

Accredited by UBC CPD



CONTINUING PROFESSIONAL DEVELOPMENT
FACULTY OF MEDICINE



BC ECHO for
Post-COVID-19
Recovery

Post-COVID19 perspectives for primary care

Renée Janssen MD FRCPC

General Internal Medicine



DEPARTMENT OF
FAMILY MEDICINE

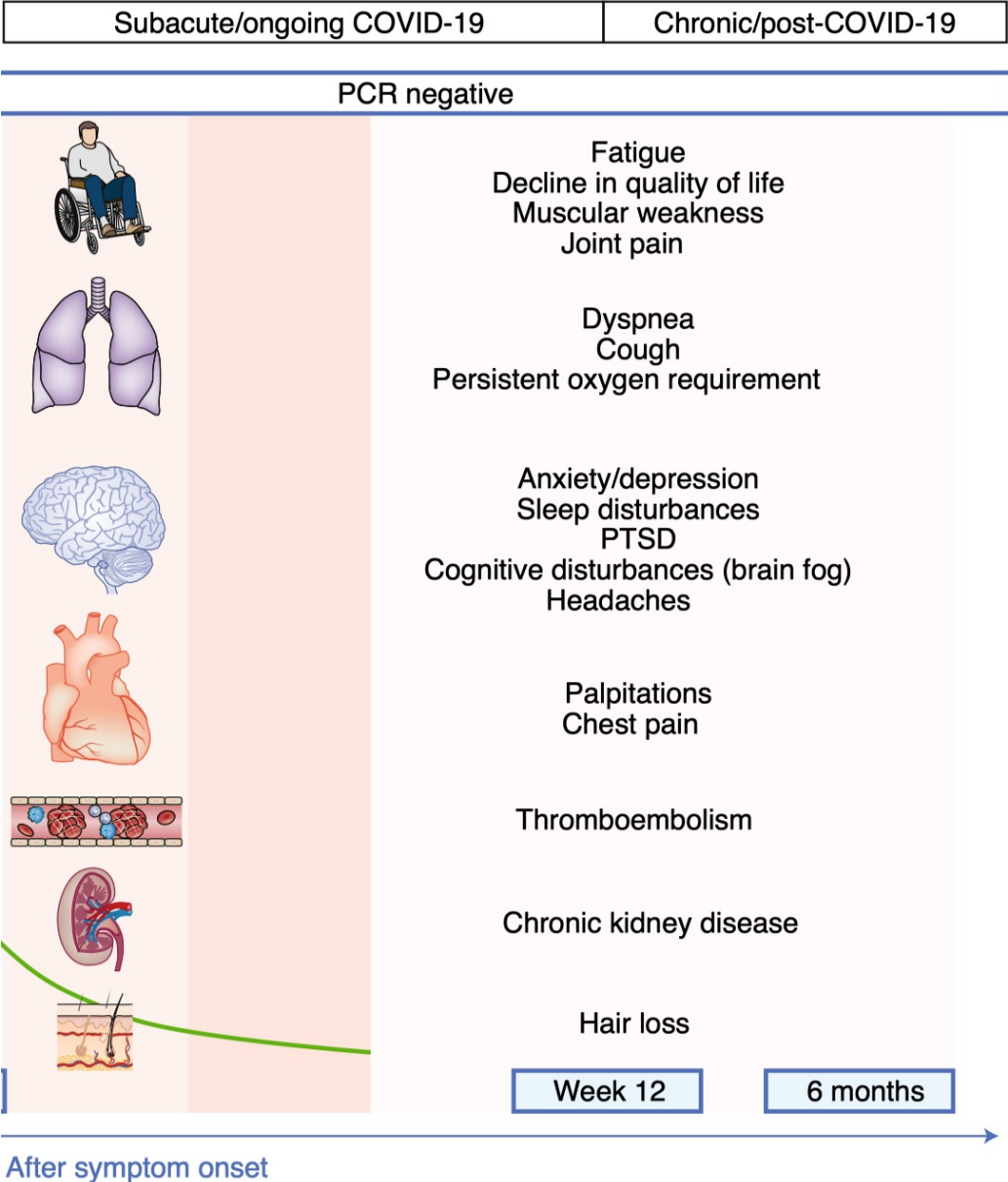
Leaders in primary care, champions
of community health

No disclosures / Conflicts of interest

Objectives

- Overview of the natural history and typical presentation of “long COVID”
- Understanding the basic “post-COVID-19 work-up”
- Identifying who requires further investigation and identifying “red flag symptoms”
- Identifying the population of patients who require referral to subspecialists
- Brief overview of general principles of treatment

POST COVID19



What to call it?

Post acute sequelae of COVID19 (PASC) – research term

Long COVID

Long-haul COVID

Post-acute COVID syndrome

Chronic COVID

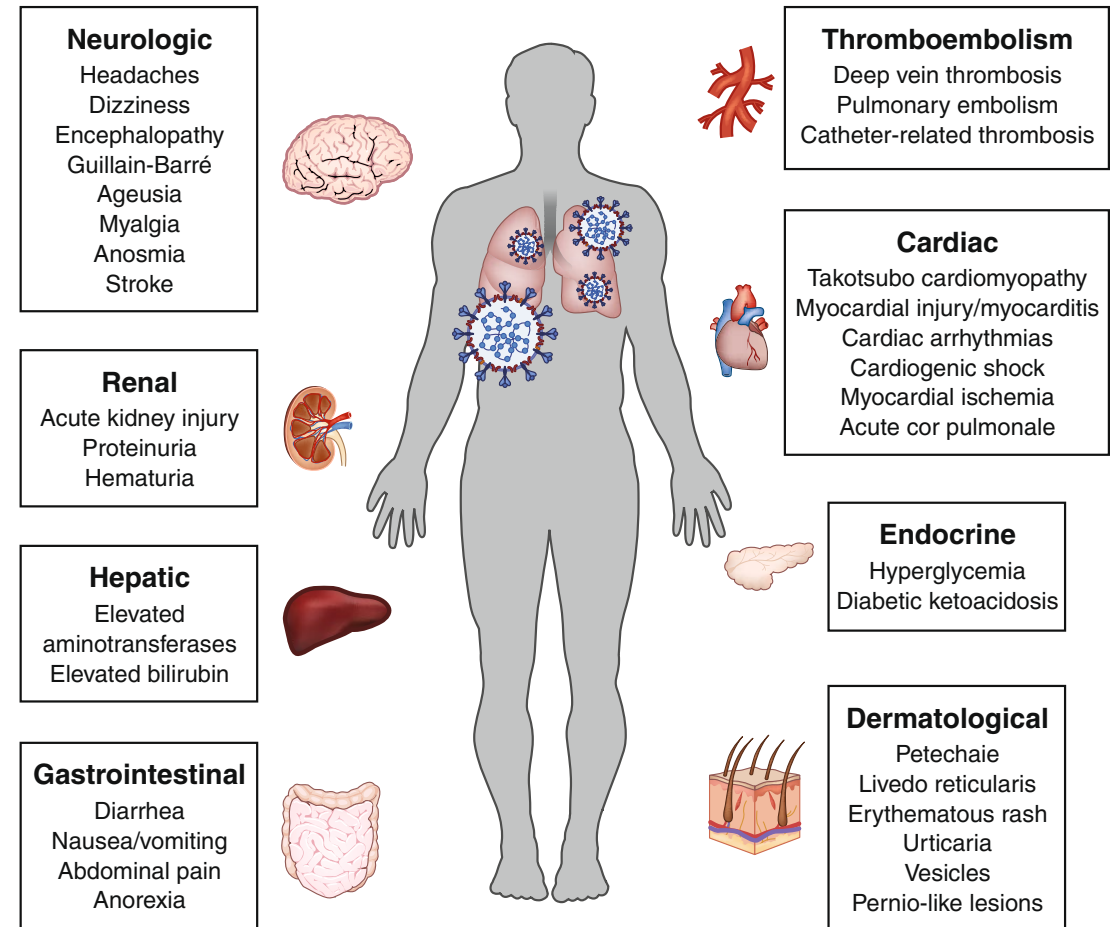
(Myalgic encephalomyelitis/chronic fatigue syndrome?)

What IS long COVID?



Post COVID symptoms are wide ranging

- Respiratory symptoms
- Cardiovascular symptoms
- Generalised symptoms
- Neurological symptoms
- Gastrointestinal symptoms
- Musculoskeletal symptoms
- Ear, nose and throat symptoms
- Dermatological symptoms
- Psychological/psychiatric symptoms



Definitions: long COVID

The term “Post-COVID Conditions” is an umbrella term for the **wide range of physical and mental health consequences** experienced by some patients that are present four or more weeks after SARS-CoV-2 infection, including by patients who had initial mild or asymptomatic acute infection – **CDC 2021**


Post-COVID-19 syndrome: Signs and symptoms that develop during or after an infection consistent with COVID-19, continue for more than 12 weeks and are not explained by an alternative diagnosis. It usually presents with **clusters of symptoms, often overlapping, which can fluctuate** and change over time and can affect any system in the body – **NICE 2021**

Definitions: timeline


NICE guideline, 2021



Acute COVID-19: symptoms of COVID-19, up to four weeks following the onset of illness



Ongoing symptomatic COVID-19: Signs and symptoms of COVID-19 from 4 weeks up to 12 weeks.



Post-COVID-19 syndrome: Signs and symptoms that develop during or after an infection consistent with COVID-19, continue for more than 12 weeks and are not explained by an alternative diagnosis.

Subscribe

Latest Issues

SCIENTIFIC
AMERICAN®

Cart 0

Sign In | Newsletters

CORONAVIRUS

THE SCIENCES

MIND

HEALTH

TECH

SUSTAINABILITY

VIDEO

PODCASTS

OPINION

STORE



Sign up for our free newsletters.

Sign Up

PUBLIC HEALTH | OPINION

A Tsunami of Disability Is Coming as a Result of ‘Long COVID’

We need to plan for a future where millions of survivors are chronically ill

By Claire Pomeroy on July 6, 2021

10% of people infected with SARS-CoV-2 will develop long COVID, with persistent symptoms after 4 weeks

COVID19 – British Columbia numbers

Cases
300,000

Recovered
240,000

Deaths
2,500

30,000

<https://ourworldindata.org/coronavirus-data>

Most common symptoms

- Fatigue
- Brain fog
- Dyspnea
- Cough
- Painful joints or muscles
- Chest pain
- Depression or anxiety
- Headache
- Fever
- Palpitations
- Dizziness on standing
- Post-exertional malaise

A case

- 47F with history of hypothyroidism
- Ultramarathon runner, mother, nurse
- Contracted COVID19 in spring 2020
- Developed mild URTI symptoms in spring 2020, managed at home
- By summer 2020, she worked back up to running every other day



Case continued - hospitalization

- In August, she developed chest pain and dyspnea
- She was admitted for work up
- LAB: Troponin was positive
- ECHO: normal
- Coronary CTA: no significant coronary artery disease
- Cardiac MRI: not totally normal but no evidence of myocarditis
- CT chest: subtle interlobular septae ?clinical significance

Diagnosis: probable myocarditis

Case continued – persistent symptoms

- Fatigue
- Post-exertional malaise
- Dyspnea
- Non-refreshing sleep
- Anxiety
- Brain fog
- Hair loss
- Unable to return to work due to her symptoms

Dx

dyspnea – work up

- Referral to Respiriology
- Full pulmonary function test: normal
- Maximal inspiratory pressures (MIPS) and maximal expiratory pressures (MEPS) were normal
- Cardiopulmonary exercise test: normal aerobic exercise capacity
- Repeat CT chest: unchanged ?improved from first study

NO EXPLANATION FOR SEVERE DYSPNEA ON INVESTIGATIONS

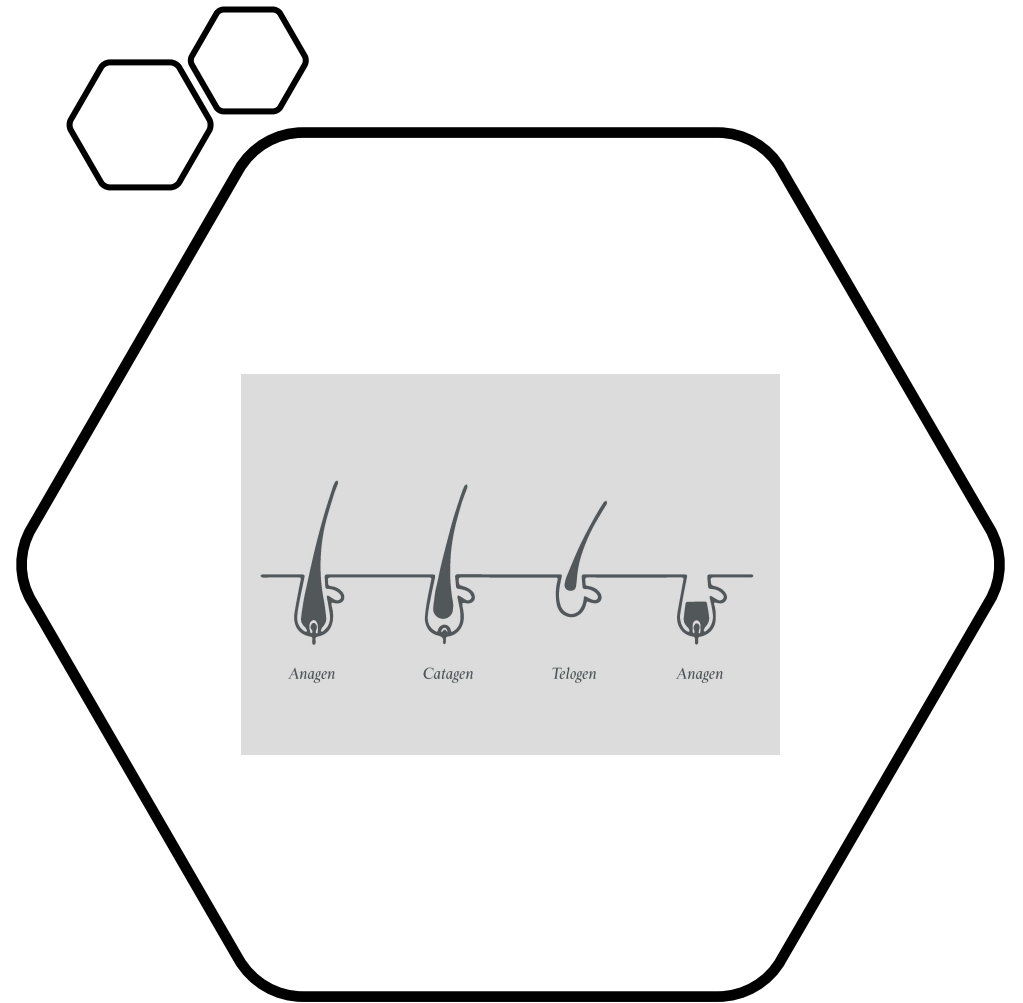


Anxiety

- Referred to our Psychiatry colleagues
- Started on escitalopram with some benefit
- She trialed counselling which she found helpful

Hair loss

- Referred to Dermatology
- Felt most likely to have telogen effluvium
- Counselling that her hair loss should resolve over time
- Recommended minoxidil 5% foam BID to frontal scalp





Current update: 1 year

- Unable to work
- Dyspnea with minimal exertion
- Post-exertional malaise
- Sleep dysfunction
- Anxiety, low mood
- Pathological fatigue
- Brain fog
- She does not perceive any major improvement

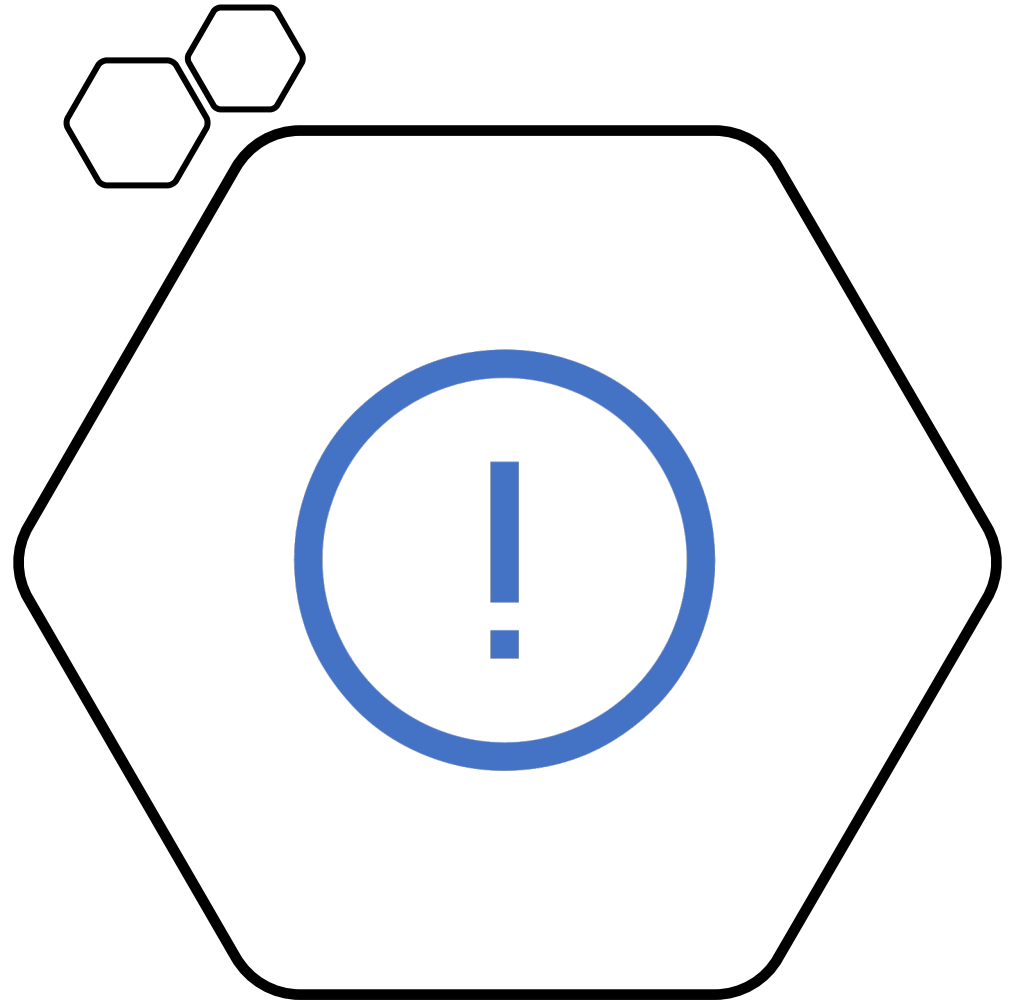
Medically unexplained symptoms

“Everything has come back negative”

“There is nothing wrong with you”

Persistent symptoms and loss of function despite normal labs, imaging, electrophysiology, and other objective measures of organ function

NOT PSYCHOSOMATIC/SOMATIFORM



Who is more likely to experience long COVID?

- Female
 - Asthma
 - Higher BMI
 - Previous hospitalisation for acute COVID-19
 - Poor general health
 - Non-white ethnic groups
-
- BUT... very hard to predict
 - Do not assume more likely to occur in those hospitalized



How to approach long-COVID patients



Complete review
of systems,
screening for
common
symptoms



Target
investigations to
patient symptoms



Exhaustive
investigations are
not required to
rule out objective
end-organ disease



Validate patient
symptoms



Refer to
subspecialty for
red flags or
objective findings
of disease

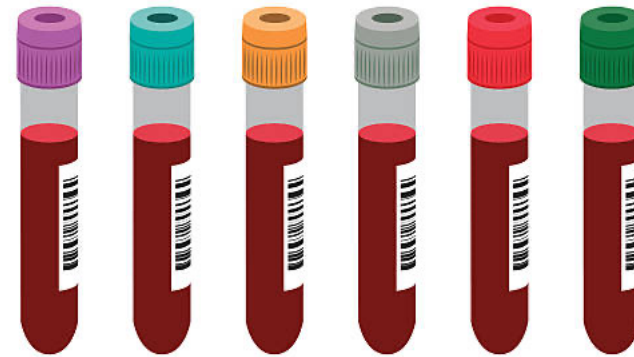
Making the diagnosis

- Screen for typical features
 - Brain fog
 - Post-exertional malaise
 - Profound pathological fatigue
 - Sleep disturbances
 - Dyspnea out of keeping with exertion
- long COVID is not a diagnosis of exclusion
- long COVID does not require an extensive work up



Labs

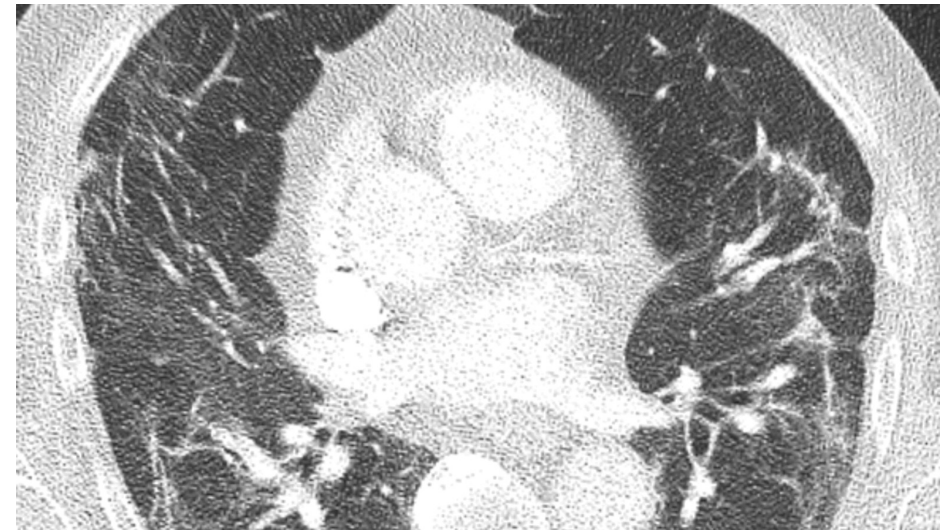
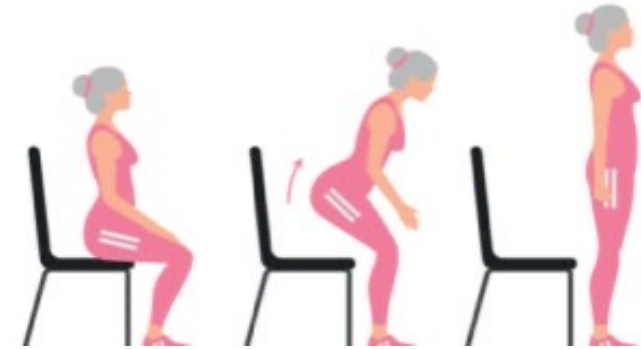
- Decisions about blood tests should be guided by symptoms
- Typical labs:
 - CBC
 - Electrolytes
 - Kidney and liver enzymes, function
 - BNP, troponin
 - Ferritin
 - TSH
- D-dimer is often elevated in patients and is of unclear significance



Investigating respiratory symptoms

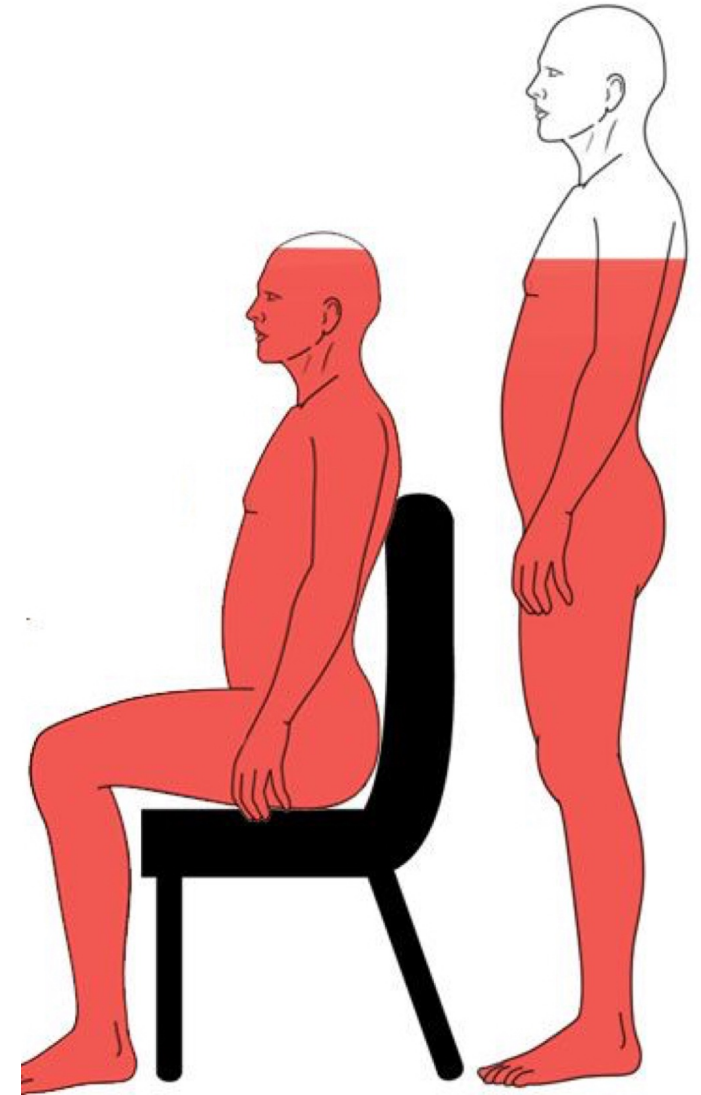
- Functional cardiorespiratory tests may be helpful
 - 6-minute walk test
 - Sit to stand test
- Imaging: CT chest is more sensitive to interstitial changes

Sit-to-stand tests
or exercise-induced desaturation in COVID-19 Patient



Autonomic dysfunction

- Screen for Postural orthostatic tachycardia syndrome (POTS)
 - 1st thing in the AM
 - HR before getting out of bed
 - HR upon standing: time 0, 1, 3 5, 10 min
- HR > 120 or \uparrow 30 BPM and symptomatic
- First line treatment for POTS – salt supplementation



How to approach long-COVID patients



Complete review
of systems,
screening for
common
symptoms



Target
investigations to
patient symptoms



Exhaustive
investigations are
not required to
rule out objective
end-organ disease



Validate patient
symptoms



Refer to
subspecialty for
red flags or
objective findings
of disease

When to refer



**RAPID ACCESS TO
CONSULTATIVE EXPERTISE**

- Referral to subspecialty will depend on your access in your community, and your comfort with post-COVID patients
- NO referral: If a patient has normal investigations and symptoms are typical for long COVID, and are slowly improving
- We often refer to other specialists with objective findings of organ dysfunction (cardiac, respiratory, mental health, neurologic, dermatologic, thrombosis, voice dysfunction)
- I consider referral to the CCDP at BCWH in cases of severe fatigue, inability to work who have plateaued wrt recovery after 6-9 mo

Post-COVID19: Key points (CDC)

- The term “Post-COVID Conditions” is an **umbrella term** for the wide range of physical and mental health consequences experienced by some patients
- Objective laboratory or imaging findings should **not be used as the only measure** or assessment of a patient’s well-being
- Lack of laboratory or imaging abnormalities **does not invalidate** the existence, severity, or importance of a patient’s symptoms or conditions
- Approach treatment by **focusing on specific symptoms**
- Understanding of post-COVID conditions remains incomplete

Treatment

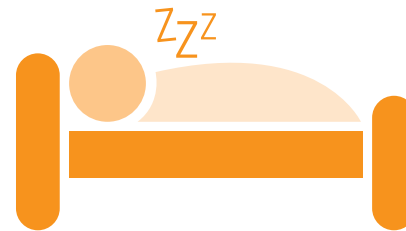


Pacing

- PLAN
- PACE
- PRIORITIZE



STOP trying to push your limits. Overexertion may be detrimental to your recovery.



REST is your most important management strategy. Do not wait until you feel symptoms to rest.



PACE your daily physical and cognitive activities. This is a safe approach to navigate triggers of symptoms.

FIGURE. The “Stop. Rest. Pace” approach to safely manage physical and cognitive activities while recovering from long COVID.

pharmacotherapy

- There is a lack of evidence for pharmacological interventions
- It is not known if over-the-counter vitamins and supplements are helpful, harmful or have no effect



Getting back to work

- Screen for objective limitations to return to work e.g. mask-wearing in those with dyspnea
- Use pacing to guide graduated return to work plan
- Consider referral to a multidisciplinary approach to guide rehabilitation, including physical, psychological and psychiatric aspects of management
- Provide written patient information
- Counsel patients that they will likely recover, although it may take time

COVID-19

-  **Your Health**
- Vaccines
- Cases & Data
- Work & School
- Healthcare Workers
- Health Depts

 Your Health

Post-COVID Conditions

About COVID-19



Updated Sept. 16, 2021

Languages ▾

Print

You can change your cookie settings at any time using our [cookies page](#).

- Health A-Z
- Live Well
- Mental health
- Care and support
- Pregnancy
- N

[Home](#) > [Health A to Z](#) > [Coronavirus \(COVID-19\)](#)

Long-term effects of coronavirus (long COVID)



[Our Services](#)

[Health Info](#)

[Our Research](#)

[About](#)

[Contact](#)

[Health I](#)

Menu ☰

Health Info / [Post-COVID-19 Care & Recovery](#)

Post-COVID-19 Care & Recovery

Support your understanding and management of symptoms as you recover from COVID-19.



- [About RACE](#)
- [BC & YK Family Physicians / Nurse Practitioners](#)
- [Specialists](#)
- [eCASE](#)
- [Contact Us](#)
- [Links](#)



RACE gave me a level of professional satisfaction, professional empowerment and improved patient care.



Questions/discussion

- rjanssen3@providencehealth.bc.ca

Accredited by UBC CPD



CONTINUING PROFESSIONAL DEVELOPMENT
FACULTY OF MEDICINE



DEPARTMENT OF
FAMILY MEDICINE

Leaders in primary care, champions
of community health



BC ECHO for
Post-COVID-19
Recovery