Post-COVID-19 Conditions

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Consent and Disclosures

- I am part of the leadership team for Occupational and Environmental Health Network (OEHN)
- Otherwise, I have no other relevant financial interests to discuss

Outline

- Define Long-COVID and timeline
- Identify most common symptoms of post-acute COVID illness
- Current Research
- Resources

What is PASC?

SARS-CoV-2 is a virus that can infect the body, referred to as a SARS-CoV-2 infection. Recovery from SARS-CoV-2 infection can vary from person to person:

Acute Infection: Most people recover quickly from acute SARS-CoV-2 infection. Reported symptoms from people with acute infection range from mild to severe. In some cases, this is diagnosed as COVID-19. Other people do not experience any symptoms of infection. People who do not experience symptoms can also be diagnosed with SARS-CoV-2 infection.

For some people, symptoms last weeks or months after the acute infection has passed. This is often referred to as Long COVID.

For other people, new symptoms may appear after the acute infection has passed whether or not they had symptoms during the acute infection.

Post-acute experience: Together, these and other health effects of the virus are called post-acute sequelae of SARS-CoV-2 infection, or PASC. PASC refers to what happens after the acute infection with the virus and is relevant whether a person has been diagnosed with COVID-19 or not. Even if someone did not experience symptoms, PASC is still relevant because there could be consequences after acute infection.

Post-COVID-19 illness

- Poorly defined syndrome that goes by several names:
  "long COVID", "long haulers", "post-COVID conditions",
  "post-acute sequelae of SARS-COV-2 (PASC)", "chronic COVID"
- Sequalae similar to recovery from other viral illnesses, critical illness, and/or sepsis
- Heterogenous manifestations can be physical, social, and/or psychological
- Frequency of long-term symptoms varies widely: 5% - 80%
- Can occur in adults and children

Categories of COVID illness

- Acute COVID-19: up to 4 weeks duration following symptom onset

- Post-COVID-19: > 4 weeks and not explained by an alternative diagnosis

Pathophysiologic Process

Proposed mechanisms:

- Organ damage resulting from acute phase infection
- Complications from a persistent hyperinflammatory state
- Ongoing viral activity associated with an intra-host viral reservoir
- Inadequate antibody response
- Other potential causes

Physical Symptoms

- Fatigue: 15-87%
- Dyspnea: 10-71%
- Chest pain or tightness: 12-44%
- Cough: 17-34%

Psychological symptoms

- Anxiety
- Depression
- PTSD
- Cognitive deficits / “brain fog”

Long COVID Studies

- FAIR Health Study – of 2 million patients with COVID-19, 23% had one or more symptoms >30 days post infection; 50% of hospitalized had symptoms
- Mayo Clinic Study – of 1st 100 patients with COVID-19, fatigue, respiratory, mental health symptoms and neurologic; 34 % difficult ADL's; 1/3 had RTW
- Northwestern Study – of 100 non-hospitalized patients, headache, brain fog, paresthesias, loss of taste/smell, and myalgia; preexisting anxiety and depression in 50%; autoimmune disorders in 16%
- Recent CDC report compared COVID vs cancer patients in need of rehab: Higher prevalence of poor physical health, higher pain levels, decreased physical activities and decreased ADL's in COVID referrals

Research

Research is underway to define post-acute and long-term phases of COVID-19

- Describe the natural history of SARS-COV-2 infection and related illnesses
- Identify exclusive health effects of COVID-19
- Prevalence, type, duration, and severity of persistent symptoms s/p COVID
- Risk factors associated with developing long COVID symptoms
- Understand the pathophysiology of long-term sequalae

RECOVER
Researching COVID to Enhance Recovery

CDC and NIH Partnership

Progress takes coordinated action.

Teamwork is at the heart of RECOVER. Many people, groups, and organizations are working together through a collection of studies referred to as the SARS-CoV-2 Recovery Cohort. These studies include diverse groups of people, including adults and children.

The studies will include participants from:

- Long COVID clinics that treat people with ongoing symptoms
- NIH-supported COVID-19studies and networks
- Established NIH-supported studies of other diseases and conditions
- Other settings

Questions

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Notes