

# Long COVID: What do we know & how can we manage it?

Gavin H Harris, MD  
Assistant Professor of Medicine  
Divisions of Critical Care Medicine & Infectious Diseases  
Emory University School of Medicine



# A definition?

- Post-acute sequelae of (SARS-CoV-2 Infection (COVID-19): PASC

“[a] condition that occurs in individuals with a history of probable or confirmed SARS CoV-2 infection, usually **3 months** from the onset of COVID-19 symptoms and that **last for at least 2 months and cannot be explained by an alternative diagnosis**.

Common symptoms: fatigue, shortness of breath, cognitive dysfunction but also others and generally have an impact on everyday functioning. Symptoms may be **new onset following initial recovery from an acute COVID-19 episode or persist from the initial illness**. Symptoms may also **fluctuate or relapse over time**.”

# Epidemiology

- Approx 10-30% of all patients have prolonged symptoms lasting at least 12 mo. (2020)
- Approx 6/10 (60%) of all patients have at least one symptom a year later. (2022)
- Approx 25-40% of people hospitalized with COVID-19 develop persistent symptoms. (2022)

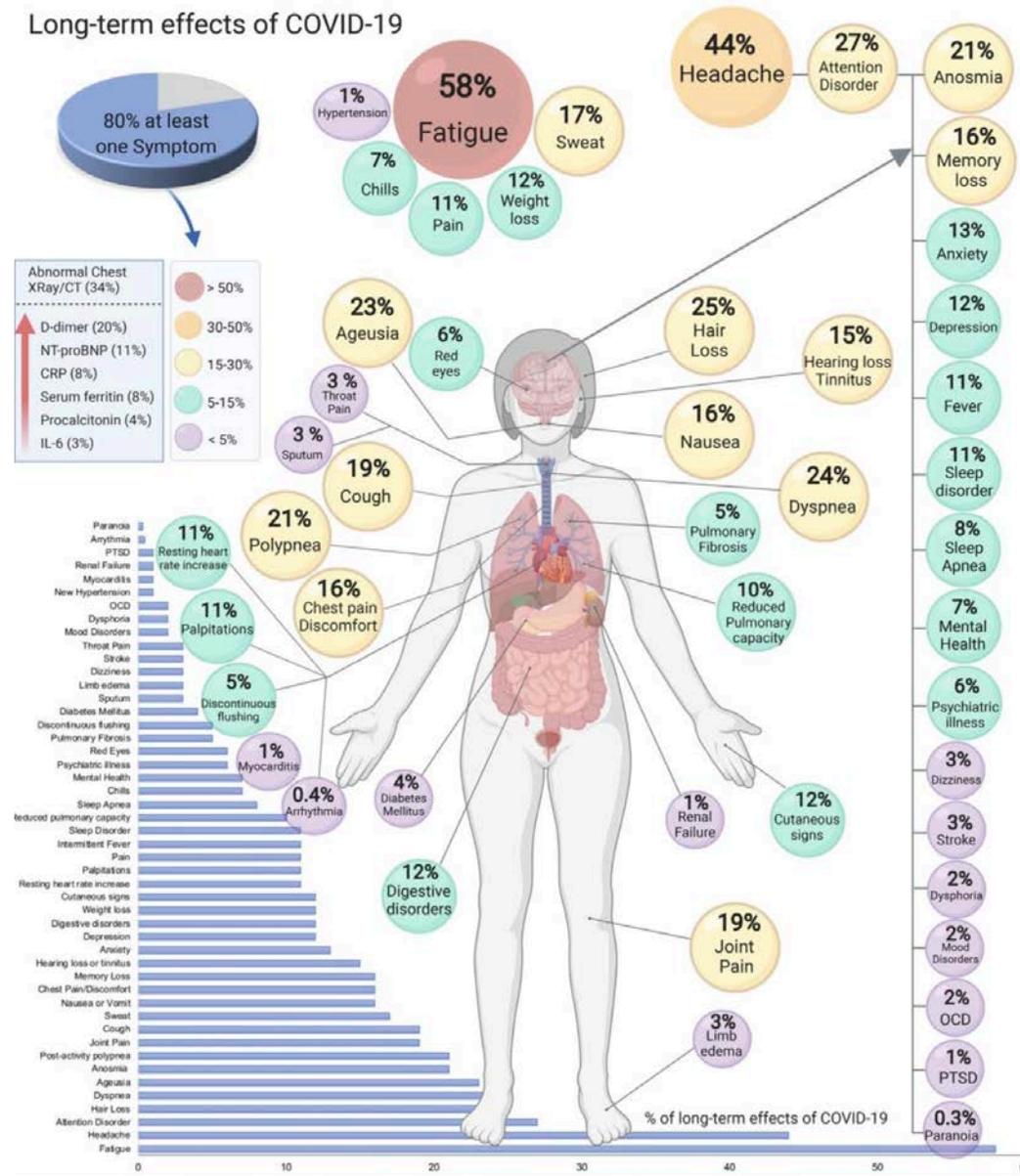
*10-93% of hospitalized COVID-19 survivors have prolonged symptoms lasting at least 3 months post-discharge*

BMJ, 2020.  
ESCMID, 2022.  
Lancet, 2021.

# Epidemiology – Related to severity of initial symptoms?

- 125/134 (93%) pts had persistent symptoms >2mo from infxn
  - 19-84y (mean 40)
  - Hospitalized
  - 20% required MV
  - 4:1 F:M ratio
- Patients w/ moderate/severe infxns 2x as likely as those with asymptomatic cases to report symptoms
  - 63.8% vs. 38.6% (poor sleep quality) (n=289, 1 yr post-infection)
- Swedish study modeled associations b/t severity of COVID-19 infxn, underlying medical conditions, previous healthcare usage, social determinants of health, PASC
  - 205,241 adults, 90-360 days post infxn
  - 32% admitted to ICU developed PASC; 6% hospitalized; 1% outpatient
  - Most common symptom outpatients: fatigue; shortness of breath most common in hospitalized/ICU (23%/39%)
  - Caution: 1 Mar-2020 through 31 Jul-2021; vaccination impact & Omicron variant yet to be determined

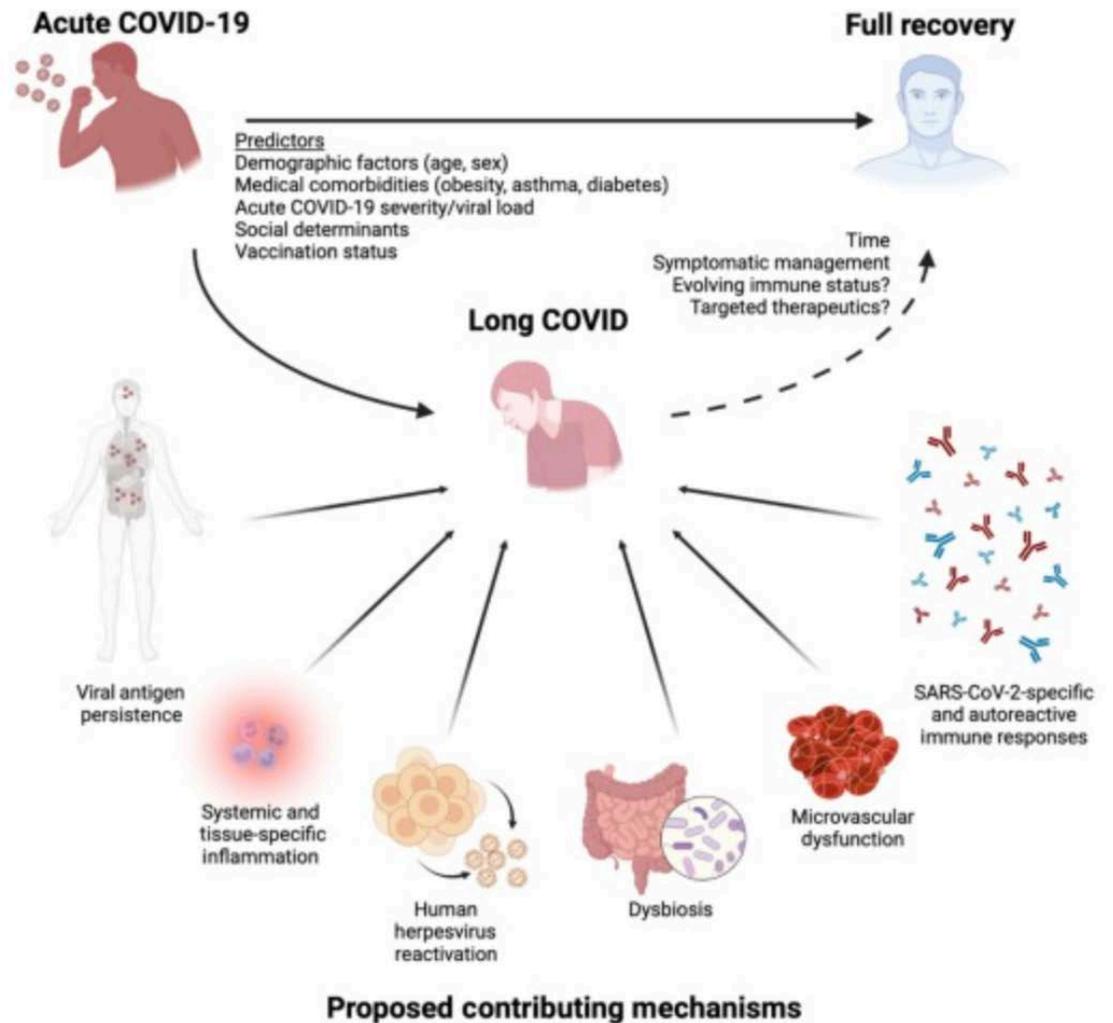
# Long-term effects of COVID-19



Approx 50% reported worsened quality of life

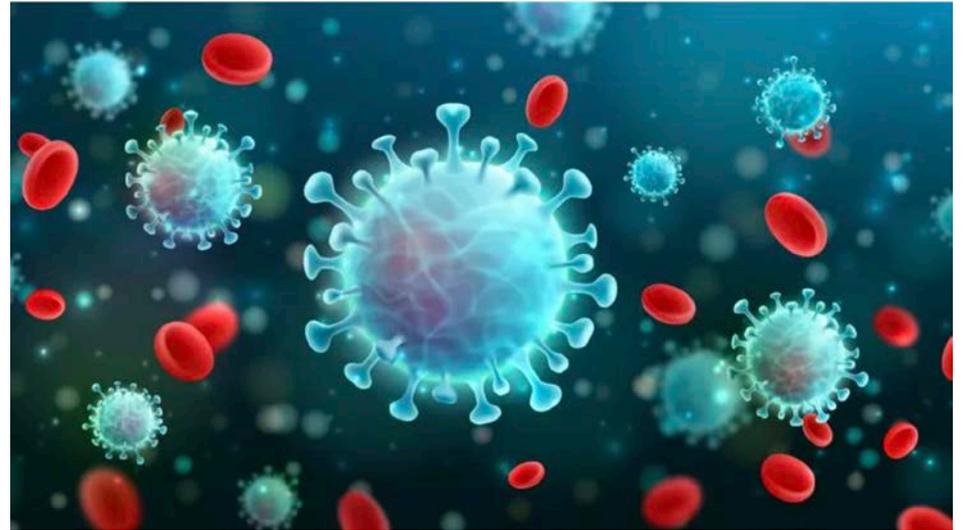
# Causes/Patterns?

- SARS-CoV-2 directly damages cells => some people with COVID-19 never recover completely
- Some people have symptoms related to long-term hospitalization => symptoms are very similar to post-critical illness syndrome/post-intensive care unit syndrome
- Symptoms appear after recovery



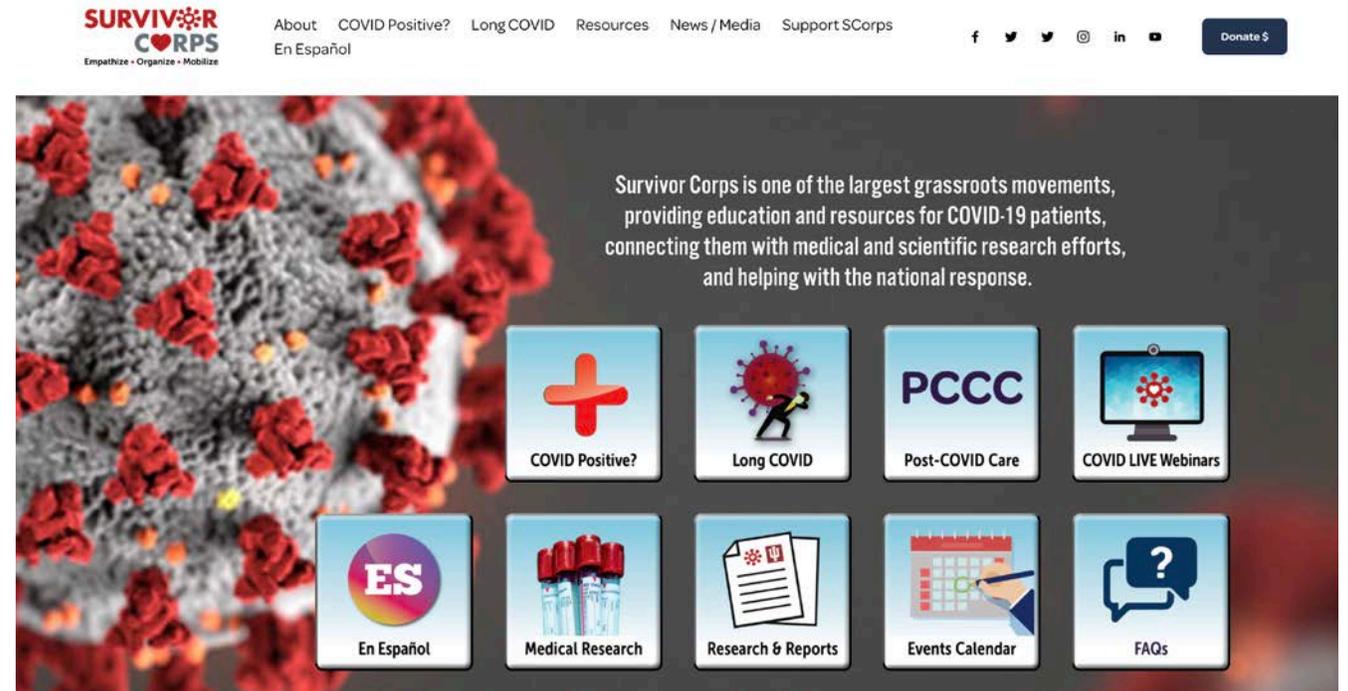
# Important Points

- Severity requires attention sooner
- No organ system is spared
- PASC affects children too
- Women are affected more than men



# So what do we do about it?

- No single diagnostic test
- Multidisciplinary approach
- Symptom-specific Rx's



**SURVIVOR CORPS**  
Empathize • Organize • Mobilize

About COVID Positive? Long COVID Resources News / Media Support SCorps  
En Español

f t i @ in v [Donate \\$](#)

Survivor Corps is one of the largest grassroots movements, providing education and resources for COVID-19 patients, connecting them with medical and scientific research efforts, and helping with the national response.

- COVID Positive?
- Long COVID
- PCCC Post-COVID Care
- COVID LIVE Webinars
- En Español
- Medical Research
- Research & Reports
- Events Calendar
- FAQs

# Symptom-specific treatments

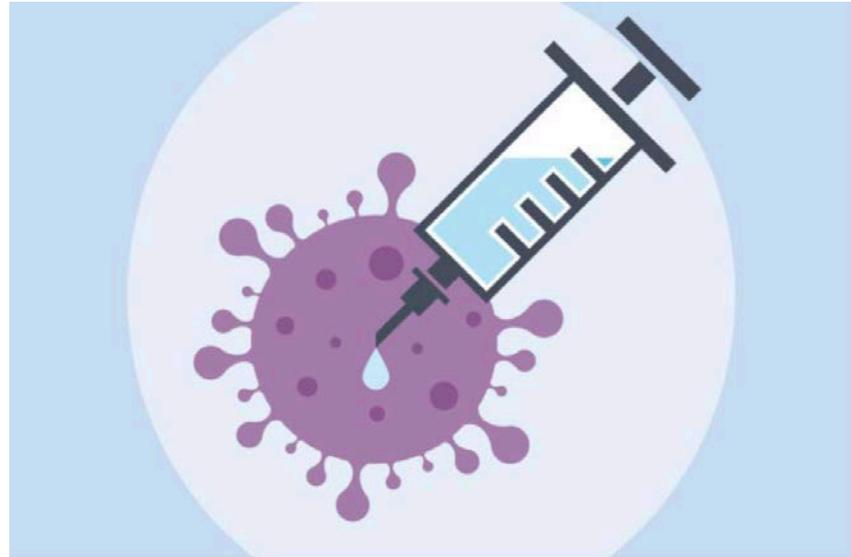
- Fatigue: Pacing, Planning, Prioritizing, Positioning; physical exercise program
- Respiratory symptoms: breathing exercises, ICS, SABA for bronchospasm; steroids if needed
- Cardiac symptoms: cardiac rehab, specific medications
- Neurologic symptoms: memory exercises, referrals

# What about those vaccines?

- UK Health Security Agency recently conducted an analysis of 8 studies
  - 6 found that vaccinated people LESS likely than unvaccinated patients to develop symptoms of PACS
  - 2 remaining studies found vaccination did not appear to conclusively reduce chance of developing PACS
- US VA study found vaccinated COVID patients had 13% lower risk than unvaccinated patients of having symptoms 6 months later (64,000ppl)
- UK study found 50% lower risk of lingering symptoms w/ vaccinated pts (1.2mil ppl), another found 41% lower risk (6,000 ppl).

# Important Message:

**Get VACCINATED**



# Additional Resources:

- HHS Region IV Emory University SCDP: <https://med.emory.edu/departments/medicine/divisions/infectious-diseases/serious-communicable-diseases-program/covid-19-resources/index.html>
- NETEC: <https://netec.org/>
- CDC: <https://www.cdc.gov/coronavirus/2019-ncov/long-term-effects/index.html>
- <https://www.survivorcorps.com/>