#### **Practice** | Five things to know about ...

# Treating common and potentially modifiable symptoms of post-COVID-19 condition (long COVID) in adults

Kieran L. Quinn MD PhD, Angela M. Cheung MD PhD, Fahad Razak MD MSc

■ Cite as: CMAJ 2023 January 17;195:E80-1. doi: 10.1503/cmaj.220824

See related articles at www.cmaj.ca/lookup/doi/10.1503/cmaj.220818 and www.cmaj.ca/lookup/doi/10.1503/cmaj.220823

# 1 Fatigue and postexertional malaise associated with long COVID should be treated with titrated structured activity and energy conservation strategies<sup>1</sup>

To avoid precipitating postexertional malaise, patients should be advised to begin a structured and symptom-guided return to activity program, tailored to their severity of fatigue. The 4 Ps (pacing; prioritizing which activities need to get done on specific days and which activities can be postponed; positioning to modify activities to make them easier to perform [e.g., while sitting]; and planning) is a helpful framework to educate people about how to apply physical, emotional and cognitive energy conservation strategies.<sup>1</sup>

# 2 Guideline-directed use of psychosocial interventions and medications can be used to treat mental health complications of long COVID

Anxiety, depression and posttraumatic stress disorder are among the most common mental health manifestations of long COVID and may be treated according to relevant guidelines in people with these conditions, which are similar to recommendations among people with myalgic encephalomyelitis (ME).<sup>2</sup> The use of cognitive behavioural therapy for the treatment of fatigue is controversial and not currently endorsed by the ME Association.<sup>2</sup>

### Breathing exercises, body positioning and pulmonary rehabilitation may improve dyspnea<sup>2</sup>

In people with mild dyspnea, pursed lip or deep breathing exercises may improve symptoms. Persistent hypoxemia is not a common manifestation of long COVID and may be caused by severe lung disease or organizing pneumonia. Its presence should prompt referral to a respirologist and consideration of pulmonary rehabilitation.<sup>2,3</sup>

## People with sleep disturbances should receive counselling on sleep hygiene, relaxation techniques and stimulus control<sup>2</sup>

Sleep disturbances may be a result of their SARS-CoV-2 infection or the negative effects of the pandemic.<sup>2</sup> They can be managed using cognitive behavioural therapy or 1 of the following medications currently available in Canada: eszopiclone, zolpidem or doxepin.<sup>4</sup>

# 5 Specific guidelines exist for the treatment of palpitations and tachycardia with particular causes

Current recommendations for the treatment of inappropriate sinus tachycardia and postural orthostatic tachycardia syndrome include behavioural modifications, oral fluids, salt, compression stockings,  $\beta$ -blockers, ivabradine and midodrine.<sup>5</sup>

#### References

- Herrera JE, Niehaus WN, Whiteson J, et al. Multidisciplinary collaborative consensus guidance statement on the assessment and treatment of fatigue in postacute sequelae of SARS-CoV-2 infection (PASC) patients. PM R. 2021;13:1027-43.
- Crook H, Raza S, Nowell J, et al. Long COVID mechanisms, risk factors, and management. BMJ 2021;374:n1648.
- Bouteleux B, Henrot P, Ernst R, et al. Respiratory rehabilitation for COVID-19 related persistent dyspnoea: a one-year experience. Respir Med 202;189:106648.
- Sateia MJ, Buysse DJ, Krystal AD, et al. Clinical practice guideline for the pharmacologic treatment of chronic insomnia in adults: an American Academy of Sleep Medicine clinical practice guideline. J Clin Sleep Med 2017;13:307-49.
- Raj SR, Guzman JC, Harvey P, et al. Canadian Cardiovascular Society Position Statement on postural orthostatic tachycardia syndrome (POTS) and related disorders of chronic orthostatic intolerance. Can J Cardiol 2020;36:357-72.

Competing interests: Kieran Quinn is a former assistant scientific director of the Ontario COVID-19 Science Advisory Table from Aug. 8, 2022, to Sept. 30, 2022. He is the current assistant scientific director of the Ontario Public Health Emergencies Science Advisory Committee and has received Canadian Institutes of Health Research (CIHR) grants (awarded to his institution) to study the long-term effects of COVID-19. He has served as an advisor for the chief science advisor of the Canada Task Force on Post-COVID-19 Condition. Fahad Razak holds a salary award as the Graham Farguharson knowledge translation fellow from the PSI Foundation and is an employee of Ontario Health. He was also an employee of Public Health Ontario during the writing of this manuscript. Fahad Razak has received grants (outside the current article) to study COVID-19 from the CIHR, Canadian Frailty Network, University of Toronto (including the Department of Medicine, St. Michael's Hospital and the Sunnybrook Health Sciences Centre), Digital Research Alliance of Canada (Data Champions Pilot Project) and Royal College of Physicians and Surgeons of Canada. Angela Cheung has received CIHR grants (awarded to her institution) for CANCOV (platform observational study of COVID-19 in Canada) and RECLAIM (adaptive platform randomized controlled trials for long COVID interventions). MediciNova is providing a study drug and placebo for the RECLAIM trial, a multicentre study across Canada. Angela Cheung has served as an advisor for the Ontario COVID-19 Science Advisory Table, Public Health Agency of Canada, Canadian Agency for Drugs and Technologies in Health, COVID-19 Immunity Task Force and chief science advisor of the Canada Task Force on Post- ${\hbox{\footnotesize COVID-19 Condition. No other competing interests were declared.}}\\$ 

This article has been peer reviewed.

Affiliations: Department of Medicine and Institute of Health Policy, Management, and Evaluation (Quinn, Razak, Cheung), University of Toronto; ICES Central (Quinn); Department of Medicine (Quinn, Cheung), Sinai Health System and University Health Network; Temmy Latner Centre for Palliative Care (Quinn); Department of Medicine (Razak), Li Ka Shing Knowledge Institute, Unity Health Toronto; Department of Medicine (Razak), St. Michael's Hospital, Unity Health Toronto; Toronto General Hospital Research Institute and Schroeder Arthritic Institute (Cheung), University Health Network, Toronto, Ont.

**Content licence:** This is an Open Access article distributed in accordance with the terms of the Creative Commons Attribution (CC BY-NC-ND 4.0) licence, which permits use, distribution and reproduction in any medium, provided that the original publication is properly cited, the use is noncommercial (i.e., research or educational use), and no modifications or adaptations are made. See: https://creativecommons.org/licenses/by-nc-nd/4.0/

Correspondence to: Kieran Quinn, kieran.quinn@sinaihealth.ca

CMAJ invites submissions to "Five things to know about ..." Submit manuscripts online at http://mc.manuscriptcentral.com/cmaj