

Update on
Clinical long-term effects of COVID-19

THE LATEST ON THE COVID-19 GLOBAL SITUATION
& LONG-TERM SEQUELAE

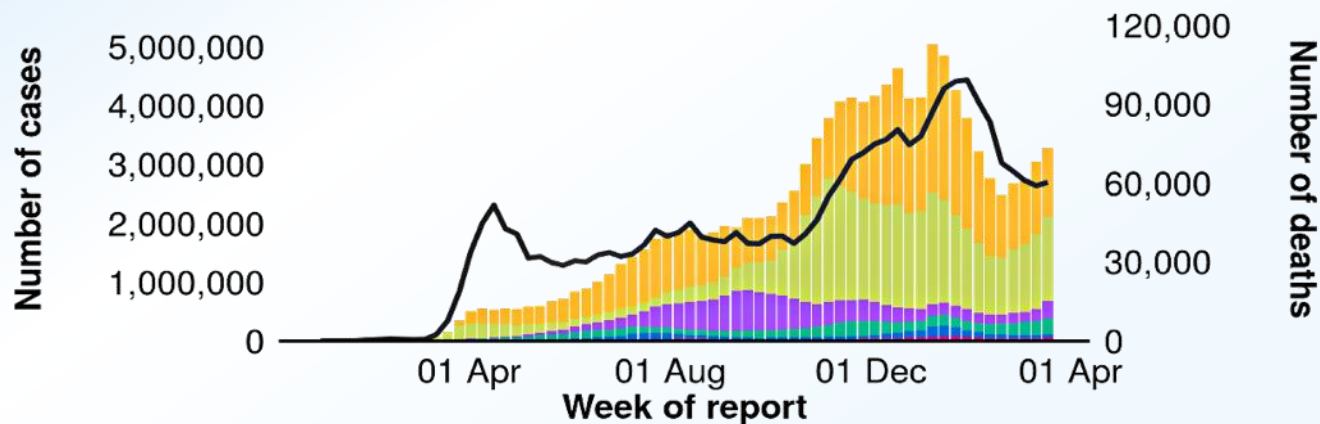
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Current global situation

CASES REPORTED TO WHO AS OF 21 MARCH 2021, 10:00 CEST

- Cases: > 122 million
- Deaths: > 2.7 million



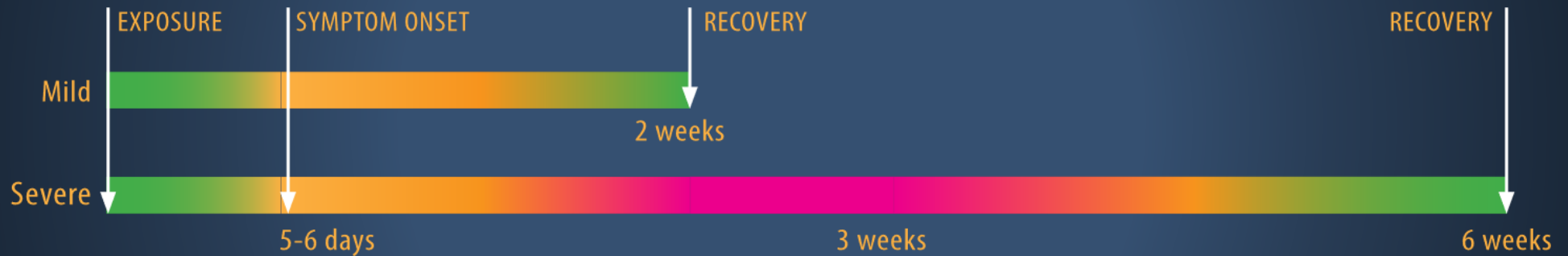
Note: Data smoothed with 7-day moving average

* Data are incomplete for the current week. Cases depicted by bars; deaths depicted by line

CHECK OUT THE LATEST GLOBAL SITUATION

[WHO Coronavirus Disease \(COVID-19\) Dashboard](#)

Clinical course of COVID-19



- Most people with COVID-19 experience **mild symptoms** or **moderate illness**
- Approximately **10-15% of cases progress to severe disease**, and about **5% become critically ill**
- Typically, people recover from COVID-19 after 2 to 6 weeks

Lingering symptoms after SARS-CoV-2 infection

- While most people with COVID-19 recover and return to normal health, some people can have symptoms that last for weeks or even months after recovery from acute illness. People are not infectious to others during this time¹
- This persistent state of ill health is known as '**post COVID condition**' but other names are also used to describe the condition². However, there is no internationally agreed definition of post COVID condition as of yet
- Even people who are not hospitalized and who have mild illness can experience persistent or late symptoms
- Some patients develop medical complications that may have lasting health effects



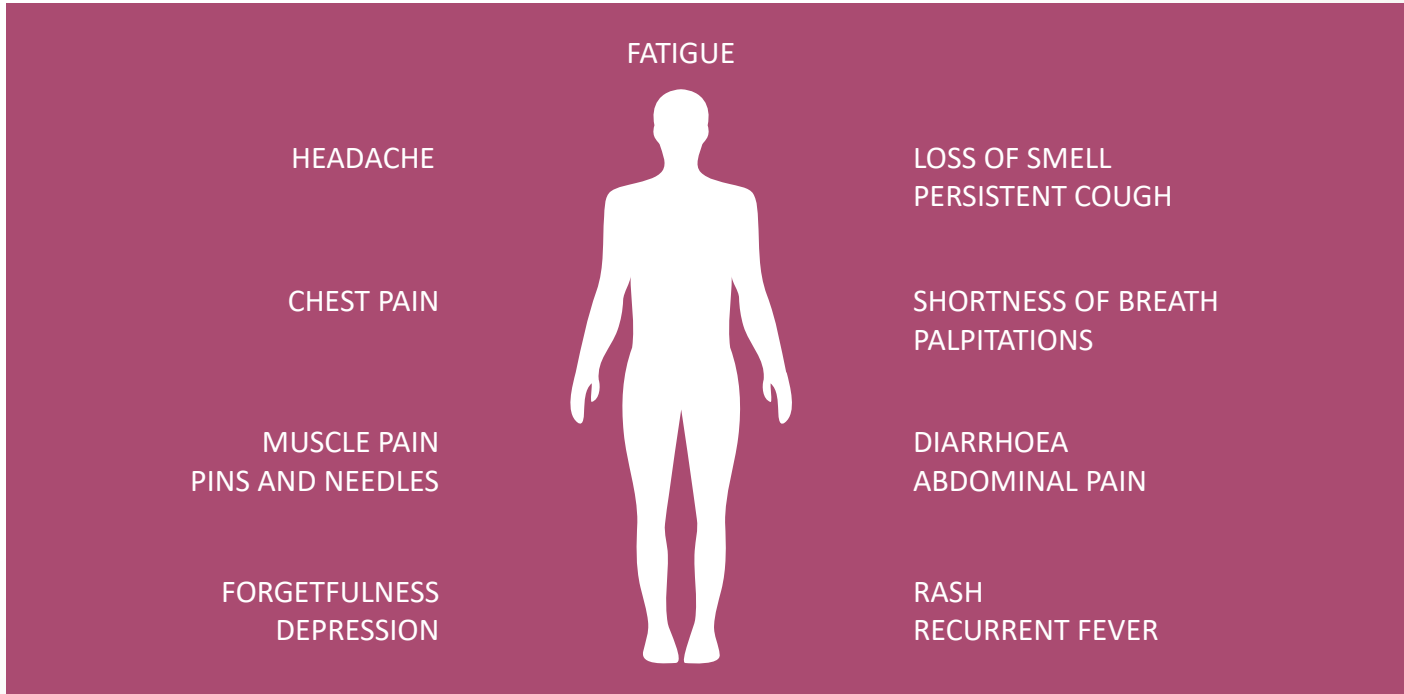
Image: vecteezy.com

¹ People are not infectious past 9-10 days post symptom onset if they have asymptomatic or mild disease. After severe disease (hospitalized patients), people typically do not shed virus after three weeks

² ie: chronic COVID syndrome; late sequelae of COVID-19; long COVID; long haul COVID; long-term COVID-19; post COVID syndrome; post-acute COVID-19; post-acute sequelae of SARS-CoV-2 infection

Reported symptoms after SARS-CoV-2 infection

A wide range of long-term symptoms are reported, among others*:



* This is not an exhaustive list, other symptoms are reported

Source: <https://apps.who.int/iris/bitstream/handle/10665/339629/Policy-brief-39-1997-8073-eng.pdf>

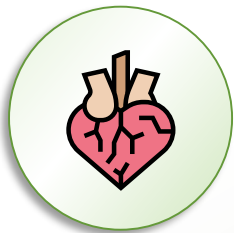
<https://www.medrxiv.org/content/10.1101/2021.01.27.21250617v2.full.pdf>

<https://www.cdc.gov/coronavirus/2019-ncov/long-term-effects.html>

<https://www.acpjournals.org/doi/10.7326/M20-5926>

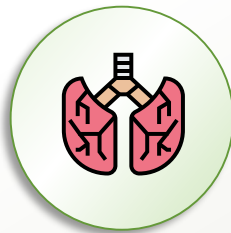
COVID-19 may increase the risk of long-term health problems

More serious long-term complications appear to be less common but have also been reported, especially in patients with severe COVID-19 who were hospitalized. These have been noted to affect different organ systems in the body and include:



CARDIOVASCULAR

inflammation of
the heart muscle



RESPIRATORY

lung function
abnormalities



DERMATOLOGIC

rash



NEUROLOGIC

loss of taste & smell,
sleep disturbance



PSYCHIATRIC

depression, anxiety,
changes in mood

<https://www.cdc.gov/coronavirus/2019-ncov/hcp/clinical-care/late-sequelae.html>
<https://www.thelancet.com/action/showPdf?pii=S0140-6736%2820%2932656-8>

Some people feel they do not fully recover from COVID-19

- There are many reports from people who feel they do not regain their previous health following COVID-19
- Preliminary results from a nationally representative sample survey by the UK Office for National Statistics estimates that around **1 in 10 respondents** testing positive for COVID-19 **may exhibit symptoms for a period of 12 weeks or longer**¹
- Other studies indicate that around a third of people testing positive for SARS-CoV-2 **had not returned to their usual state of health when interviewed 3 to 6 weeks after diagnosis** ^{2,3,4}
- One recent study found that **30% of COVID-19 patients surveyed still had persistent symptoms after nine months**⁵. The majority of patients surveyed (85%) were outpatients with mild illness
- Patients that are admitted to intensive care units may experience **post-intensive care syndrome (PICS)** which are health problems that remain after critical illness

¹ <https://www.ons.gov.uk/news/statementsandletters/theprevalenceoflongcovidsymptomsandcovid19complications>

² <https://www.cdc.gov/mmwr/volumes/69/wr/mm6930e1.htm>

³ <https://www.acpjournals.org/doi/10.7326/M20-5926>

⁴ <https://www.medrxiv.org/content/10.1101/2021.03.03.21252086v1.full.pdf>

⁵ <https://jamanetwork.com/journals/jamanetworkopen/fullarticle/2776560>

Long-term health effects of other coronavirus infections

- Several studies* examined the **long-term health effects of severe acute respiratory syndrome (SARS)**, the coronavirus that emerged in 2003, the **middle east respiratory syndrome (MERS)** and other viruses¹
- One study found a persistent and significant impairment of exercise capacity and health status in survivors of SARS over 24 months. Health workers who had SARS experienced even more marked adverse impact²
- Another study, revealed that 40% of people recovering from SARS still had chronic fatigue symptoms 3.5 years after being diagnosed³
- A systematic review found that lung function abnormalities, psychological impairment and reduced exercise capacity were reported in people with SARS and MERS up to 6 months after hospital discharge⁴

* This is not an exhaustive list of studies

¹ <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7550169/>

² <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7192220/>

³ <https://jamanetwork.com/journals/jamainternalmedicine/fullarticle/415378>

⁴ <https://pubmed.ncbi.nlm.nih.gov/32449782/#:~:text=Conclusion%3A%20Lung%20function%20abnormalities%2C%20psychological,outcomes%20in%20COVID%2D19%20survivors>

More research is needed to examine the long-term consequences of COVID-19

- **COVID-19 can result in prolonged illness**, even in young adults and children **without underlying chronic medical conditions**
- **Much is still unknown** about how COVID-19 affects people over time and **more research and multi-year studies are needed** to understand:
 - long-term effects of COVID-19
 - why symptoms persist or recur
 - how these health problems affect patients
 - clinical course and likelihood of full recovery
 - Implication of long term health effects on return to work
- Protective measures continue to be important in preventing COVID-19

https://www.nature.com/articles/d41586-021-00586-y?utm_source=Nature+Briefing&utm_campaign=7de7a692f7-briefing-dy-20210305&utm_medium=email&utm_term=0_c9dfd39373-7de7a692f7-43373093<https://www.medrxiv.org/content/10.1101/2020.12.24.20248802v2>



Image: vecteezy.com

WHO responds to better understand the implications of post-COVID condition

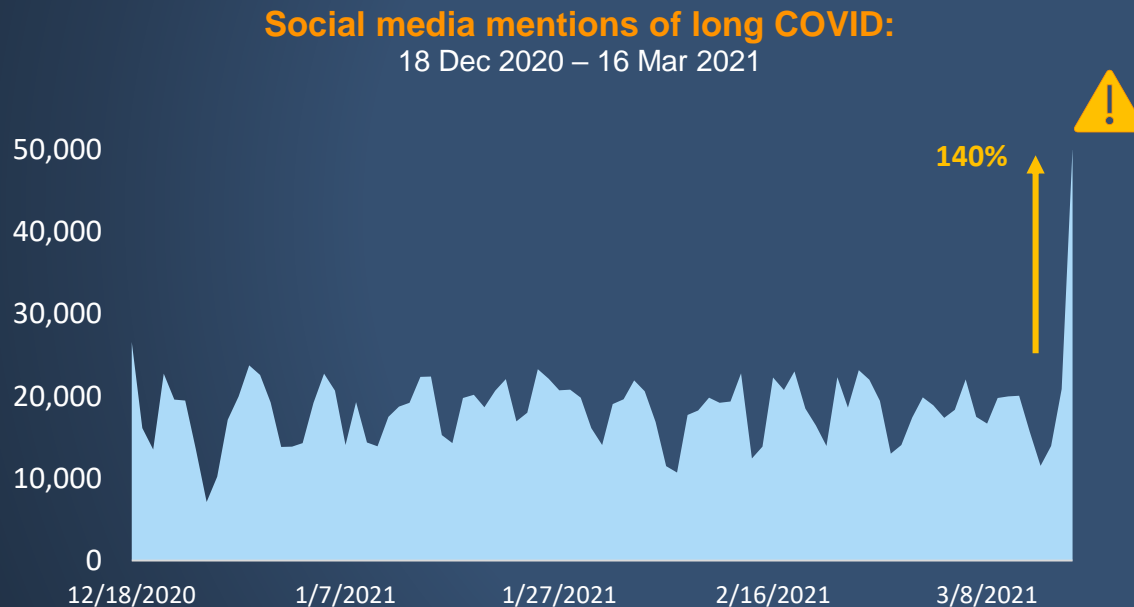
- WHO has designed a **post-COVID case report form (CRF)**¹ to collect standardized clinical data from individuals after hospital discharge or after acute illness to examine the medium- and long-term consequences of COVID-19
- WHO is working with experts to develop a clinical case definition of post-COVID condition
- Scientific studies are underway to understand the health challenges and implications of post-COVID condition. These studies are carried out in close collaboration with different research groups as well as patients and advocacy groups



¹ [https://www.who.int/publications/i/item/global-covid-19-clinical-platform-case-report-form-\(crf\)-for-post-covid-conditions-\(post-covid-19-crf-\)#:~:text=WHO's%20Post%20COVID%20case%20report,be%20available%20in%20multiple%20languages](https://www.who.int/publications/i/item/global-covid-19-clinical-platform-case-report-form-(crf)-for-post-covid-conditions-(post-covid-19-crf-)#:~:text=WHO's%20Post%20COVID%20case%20report,be%20available%20in%20multiple%20languages)

Social media monitoring on post COVID condition

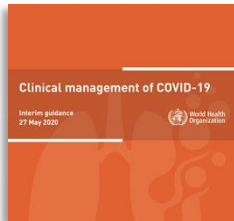
Mentions of 'long COVID' on social media



'long COVID' generated **1.65M social media mentions** during a **three-month period**

Mid March mentions **rose by 140%**

Additional WHO resources



- **WHO Clinical management of COVID-19**

This guidance document is intended for clinicians caring for COVID-19 patients during all phases of their disease – from screening to discharge. Next version of this guidance to include long-term consequences

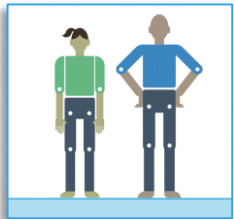
<https://www.who.int/publications/i/item/WHO-2019-nCoV-clinical-2021-1>



- **Global COVID-19 clinical platform case report form (CRF) for post-COVID condition**

WHO's post-COVID case report form (CRF) has been designed to report standardized clinical data from individuals after hospital discharge or after the acute illness to examine the medium- and long-term consequences of COVID-19

[https://www.who.int/publications/i/item/global-covid-19-clinical-platform-case-report-form-\(crf\)-for-post-covid-conditions-\(post-covid-19-crf-\)](https://www.who.int/publications/i/item/global-covid-19-clinical-platform-case-report-form-(crf)-for-post-covid-conditions-(post-covid-19-crf-))



- **Support for rehabilitation self-management after COVID-19-related illness**

This leaflet provides basic exercises and advice on: managing breathlessness, exercising after leaving hospital, problems with voice, managing stress and other issues related to COVID-19 recovery

<https://www.euro.who.int/en/health-topics/health-emergencies/coronavirus-covid-19/technical-guidance/2020/support-for-rehabilitation-self-management-after-covid-19-related-illness-2020>



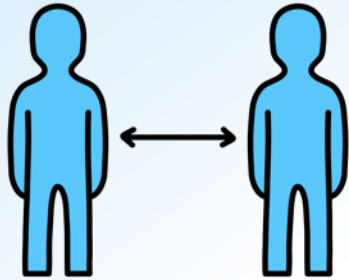
- **Policy Brief 39 - Health systems & policy analysis in the wake of the pandemic: Preparing for Long COVID**

A new policy brief documents responses to post-COVID conditions in different countries and looks at how sufferers, including medical professionals, are driving some of those responses.

<https://apps.who.int/iris/bitstream/handle/10665/339629/Policy-brief-39-1997-8073-eng.pdf>

COVID-19 protective measures

Protect yourself & others



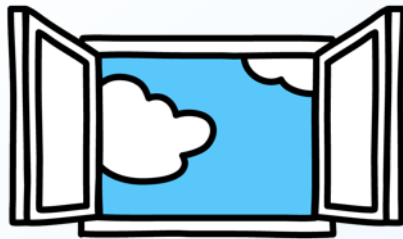
Keep your distance



Wash your hands frequently



Cough & sneeze into your elbow



Ventilate or open windows



Wear a mask



EPI•WIN

infodemic
MANAGEMENT