



Welcome to the Division of Continuing Medical Education's Post COVID-19 Condition 2026 Webinar Series



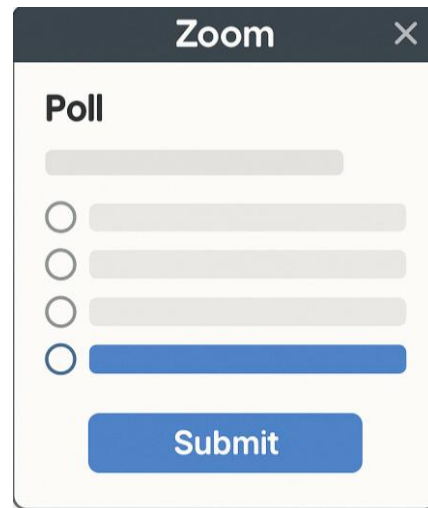
Treaty Acknowledgment

As we gather here today, we acknowledge we are on Treaty 2, 4, 5, 6, 8 and 10 Territories and the Homeland of the Métis. We respect that Indigenous people have rich cultural and traditional practices that have been known to improve health outcomes. We pay our respect to the First Nations and Métis ancestors of this place and reaffirm our relationship with one another.



Quick Poll

- Please select your role from the list, so we can see who is in the audience.
- Please rate your **knowledge level** about the Post COVID-19 Condition (PCC) topics **before** attending the webinar.



The image shows a screenshot of a Zoom poll interface. At the top, the word "Zoom" is displayed in white on a dark blue background, with a close button (X) to its right. Below this, the word "Poll" is written in bold black text. The poll content consists of five horizontal bars. The first bar is a solid grey bar. The next three bars are preceded by a radio button icon (a small circle) and are also grey. The fifth bar is preceded by a radio button icon and is highlighted in blue. At the bottom of the poll area, there is a blue button with the word "Submit" written in white.



Accreditation Credits

- **Royal College of Physicians and Surgeons of Canada (RCPSC):**
This event is an Accredited Group Learning Activity (Section 1) as defined by the Maintenance of Certification (MOC) program of the Royal College of Physicians and Surgeons of Canada and approved by the Division of Continuing Medical Education, College of Medicine, University of Saskatchewan. You may claim a maximum of 1.0 hours (credits are automatically calculated).
- **The College of Family Physicians of Canada (CFPC):**
This activity meets the certification criteria of the College of Family Physicians of Canada and has been certified by the Continuing Medical Education Division, University of Saskatchewan for up to 1.0 Mainpro+® Certified Activity credits.
- **Other Healthcare Professionals:**
Participation in this event may be included as part of the continuing education and competence programs established by individual professional associations.



Following this webinar...

Certificates:

Certificates will be emailed to those who attend the live session, within 10-14 business days post-webinar.



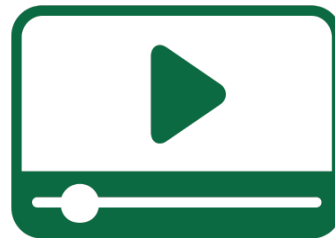
Evaluation:

A survey link will be shared in the chat at the end of this event. The link will also be included in the email distribution of the certificates.



Recordings:

This event will be recorded for future educational purposes and managed/distributed by CME.





Digital Learning Experience

Questions:

- Throughout the presentation and during the Q&A period, attendees can submit written questions through **Zoom's Q&A function** (anonymously, if desired) or **chat function** (addressed to "everyone")
- During the presentation, attendees will be muted.
- During the Q&A period following the presentation, attendees can use the **raise hand function** and **unmute** to ask a question.

Video:

- Video has been enabled and is optional for attendees.
- During the Q&A period, any speakers, including our main presenters, will be recorded.





Mitigating Potential Bias

Potential sources of bias have been mitigated.

- CME office recruits, communicates and manages all financial supporters, not the Scientific Planning Committee.
- 'Event Supporters' are kept separate from the educational content and listed as 'non-accredited' and 'optional' to attendees.
- 'Event Supporters' are not provided the opportunity to have commercial influence towards the educational content being delivered.
- Continuing Professional Development (CPD) material is peer reviewed and elevated to the Director of Accreditation, CME for further review, if required, until in compliance with the national accreditation standards.
- Brands/medical equipment/etc. are equally presented with no bias and/or with a generic brand listed.
- Survey results are documented, reviewed and addressed when bias is identified.



Dr. Rachana Bodani, MD, MSc, FRCPC

- Assistant Professor, Dept of Psychiatry, University of Saskatchewan
- Involved in UGME and PGME as clerkship director and competence committee chair
- Focused clinical practice in sleep disorders and trauma, as well as mental illness as it relates to chronic medical conditions



Cordell Hilderman

- Co-presenter
-



Cognitive and Mental Health Aspects of PCC

Dr. Rachana Bodani, MSc, MD, FRCPC

April 21, 2026



Presenter Disclosures

Presenter: Rachana Bodani

Relationships with financial sponsors:

Grants/Research Support, Speakers Bureau/

Honoraria, Consulting Fees, Patents, Other:

NONE

Presenter: Cordell Hilderman

Relationships with financial sponsors:

Grants/Research Support, Speakers Bureau/

Honoraria, Consulting Fees, Patents, Other:

NONE

We are grateful to include Cordell Hilderman, who shares insights grounded in lived experience. He has confirmed he does not have any financial or commercial relationships that could influence the content of this session.



Learning Objectives

By the end of this presentation, learners will be able to:

1. Identify the impact of Post COVID-19 Condition on Mental Health among patients and families.
2. Describe appropriate steps for the diagnosis of Mental Health conditions and management as part of PCC.
3. Apply CAN-PCC mental health guidelines in clinical practice to support patient care.



Mental Health conditions and management in PCC

- In 2022 Stats Canada data from 5 million surveyed 18 % of age 15 and up met the diagnostic criteria for mood, anxiety, or substance use disorders in the previous 12 months.
- Prevalence was highest among young women
- More than 1/3 reported unmet or partially met health/mental health care needs.

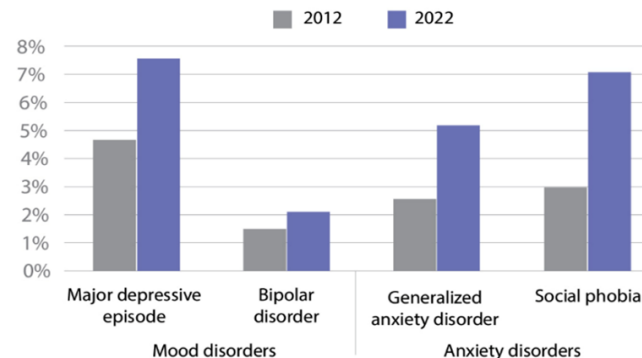
Source: [Statistics Canada, Mental disorders in Canada, 2022, Dec 6, 2024.](#)
Reproduced and distributed on an "as is" basis with the permission of Statistics Canada.

MENTAL DISORDERS

in Canada, 2022

The prevalence of mood and anxiety disorders in Canada increased from 2012 to 2022.

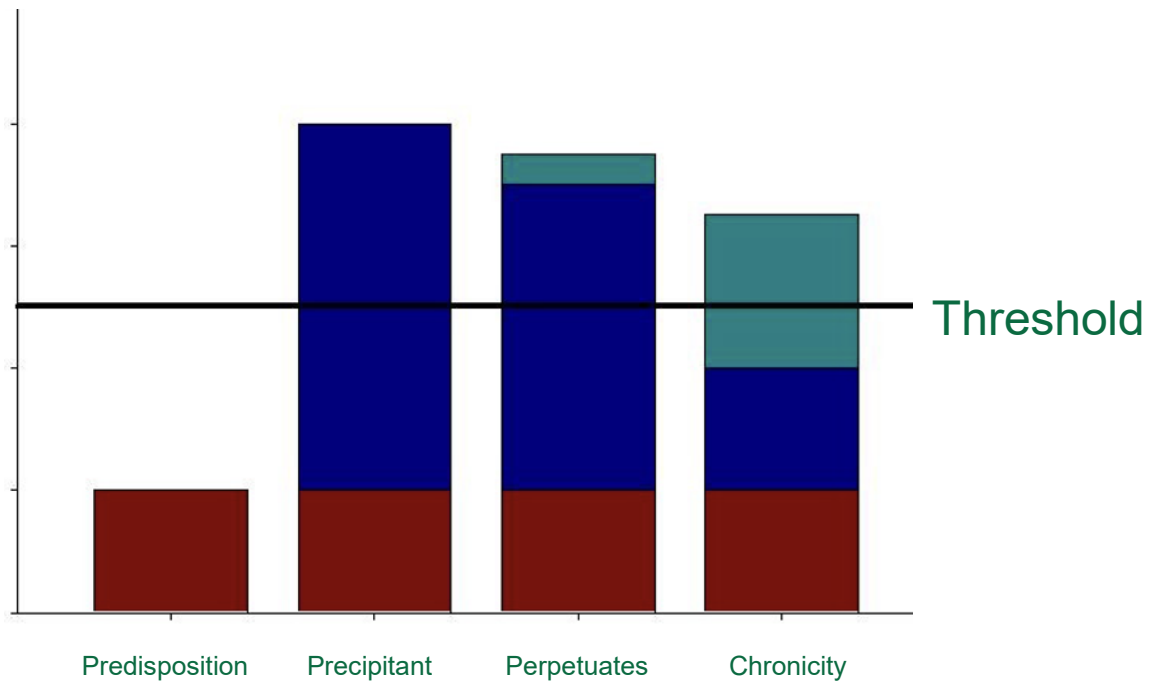
12-month prevalence of selected mental disorders



Note: The comparison on the prevalence of social phobia was based on data from 2002 and 2022.



Stress Diathesis Model





Comorbidity

- Mental Health disorders are extremely common in PCC
- Large US study of 25,122 participants
- Those experiencing PCC were approximately twice as likely to report depression and anxiety symptoms than other US adults



Original Investigation | Psychiatry

Psychiatric Symptoms, Treatment Uptake, and Barriers to Mental Health Care Among US Adults With Post-COVID-19 Condition

Hiten Naik, MD; Karen C. Tran, MD, MHSc; John A. Staples, MD, MPH; Roy H. Perlis, MD, MSc; Adeera Levin, MD



Common Neuropsychiatric Manifestations

- Sleep disturbance, 21.4%–34.4%
- fatigue, 17.5%–32.9%
- objective cognitive impairment 10.3%–35.7%
- anxiety, 13.3%–26.8%
- PTSD, 9.9%–24.1%
- subjective cognitive impairment, 8.9%–25.0%
- depression, 7.5%–21.5%
- dysosmia, 8.2%–15.6%
- dysgeusia, 4.7%–11.4%
- headache, 3.6%–12.0%
- sensorimotor disturbances, 2.4%–12.3%
- Dizziness, 1.6%–5.1%

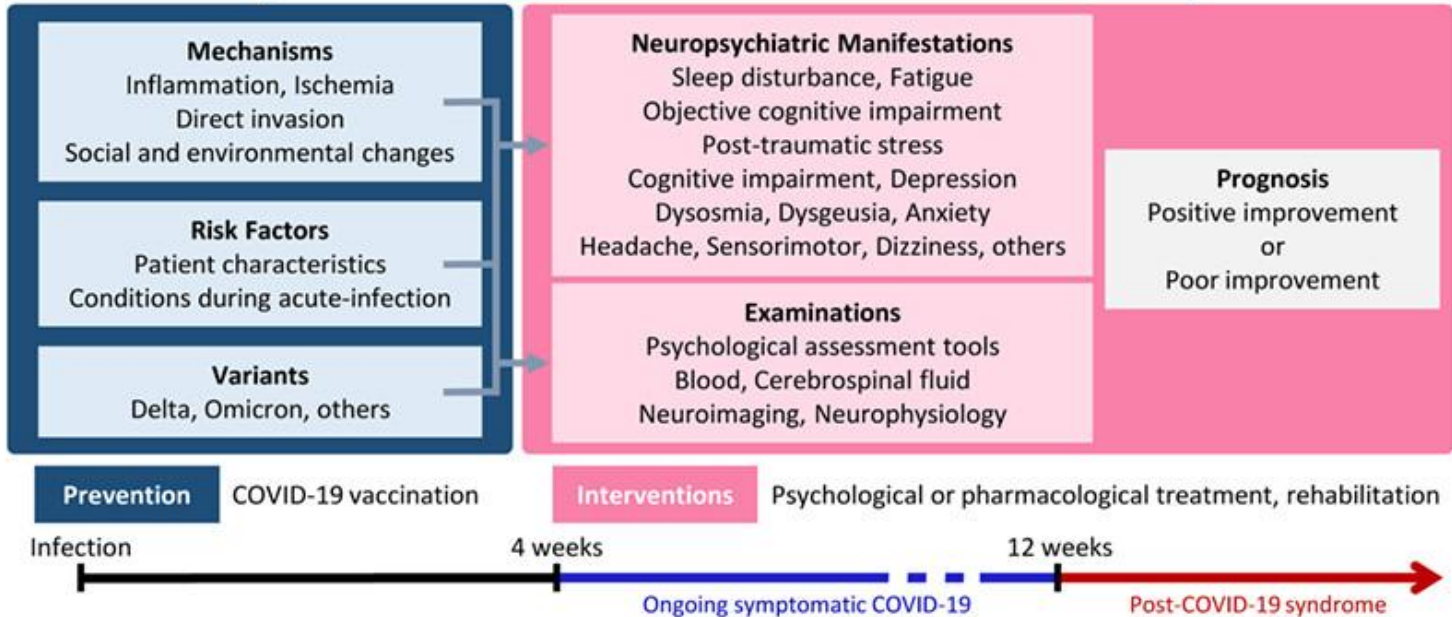


Risk Factors

- From a US cross-sectional study of 25,122 participants, risk factors for developing neuropsychiatric manifestations of COVID-19
 - severity of foregoing COVID-19
 - the female sex
 - the presence of comorbidities
 - a history of mental health disease
 - elevation in the levels of inflammatory markers
- pathophysiological mechanisms only partially elucidated
- Note the possible role of the indirect effects (ex. social isolation, worries about financial and health recovery, etc.)



Neuropsychiatric Aspects of Long COVID: A Comprehensive Review





The CAN-PCC Collaborate acknowledges that people with lived experience of PCC often experience challenges with acknowledgement of their condition, and that worries of medical “gaslighting” exist. Care must be taken to avoid confusing symptoms of PCC with those of mental health conditions.

The aim with these recommendations is to identify mental health disorders that occur concurrently to PCC in order to decrease symptoms and increase quality of life.

Implications of strong and conditional recommendations

	Strong	Conditional
For patients	People will want to follow it, and a small proportion would not.	Most people will want to follow it, but many would not. Most people will want to discuss with a health professional first.
For health care professionals	Health care professionals will want to prescribe it. Adherence could be used as a quality criterion or performance indicator. Decision aids are not likely to be needed.	Most health care providers will want to prescribe it, recognizing that different choices will be appropriate for different patients. Decision aids may be useful to help people make a decision consistent with their values and preferences.
For policymakers	Policymakers will want to adopt it in most situations as performance indicator.	Policy making will require substantial debate and policies are more likely to vary. Performance indicators would measure adequate informing and discussion.



Accessing the Guidelines



Canadian Guidelines for Post COVID-19 Condition

Enter a keyword to search for recommendations



Learn about all 100+ recommendations for post COVID-19 condition (PCC) (also known as long COVID)

How do you want to view the recommendations?



List View



Plain Language View



Map View



Enter a keyword to search for recommendations



[Glossary](#) [Read first about Good Practice Statements](#)



Plain Language Recommendation

[See more](#)

We suggest that caregivers, workers, and visitors in long-term care homes wear face masks. This can help prevent COVID-19 and lower the risk of long COVID (also known as post COVID-19 condition).

Certainty of evidence

⊕○○○ Very low

Recommendation strength

✔ conditional

Publication date: 2024/06/02



Plain Language Recommendation

[See more](#)

We suggest that **healthcare professionals, patients, support people, and visitors wear face masks** in out-of-hospital clinics. This can help prevent COVID-19 infection and lower the risk of long COVID (also known as post COVID-19 condition).

Certainty of evidence

⊕○○○ Very low

Recommendation strength

✔ conditional

Publication date: 2024/06/02



Plain Language Recommendation

[See more](#)

We suggest that adults in the community who don't have COVID-19 symptoms wear face masks. This can help prevent COVID-19 infection and lower the risk of long COVID.

Certainty of evidence

⊕⊕○○ Low

Recommendation strength

✔ conditional

Publication date: 2024/04/30



Plain Language Recommendation

[See more](#)

We suggest a short course* of metformin in adults who have or may have COVID-19 infection to prevent long COVID (also known as post

Recommendation topic

Any ▲

Any

Clinical interventions for PCC (23)

Health care services and systems, social support (14)

[Neurological and psychiatric topics \(13\)](#)

Pediatric and adolescent topics (19)

Prevention of PCC (24)

Testing, identification and diagnosis related to PCC (19)



Neurological and Psychiatric Recommendations (13)

All		Prevention of PCC	Testing, identification and diagnosis related to PCC	Clinical interventions for PCC	Neurological and psychiatric topics	Pediatric and adolescent topics	Health care services and systems, social support
Interventions		Anxiety screening	Central nervous system stimulants	Cognitive behavioural therapy (CBT) and pacing/energy conservation	Cognitive impairment screening	Cognitive rehabilitation	Communication interventions
Populations							
People diagnosed with post COVID-19 condition	13	1	1	1	1	1	1
People with suspected post COVID-19 condition	13	1	1	1	1	1	1
People with cognitive impairment	3					1	
People with post-exertional malaise (PEM)/post-exe...	2			1			
Olfactory disorder	1						
People with brain fog	1		1				
People with fatigue	1						
People with sleep disturbances	1						



Guidelines Related to Screening



Screening for Depression



Recommendation

The CAN-PCC Collaborative recommends the use of **screening** for **depression** over no **screening** for adults with post COVID-19 condition (strong recommendation, moderate certainty in the evidence). **Remarks:** **Screening** is intended to ensure that in addition to managing post COVID-19 condition symptoms, **depression** can also be detected and treated. [See more](#)

Certainty of evidence

⊕⊕⊕○ Moderate

Recommendation strength

✔ strong

Publication date: 2024/07/01



Screening Tools

The CAN-PCC Collaborative recommends against using standardized screening tools and rather recommends using structured interviews to gather more fulsome information about the patient's symptoms, particularly as these may overlap with other PCC symptoms.

Validated screening tools for depression do exist and are as follow:

- **Patient Health Questionnaire (PHQ-9)**
 - **PHQ-2**
 - **Hamilton Depression Rating Scale (HAM-D)**
 - **Beck Depression Inventory (BDI/BDI II)**
 - **Mood Disorder Questionnaire (MDQ)**: A free online screening tool that can help rule out bipolar disorder.
-



The Patient Health Questionnaire (PHQ-9)

Patient Name _____ Date of Visit _____

Over the past 2 weeks, how often have you been bothered by any of the following problems?

	Not At all	Several Days	More Than Half the Days	Nearly Every Day
1. Little interest or pleasure in doing things	0	1	2	3
2. Feeling down, depressed or hopeless	0	1	2	3
3. Trouble falling asleep, staying asleep, or sleeping too much	0	1	2	3
4. Feeling tired or having little energy	0	1	2	3
5. Poor appetite or overeating	0	1	2	3
6. Feeling bad about yourself - or that you're a failure or have let yourself or your family down	0	1	2	3
7. Trouble concentrating on things, such as reading the newspaper or watching television	0	1	2	3
8. Moving or speaking so slowly that other people could have noticed. Or, the opposite - being so fidgety or restless that you have been moving around a lot more than usual	0	1	2	3
9. Thoughts that you would be better off dead or of hurting yourself in some way	0	1	2	3

Column Totals _____ + _____ + _____

Add Totals Together _____



PHQ-9 Score	Provisional Diagnosis	Treatment Recommendation <i>Patient Preferences should be considered</i>
5-9	Minimal Symptoms*	Support, educate to call if worse, return in one month
10-14	Minor depression ++ Dysthymia* Major Depression, mild	Support, watchful waiting Antidepressant or psychotherapy Antidepressant or psychotherapy
15-19	Major depression, moderately severe	Antidepressant or psychotherapy
>20	Major Depression, severe	Antidepressant and psychotherapy (especially if not improved on monotherapy)

* *If symptoms present \geq two years, then probable chronic depression which warrants antidepressants or psychotherapy (ask "In the past 2 years have you felt depressed or sad most days, even if you felt okay sometimes?")*

++ *If symptoms present \geq one month or severe functional impairment, consider active treatment*

Score > 10 Sensitivity 88% & Specificity 88% for depression



Screening for Anxiety

Recommendation

[See more](#)

The CAN-PCC Collaborative suggests the use of screening for anxiety over no screening for adults with post COVID-19 condition (conditional recommendation, very low certainty in the evidence). **Remarks:** Screening is intended to ensure that in addition to managing post COVID-19 condition symptoms, anxiety can also be detected and treated.

Certainty of evidence

 Very low

Recommendation strength

 conditional

Publication date: 2025/01/14



Screening Tools

Validated screening tools for anxiety:

- Generalized Anxiety Disorder (GAD-7):
 - Hospital Anxiety and Depression Scale (HADS):
 - Hamilton Anxiety Rating Scale (HAM-A)
 - Beck Anxiety Inventory (BAI)
-



Generalized Anxiety Disorder 7-item (GAD-7) scale

Over the last 2 weeks, how often have you been bothered by the following problems?	Not at all sure	Several days	Over half the days	Nearly every day
1. Feeling nervous, anxious, or on edge	0	1	2	3
2. Not being able to stop or control worrying	0	1	2	3
3. Worrying too much about different things	0	1	2	3
4. Trouble relaxing	0	1	2	3
5. Being so restless that it's hard to sit still	0	1	2	3
6. Becoming easily annoyed or irritable	0	1	2	3
7. Feeling afraid as if something awful might happen	0	1	2	3
<i>Add the score for each column</i>	+	+	+	
Total Score (<i>add your column scores</i>) =				

If you checked off any problems, how difficult have these made it for you to do your work, take care of things at home, or get along with other people?

Not difficult at all _____

Somewhat difficult _____

Very difficult _____

Extremely difficult _____

Source: Spitzer RL, Kroenke K, Williams JBW, Lowe B. A brief measure for assessing generalized anxiety disorder. *Arch Intern Med.* 2006;166:1092-1097.



GAD-7

Interpretation

Total Score	Interpretation
≥10	Probable diagnosis of GAD; confirm by further evaluation
5	Mild anxiety
10	Moderate anxiety
15	Severe anxiety

Sensitivity 89% & Specificity 82%



Cognitive Screening



Recommendation

[See more](#)

The CAN-PCC Collaborative suggests not using cognitive screening tests in adults with suspected or confirmed post COVID-19 condition (conditional recommendation, very low certainty in the evidence). **Remarks:** For those presenting with cognitive symptoms, detailed clinical evaluation is necessary. Available objective cognitive screening tests are not suitable as a tool to screen for the more subtle cognitive deficits often seen in this group.

Certainty of evidence

⊕○○○ Very low

Recommendation strength

⊗ conditional

Publication date: 2025/02/04

Given the lack of effect of objective cognitive screening tools even in the populations for which they were originally developed, the Guideline Team considered it highly unlikely that the available objective cognitive screening tools designed to detect moderate to severe gross cognitive impairments (e.g., dementia) would accurately identify the cognitive difficulties experienced by many post COVID-19 condition patients, as these often more subtle cognitive deficits are more challenging to detect. Furthermore, due to the relatively high likelihood of false negatives, the Guideline Team concluded that universal screening could result in net harm, potentially delaying or preventing appropriate diagnosis, treatment, and access to support services, including financial coverage.



Guidelines Related to Treatment



Use of Selective Serotonin Reuptake Inhibitors

Recommendation

[See more](#)

The CAN-PCC Collaborative suggests not using selective serotonin reuptake inhibitors (SSRIs) in adults with suspected or confirmed post COVID-19 condition and brain fog (conditional recommendation; very low certainty in the evidence). **Remarks:** This recommendation does not apply to adults currently taking SSRIs for pre-existing conditions and/or co-morbid mood disorders. This recommendation is based on indirect evidence and will be re-evaluated if studies become available in a post COVID-19 condition population.

Certainty of evidence

 Very low

Recommendation strength

 conditional

Publication date: 2025/03/30



Considerations

Justification and other considerations

Subgroup considerations	This recommendation does not apply to adults currently taking SSRIs for pre-existing conditions and/or co-morbid mood disorders. People should speak to their prescribing healthcare professional if they have questions about their current use of SSRIs.
Implementation considerations	None
Monitoring and evaluation	None
Research priorities	Currently, no studies have directly assessed the effects of SSRIs in adults with post COVID-19 condition. This absence of evidence highlights a critical gap in knowledge, emphasizing the need for rigorously designed studies to evaluate the efficacy and safety of SSRIs in this specific population. High-quality research is essential to provide precise guidance for clinical practice and to inform evidence-based decision-making for managing post COVID-19 condition.
Justification	The net effect of SSRIs in adults with post COVID-19 condition remains uncertain, as no studies have been conducted in this specific population. However, indirect evidence from the use of SSRIs in other conditions, such as mood disorders, indicates a potential for harm, emphasizing the need for caution in their use until more evidence is available.



Evidence for SSRIs generally

Table 3.5. Summary of Comparative Favourability Ratings for First-Line Antidepressants: Efficacy, Acceptability, Drug Interactions, Discontinuation Effects, and Tolerability Issues.

Antidepressant	Efficacy and drug-specific issues ¹					Tolerability issues			
	Efficacy	Acceptability ²	Drug interactions	Discontinuation		Sedation	Weight gain	Sexual dysfunction	Other Tolerability ³
SSRIs									
Citalopram			QTc ²						
Escitalopram									
Fluoxetine									
Fluvoxamine									
Paroxetine									
Sertraline									
SNRIs									
Desvenlafaxine									
Duloxetine									
Levomilnacipran									
Venlafaxine-XR									
Others									
Bupropion									
Mirtazapine									
Vilazodone									
Vortioxetine									
Not available in Canada									
Agomelatine			LFTs ⁴						
Mianserin									
Milnacipran									

	More favourable
	Less favourable
	Neutral ⁵

(CANMAT) 2023



Treatment with Melatonin in addition to Sleep Hygiene

Recommendation

[See more](#)

In individuals with post COVID-19 condition and sleep disturbances, the CAN-PCC Collaborative suggests using **melatonin** in addition to sleep hygiene advice (conditional recommendation, very low certainty in the evidence). **Remarks:** It is important for people to be aware that commercially available **melatonin** supplements may not contain the amount of **melatonin** indicated on their labels and may also contain additional substances such as serotonin.

Certainty of evidence

 Very low

Recommendation strength

 conditional

Publication date: 2025/01/14



Melatonin Dosing

3-5mg 3-4 hours before sleep for initial insomnia with similar dosing and controlled release formulation for maintenance insomnia

- Meta-analysis Ferracioli-Oda et al. (2013)
 - 0.1–5 mg . melatonin for 7–182 days reduced subjective and objective sleep onset latencies, and increased subjective but not objective total sleep time

Prolonged release melatonin taken at hs may mimic physiological pattern of melatonin excretion at night for adults > 55 years

*Note: In Canada, commercially available melatonin products may vary with regards to the accuracy of the dosage indicated on the label and may contain other substances such as serotonin.



Use of CNS Stimulants

Recommendation

[See more](#)

The CAN-PCC Collaborative suggests not using central nervous system (CNS) stimulants for adults with suspected or confirmed post COVID-19 condition and brain fog with or without post-exertional malaise (conditional recommendation; very low certainty in the evidence). **Remarks:** This recommendation is based on indirect evidence and will be re-evaluated if studies become available in a post COVID-19 condition population.

Certainty of evidence

 Very low

Recommendation strength

 conditional

Publication date: 2024/09/30



Implementation considerations

In line with a conditional recommendation, decisions about the use of CNS stimulants for brain fog in people with post COVID-19 condition should be individualized, based on a thoughtful discussion between the patients and clinicians: the clinicians should explain the balance between benefits and harms, the uncertainty and very low quality evidence on the desirable and undesirable effects, in addition to the feasibility, equity and cost-effectiveness concerns, but should also take into account the individual patient's values about the benefits and the harms, as these values may differ from the average values reported in the literature.

Monitoring and evaluation

Documentation of the discussion on risks and benefits between provider and patient that considers:

- Individual patient's values
- Feasibility
- Cost
- Equity considerations



Evidence for Cognitive Rehabilitation

Plain Language Recommendation

[See more](#)

We suggest using cognitive rehabilitation* in adults who have or may have long COVID (also known as post COVID-19 condition) and cognitive impairment (brain fog)**.

Certainty of evidence

 Very low

Recommendation strength

 conditional

Publication date: 2024/10/31

*Cognitive rehabilitation is a set of treatments that:

Re-trains the brain by practicing previously learned thinking, memory and decision-making skills to improve them.

Teaches how to work around any challenges with thinking and processing.

**Cognitive impairment is “problems with a person’s ability to think, learn, remember, use judgement, and make decisions” ([NIH, 2024](#)). It is commonly referred to as ‘brain fog’ amongst people with long COVID symptoms.



Welcome to our guest with lived experience



Questions





Thank you for attending!



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or by clicking on the link in the chat box.**



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