), respectively, were observed among non-hospitalized cases and 76% (90/118) and 68% (27/37), respectively, among hospitalized cases. Aspects of cognitive dysfunction were 2.2 to 3.0 times more prevalent among cases with post-COVID condition than in controls, but also independently associated with psychological distress and fatigue.
<a href="#"><u>Cohort study: Post-acute effects of outpatient SARS-CoV-2 infections in Denmark</u></a> (Gappa)	Gesundheitswesen	Study examined prescription drug and health-care use after SARS-CoV-2 infection not requiring hospital admission. Individuals with a positive or negative RT-PCR test for SARS-CoV-2 in Denmark between Feb 27 and May 31, 2020, were eligible for inclusion. 10 498 eligible individuals tested positive for SARS-CoV-2 in Denmark from Feb 27 to May 31, 2020, of whom 8983 (85·6%) were alive and not admitted to hospital 2 weeks after their positive test. The absolute risk of severe post-acute complications after SARS-CoV-2 infection not requiring hospital admission is low.
<a href="#"><u>'Brain fog', guilt, and gratitude: experiences of symptoms and life changes in older survivors 6 months after hospitalisation for COVID-19</u></a> (Heiberg et al)	Eur Geriatr Med	Aim of this study was to explore how older survivors experienced post-COVID-19 condition and life changes approximately 6 months after hospitalisation for COVID-19. Analyses of the responses of 17 participants showed that most had experienced various physical and/or cognitive symptoms, such as reduced physical fitness, heavy breathing, fatigue, and 'brain fog'. On the other hand, they also experienced guilt and gratitude for having survived.
<a href="#"><u>Blood group O and post-COVID-19 syndrome</u></a> (Diaz-Salazar et al)	medRxiv	Study aimed to assess whether blood group O is related to post-COVID-19 syndrome (PCS) after mild COVID-19. Blood group O had increased risk of developing PCS compared to non-O subjects. The variables that contributed the most to the predictive model were blood group O, lymphocyte count, neutrophil count, and female sex.
<a href="#"><u>Long COVID and its associated factors among COVID survivors in the community from a middle-income country: an online cross-sectional study</u></a> (Moy et al)	medRxiv	Cross-sectional study aimed to explore long COVID symptoms and associated factors. Online survey was conducted with 732 COVID-19 survivors in Malaysia, from July to September 2021. Results showed 21.1% of respondents reported experiencing Long COVID. Most commonly reported symptoms for long COVID were fatigue, brain fog, depression, anxiety, insomnia, arthralgia or myalgia. Females had 58% higher odds of experiencing long COVID.
<a href="#"><u>Brain functional connectivity alterations</u></a>	Research Square	Neuropsychological deficits and brain damage following SARS-CoV-2 infection are not well understood. 110 patients, with either severe,

<a href="#"><u>associated with neuropsychological post-COVID syndrome</u></a> (Voruz et al)		moderate or mild disease in the acute phase underwent neuropsychological and olfactory tests, as well as completed psychiatric and respiratory questionnaires at $223 \pm 42$ days post-infection. Patients in severe group displayed poorer verbal episodic memory performances, and moderate patients had reduced mental flexibility. Neuroimaging revealed patterns of hypo and hyper functional connectivity in severe patients, while only hyperconnectivity patterns were observed for moderate. Default mode, somatosensory, dorsal attention and cerebellar networks were implicated. Partial least squares correlations analysis confirmed specific association between memory performances and brain functional connectivity.
<a href="#"><u>Post-COVID-19 syndrome. SARS-CoV-2 RNA detection in plasma, stool, and urine in patients with persistent symptoms after COVID-19</u></a> (Tejerina et al)	BMC Infect Dis	Study describes a cohort of patients with a constellation of symptoms occurring four weeks after diagnosis causing different degrees of reduced functional capacity. They evaluated 29 patients who reported fatigue, muscle pain, dyspnea, inappropriate tachycardia, and low-grade fever. 13 patients (45%) had positive plasma RT-PCR results and 51% were positive in at least one RT-PCR sample (plasma, urine, or stool). Functional status was severely reduced in 48% of subjects. 18 patients (62%) received antiviral treatment. Improvement was seen in most patients and patients in treatment group achieved better outcomes with significant differences.
<a href="#"><u>Prevalence, determinants, and impact on general health and working capacity of post-acute sequelae of COVID-19 six to 12 months after infection: a population-based retrospective cohort study from southern Germany</u></a> (Peter et al)	medRxiv	Population-based retrospective cohort study in four geographically defined regions in southern Germany included persons aged 18-65 years with PCR confirmed SARS-CoV-2 infection between October 2020 and March 2021. Symptom frequencies (six to 12 months after versus before acute infection, expressed as prevalence differences [PD] and prevalence ratios [PR]), symptom severity and clustering, risk factors and associations with general health recovery, and working capacity were analysed. Burden of self-reported post-acute symptoms and possible sequelae, notably fatigue and neurocognitive impairment, remains considerable six to 12 months after acute infection even among young and middle-aged adults after mild acute SARS-CoV-2 infection, and impacts general health and working capacity.
<a href="#"><u>Long COVID and Symptom Trajectory in a Representative Sample of Americans</u></a> (Wu et al)	Research Square	Study uses a sample representing U.S. community population from the Understanding America Study COVID-19 Survey. Final sample includes 308 infected individuals who were interviewed one month before, around the time of, and 12 weeks after infection. 23% of sample experienced new-onset symptoms during infection which lasted for more than 12 weeks, and thus can be considered as having long COVID. Most common persistent new-onset symptoms among those included in study were headache (22%), runny or stuffy nose (19%), abdominal discomfort (18%), fatigue (17%), and diarrhea (13%). Long COVID was more likely among obese individuals and those who experienced hair loss, headache, and sore throat during infection.
<a href="#"><u>PMC8924350; Post-COVID-19 syndrome: assessment of short- and long-term post-recovery symptoms in recovered cases in Saudi Arabia</u></a> (Garout et al)	Infection	Study aims to examine prevalence, variation, and severity of continual symptoms in post-COVID-19 using a single-center questionnaire. Questionnaire was distributed among population in Saudi Arabia who recovered from COVID-19 between April 1, 2020 and December 31, 2021. 744 participants completed questionnaire, 318 (42.8%) recovered less than 3 months, 75 (10.1%) recovered 3-6 months, while 351 (47.2%) recovered more than 6 months. Half of the participants 353 (47.5%) had incessant symptoms and of those patients, more than half had two or more symptoms. Common symptoms included fatigue 189 (25.4%),

		headache 118 (15.9%), and myalgia 63 (8.5%). Of the participants, 189 (21.4%) experienced continual symptoms including anxiety in 98 (13.2%) and depression in 70 (9.5%).
<a href="#"><u>Assessing the impact of COVID-19 at 1 year using the SF-12 questionnaire: Data from the Anticipate longitudinal cohort study</u></a> (O'Kelly et al)	<i>Int J Infect Dis</i>	Prospective cohort study aimed to assess longitudinal impact of COVID-19 in patients using 12-item Short Form Survey score (a Health Related Quality of Life tool). Hospitalised and non-hospitalised patients (n=155; recruited Jun-Nov 2020) were assessed at a dedicated post-Covid clinic in Ireland at a 2-4 month (Timepoint 1) and 7-14 month follow up (Timepoint 2). Results showed that those with PoCS had reduced SF-12 scores at 1-year compared to those without. Predictors of PoCS at 1-year were a higher baseline heart rate and lower Physical Composite Score at median 3 months after COVID-19.
<a href="#"><u>Factors shaping the mental health and well-being of people experiencing persistent COVID-19 symptoms or 'long COVID': qualitative study</u></a> (Burton et al)	<i>BJPsych Open</i>	Study explored factors affecting mental health and well-being from perspective of people with long COVID. Five themes were identified across participant accounts regarding factors affecting mental health and well-being, including symptoms causing severe disruption to daily life, lack of service and treatment options, uncertainty of illness trajectories, experiences of care and understanding from others and changes to identity.
<a href="#"><u>Multi-organ impairment and Long COVID: a 1-year prospective, longitudinal cohort study</u></a> (Dennis et al)	<i>medRxiv</i>	Prospective, longitudinal study aimed to determine prevalence of organ impairment in long COVID patients at 6 and at 12 months after initial symptoms and to explore links to clinical presentation. Extreme breathlessness (36% and 30%), cognitive dysfunction (50% and 38%) and poor health-related quality of life (EQ-5D-5L<0.7; 55% and 45%) were common at 6 and 12 months, and associated with female gender, younger age and single organ impairment.
<a href="#"><u>Risks and burdens of incident diabetes in long COVID: a cohort study</u></a> (Xie et al)	<i>Lancet Diabetes Endocrinol</i>	In post-acute phase of disease, compared with contemporary control group, people with COVID-19 exhibited an increased risk and excess burden of incident diabetes; and an increased risk and excess burden of incident antihyperglycaemic use. Analyses to estimate risk of a composite endpoint of incident diabetes or antihyperglycaemic use yielded a HR of 1.46 and an excess burden of 18.03 per 1000 people at 12 months.
<a href="#"><u>Post-COVID-19 Syndrome in Outpatients: a Cohort Study</u></a> (Desgranges et al)	<i>J Gen Intern Med</i>	Aimed to characterize post-COVID-19 syndrome after mild COVID-19 and identify predictors. Median time between initial visit and phone survey was 150 days in COVID-positive and 242 days in COVID-negative patients. Persistent symptoms were reported by 223 (53%) COVID-positive and 33 (37%) COVID-negative patients and proportions were stable among periods of phone interviews. Among COVID-positive, female gender and overweight/obesity were predictors of persistent symptoms.
<a href="#"><u>PMC8661751; Post-COVID syndrome symptoms, functional disability, and clinical severity phenotypes in hospitalized and nonhospitalized individuals: A cross-sectional evaluation from a community COVID rehabilitation service</u></a> (Sivan et al)	<i>J Med Virol</i>	Correlation between symptom severity, functional disability, and overall health was explored. Mean age was 47, with 64% females. Median duration of symptoms was 211 days. Symptoms and functional difficulties increased substantially when compared to before infection. Three distinct severity phenotypes of mild (n = 90), moderate (n = 186), and severe (n = 94) were identified where severity of individual symptoms was of similar severity within each phenotype. Symptom scores were strongly positively correlated with functional difficulty scores and moderately negatively correlated with overall health. This is the first study reporting on severity phenotypes in a largely non-hospitalized PCS cohort. Severity phenotypes may help stratify patients for targeted interventions and planning of care pathways.

<a href="#"><u>Visual interpretation of brain hypometabolism related to neurological long COVID: a French multicentric experience</u></a> (Verger et al)	<i>Eur J Nucl Med Mol Imaging</i>	Multicentre study aimed to provide a qualitative and consensual description of brain hypometabolism observed through visual analysis of (18)F-FDG PET images of patients with suspected neurological long COVID, regarding previously reported long-COVID hypometabolic pattern. Brain (18)F-FDG PET scans of patients referred for suspected neurological long COVID with positive RT-PCR and/or serology tests were retrospectively reviewed in 3 French nuclear medicine departments. On the 143 brain (18)F-FDG PET scans performed during this 3-month period, 53% of scans were visually interpreted as normal, 21% as mildly to moderately or incompletely affected, and 26% as severely affected according to COVID hypometabolic pattern.
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## COMMENTARIES, LETTERS AND OPINION PIECES (MAR 12-MAR 25)

- [Long COVID: A growing problem in need of intervention \(Cell Reports Medicine\)](#): Considering the public health impact of long COVID, need for specific medical therapy is pressing. Of equal interest as vaccine effects is whether early treatment aimed at preventing severe disease and hospitalization can also prevent long COVID. An Italian study provides some evidence that treatment with remdesivir during hospitalization for acute COVID-19 prevents up to one-third of long-COVID cases. Remdesivir must be given as an injection and is, therefore, unlikely to be useful on a large scale for non-hospitalized patients. Two oral and less expensive antiviral drugs have recently been licensed, the protease inhibitor nirmatrelvir/ritonavir and molnupiravir, a drug that introduces mutations in the viral genome, but there are so far no data to support any protective effect on long COVID. Whether treatment-as-prevention could be applied as a strategy to combat long COVID in general, or for select risk populations, should be investigated further.
- [Rising diabetes diagnosis in long COVID \(Lancet Diabetes Endocrinol\)](#): The data presented by Xie and Al-Aly have major implications for clinical policy and public health. If COVID-19 is indeed a risk factor for diabetes in post-acute phase of infection, screening and management of dysglycaemia should be an integral part of clinical guidelines for COVID-19 diagnosis and follow-up. Long-term implications of SARS-CoV-2 infection increasing diabetes risk are profound. Potential connection between COVID-19 and diabetes highlights that infectious diseases (eg, SARS-CoV-2) and chronic diseases (eg, diabetes) cannot be viewed in siloes. When we emerge out of the pandemic, the much-neglected non-communicable diseases, such as type 2 diabetes, will continue their relentless trajectory, possibly in an accelerated manner, as the leading burdens of global health.

## MEDIA HIGHLIGHTS (MAR 12-MAR 25)

### CANADA

- [Saskatchewan's long-COVID sufferers say they are on their own \(CBC\)](#): The Saskatchewan Health Authority (SHA) doesn't have dedicated clinics for long COVID, and the organization didn't respond when asked by CBC News whether there are plans to set some up in the future. The SHA said it has no clear estimates of how many people have long COVID in the province. A new study, called [Sask Long COVID](#), was recently launched by researchers at the University of Saskatchewan. The goal is to solve the information gap by providing scientists and policy-makers with a more accurate picture of long COVID in Saskatchewan.
- [Long COVID, mental health concerns, and other episodic disabilities raise workplace questions as Canada opens up \(Financial Post\)](#): The 2nd National Summit on Episodic Disabilities and Employment, hosted by Realize, will open on March 23rd with a pre-Summit spotlight session on Long COVID. Opening speaker, Dr. Theresa Tam, the Chief Public Health Officer of Canada, will address the national health implications of Long COVID. Other presentations during the pre-Summit will include speakers from Canada, the US and the UK living with long-COVID and the latest research on how it is impacting work.

### GLOBAL

- [Long Covid could create a generation affected by disability, expert warns \(The Guardian\)](#): Prof Danny Altmann, immunologist at Imperial College London, says UK's approach fails to take the impact of infections seriously. A report published by the All-Party Parliamentary Group (APPG) on coronavirus found the UK government's policymaking on Covid has "continuously failed" to take long Covid into account and has not "adequately funded" research into treatments for the condition.

## POST COVID-19 CONDITION RESOURCES

- (NEWLY ADDED): [Altea \(Switzerland\)](#): A network for sharing evidence-based information on the long-term effects of COVID-19.
- (NEWLY ADDED): [Pandemic-Aid Networks](#): Long COVID research library.
- [Post-COVID-19 Functional Status Scale](#): An overview of a patient self-reported scale that helps to support assessment of functional status and recovery after the SARS-CoV-2 infection.
- Ontario College of Family Physicians: [Resources on Post-COVID Condition](#).
- [Agency for Clinical Innovation \(Australia\)](#): Living Evidence - post acute sequelae of COVID-19.
- Pre-populated literature searches: [Long COVID search](#) (LitCovid) and [Long COVID search](#) (NIH)
- [PAHO](#) Webinar Series on Post COVID-19 Condition launched 17 February, 2022, from 10:30 am to 12:30 pm (EST).
- [Body Politic COVID-19 Support Group \(Global\)](#): Housed on the Slack app, group members have access to dozens of different channels, which give space for more personal discussion. Some of the channels include those specifically for medical professionals, parents of children with Covid-19, LGBTQ+ individuals, BIPOC+, and different regions around the world.
- [Patient-Led Research Collaborative \(Global\)](#): Self-organized group of Long COVID patients working on patient-led research around the Long COVID experience.
- [British Heart Foundation \(UK\)](#): UK-based foundation with resources on long COVID.
- [COVID Long Haul \(Canada\)](#): Canada's largest online platform for COVID survivors, their family members and anyone searching for the most up-to-date information about the pandemic. There is a COVID long-haulers [support group](#) and a [Report on Pan-Canadian Long COVID Impact Survey \(PDF\) \(June 2021\)](#)
- [BC ECHO for Post-COVID-19 Recovery \(Canada\)](#): BC ECHO for Post-COVID-19 Recovery is a learning community of specialists and community health-care providers who use case-based learning to improve care for those recovering from [symptoms post-COVID-19](#).
- [Long Covid Support \(UK\)](#): Peer support and advocacy group aiming to facilitate international peer support and campaigning in the UK for recognition, rehabilitation and research into treatments.
- [Long COVID SOS \(UK\)](#): Long-term sufferers formed the LongCovidSOS campaign to put pressure on the UK government to recognise the needs of those with Long Covid, and to raise awareness among the general public and employers.
- [Survivor Corps \(US\)](#): One of the largest and fastest growing grassroots movements connecting, supporting, and mobilizing COVID-19 Survivors to support research. They have a [list](#) of Post-COVID Care Centers (PCC) and a PCCC Best Practices [Guide](#).
- [The Center for Chronic Illness \(US\)](#): Aims to promote well-being and decrease isolation for those impacted by chronic illness through support and education. Their online support groups are professionally-facilitated and offer psychoeducational tools for coping.
- [Blooming Magnolia \(US\)](#): Mission is to empower others by providing a platform to strengthen & protect mental health and support those afflicted with Long-Covid through education and funding of therapeutic research. They have a list of support groups and resources on their website.
- [Long COVID Alliance \(US\)](#): US-based network of patient-advocates, scientists, disease experts, and drug developers who have joined together to leverage their collective knowledge and resources to educate policy makers and accelerate research to transform our understanding of post-viral illness.
- [Long COVID Kids \(UK/US/Canada\)](#): Parent & patient led advocacy & support group based in the UK.
- [Long COVID Physio \(US & UK\)](#): International peer support, education and advocacy group of Physiotherapists living with Long COVID, founded in November 2020 by Physiotherapists living with Long COVID from the UK and US.

- [Patient-Led Research Collaborative \(Global\)](#): Group of Long COVID patients working on patient-led research around the Long COVID experience.
- [CANCOV- Patient resources \(Canada\)](#): CANCOV is a research platform grounded in a prospective longitudinal 1-year cohort study of patients infected with COVID-19.
- [COVID Patient Recovery Alliance \(CPRA\) \(US\)](#): CPRA aims to bring together leaders in business, health care, research, academia, data and analytics, and patient advocacy to develop solutions that coordinate diverse data sources, inform models of care, and ensure adequate payment for long-COVID patients. Their [report](#) outlines recommendations for federal policymakers to promote recovery.
- [British Lung Foundation \(UK\)](#): UK-based charity sharing resources on navigating the NHS, breathlessness support, movement and energy support for long COVID patients.
- [Living with Long COVID \(US\)](#): COVID-19 Long-Haulers and Post-COVID Support Community.

**Note:** Previous OCSO Post COVID-19 Condition Scans can be found [here](#).