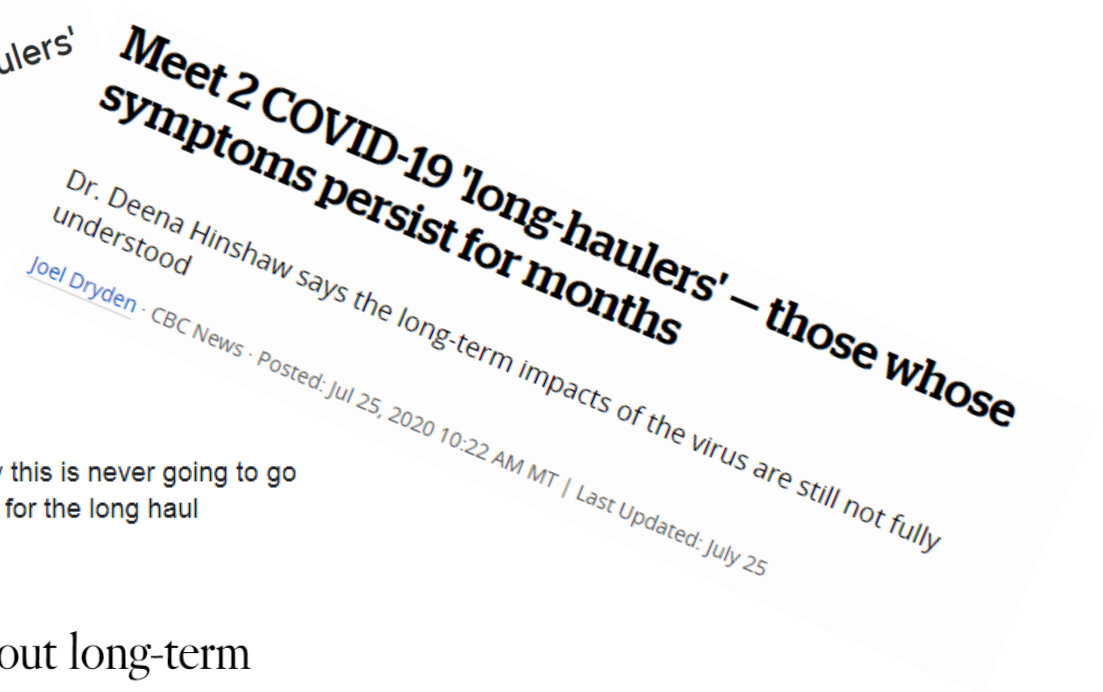
SAC update and consultation on persistent COVID-19 symptomatology post infection

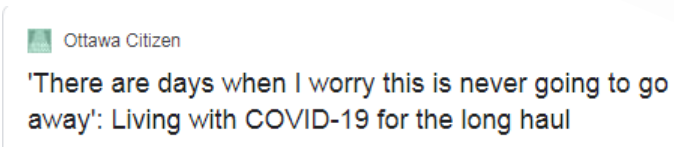
July 30, 2020

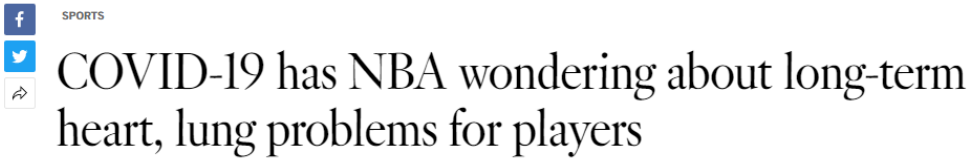

Science Weekly
Coronavirus outbreak
Covid-19: Why are people suffering long-term symptoms?
Weeks and months after having a confirmed or suspected Covid-19 infection, many people are finding they still haven't fully recovered. Emerging reports describe lingering symptoms ranging from fatigue and brain-fog to breathlessness and tingling toes. So why does Covid-19 cause lasting health problems? Ian Sample discusses some of the possible explanations with Prof Danny Altmann, and finds out how patients might be helped in the future


Vox
TWITTER
FACEBOOK
What happens if Covid-19 symptoms don't go away? Doctors are trying to figure it out.
People with long-term Covid-19 complications are meanwhile struggling to get care.
By Lois Parshley | Jul 14, 2020, 2:50pm EDT


HEALTH | News
'Great medical mystery' as COVID-19 'long-haulers' complain of months-long symptoms
Jackie Dunham CTVNews.ca Writer
@JaclynLDunham | Contact
Published Friday, June 12, 2020 12:26PM EDT
Last Updated Friday, June 19, 2020 12:03PM EDT


Meet 2 COVID-19 'long-haulers' — those whose symptoms persist for months
Dr. Deena Hinshaw says the long-term impacts of the virus are still not fully understood
Joel Dryden · CBC News · Posted: Jul 25, 2020 10:22 AM MT | Last Updated: July 25


Ottawa Citizen
'There are days when I worry this is never going to go away': Living with COVID-19 for the long haul


SPORTS
COVID-19 has NBA wondering about long-term heart, lung problems for players

The problem

- Anecdotal experience of prolonged or lasting effects of COVID-19 is increasingly being shared by patients (including health care professionals) on social and traditional media, and through patients' groups.
- As the number of convalescents increases, the health care and public health professionals are likely to witness a rise in individuals presenting with lingering physical and psychological/emotional symptoms (e.g. anxiety, depression, adjustment disorder, PTSD) following COVID-19.
- In particular, patients who have required mechanical ventilation in intensive care are likely to require significant rehabilitation to manage the physical and mental health consequences of treatment.
- The social and economic impacts (e.g. social isolation and unemployment) may additionally contribute to adverse health consequences.

The evidence

- Research (aside from anecdotal evidence) remains limited
- A report on the long term effects of 143 COVID-19 patients in Italy*:
  - 87% continued experiencing at least one symptom 60 days after onset
  - 13% were completely free of any symptoms, 32% had one or two symptoms, and 55% had three or more.
  - Most commonly reported symptoms included fatigue (53%), dyspnoea (43%), joint pain (27%), and chest pain (22%)
  - 44% reported a worsened quality of life
- A report on 274 outpatients in the US** interviewed 14–21 days after testing:
  - the median interval to symptom resolution ranged from 4 to 8 days
  - 35% did not report returning to their usual state of health
  - among individuals who reported returning to their usual state of health, 34% still had one or more COVID-related symptoms
  - symptoms least likely to have resolved included cough (43%) and fatigue (35%)
- The UK Covid-19 Symptom Study app data** (symptom information from nearly four million users) identified that approximately 10% of COVID-19 patients remain symptomatic for three weeks or more

* Carfì A et al. Persistent symptoms in patients after acute covid-19. JAMA2020;9. doi:10.1001/jama.2020.12603. pmid:3264412

** Tenforde MW et al. Symptom Duration and Risk Factors for Delayed Return to Usual Health Among Outpatients with COVID-19 in a Multistate Health Care Systems Network — United States, March–June 2020. MMWR Morb Mortal Wkly Rep

*** https://covid.joinzoe.com/post/covid-long-term

The evidence – cardiovascular/chronic disease implications

- Lindner et al. Association of cardiac infection with SARS-CoV-2 in confirmed COVID-19 autopsy cases. JAMA:
  - 39 autopsy cases of COVID-19 patients with pneumonia listed as the primary cause of death
  - evidence of viral presence in the myocardium in two thirds of patients despite not meeting the histopathological criteria of acute myocarditis
  - suggestive that COVID-19 may lead to myocardial injury via direct viral infection of the heart
- Puntmann et al. Outcomes of cardiovascular magnetic resonance in patients recently recovered from COVID-19. JAMA:
  - In 100 patients (67% of whom recovered at home) evaluated a mean of 71 days post diagnosis:
    - 78% had demonstrable cardiac involvement via cardiac MRI
    - 76% had detectable high-sensitivity troponin
    - 60% had evidence of active myocardial inflammation by abnormal native T1 and T2
  - Compared with controls:
    - left ventricular ejection fraction was lower
    - 32% manifestied late gadolinium enhancement
    - 22% with pericardial involvement
- Adds to previous postmortem case reports describing direct (myocarditis/myocardial injury) and indirect (via immunologically or virally enhanced prothrombotic states and microvascular clot formation) effects of infection on the cardiovascular system.

The SARS and MERS experience

- Psychological assessments of SARS and MERS survivors found persisting morbidity (including chronic fatigue, depression and PTSD symptoms) to be frequently present beyond 6 months post infection (Moldofsky P et al., 2011; Tansey CM et al., 2007; Lee AM et al., 2007; Wing YK et al., 2012; Lee SH et al., 2019; Gardner J et al., 2015)

- A recently conducted SR (preprint) also identified long term respiratory dysfunction, reduced exercise capacity and reduced quality of life in s in CoV survivors after hospitalization/ICU admission (Ahmed et al., 2020)

The Lyme experience

- The AMMI Canada Position Statement on the Diagnosis and Treatment of People with Persistent Symptoms That Have Been Attributed to Lyme Disease:
  - Symptoms such as body pain, fatigue and difficulty concentrating are non-specific and are commonly found in the general population, after other infectious diseases (Hickie et al., 2006), and with other diagnoses. (Sharpe and Wilks, 2002; Ricci et al., 2007; Patrick et al., 2015; Dahlhamer et al., 2018).
  - Using data from the 2014 Canadian Community Health Survey and the 2012 Canadian Community Health Survey-Mental Health it is estimated that 1.3 million adults in Canada aged 25 or older live with medically unexplained physical symptoms (Park and Gilmour 2017).

Ongoing research

- The Post-hospitalisation COVID-19 study (PHOSP-COVID) will aim to recruit 10,000 patients across the UK, who will be followed for more than a year.

- The NIAID Longitudinal Study of COVID-19 Sequelae and Immunity is recruiting adults who have recovered from documented COVID-19

- No similar studies have been registered in Canada