



COVID-19 Update

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Post-COVID Conditions

- Describe health issues that persist **more than four weeks** after first being infected. They include:
 - Multiorgan Effects of COVID-19:
 - Multiorgan effects can affect most, if not all, body systems including heart, lung, kidney, skin, and brain functions
 - Can also include conditions like multisystem inflammatory syndrome (MIS) and autoimmune conditions
 - Effects of COVID-19 Treatment or Hospitalization
 - Post-intensive care syndrome (PICS), which refers to health effects that remain after a critical illness
 - Can include severe weakness and post-traumatic stress disorder (PTSD)
 - Long COVID

**Long-COVID
aka
Post-Acute Sequelae
of SARS-CoV-2
infection (PASC)**

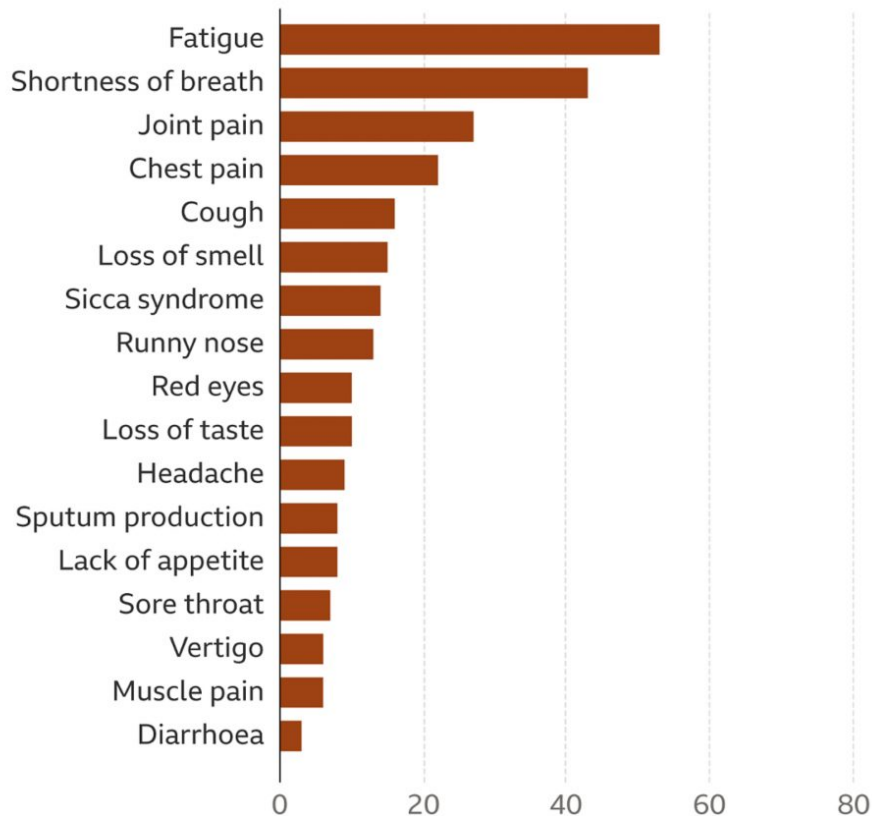


Long-COVID Symptoms

- Tiredness or fatigue
- Difficulty thinking or concentrating (sometimes referred to as “brain fog”)
- Headache
- Loss of smell or taste
- Dizziness on standing
- Fast-beating or pounding heart (also known as heart palpitations)
- Chest pain
- Difficulty breathing or shortness of breath
- Cough
- Joint or muscle pain
- Depression or anxiety
- Fever
- Symptoms that get worse after physical or mental activities

LONG COVID SYMPTOMS

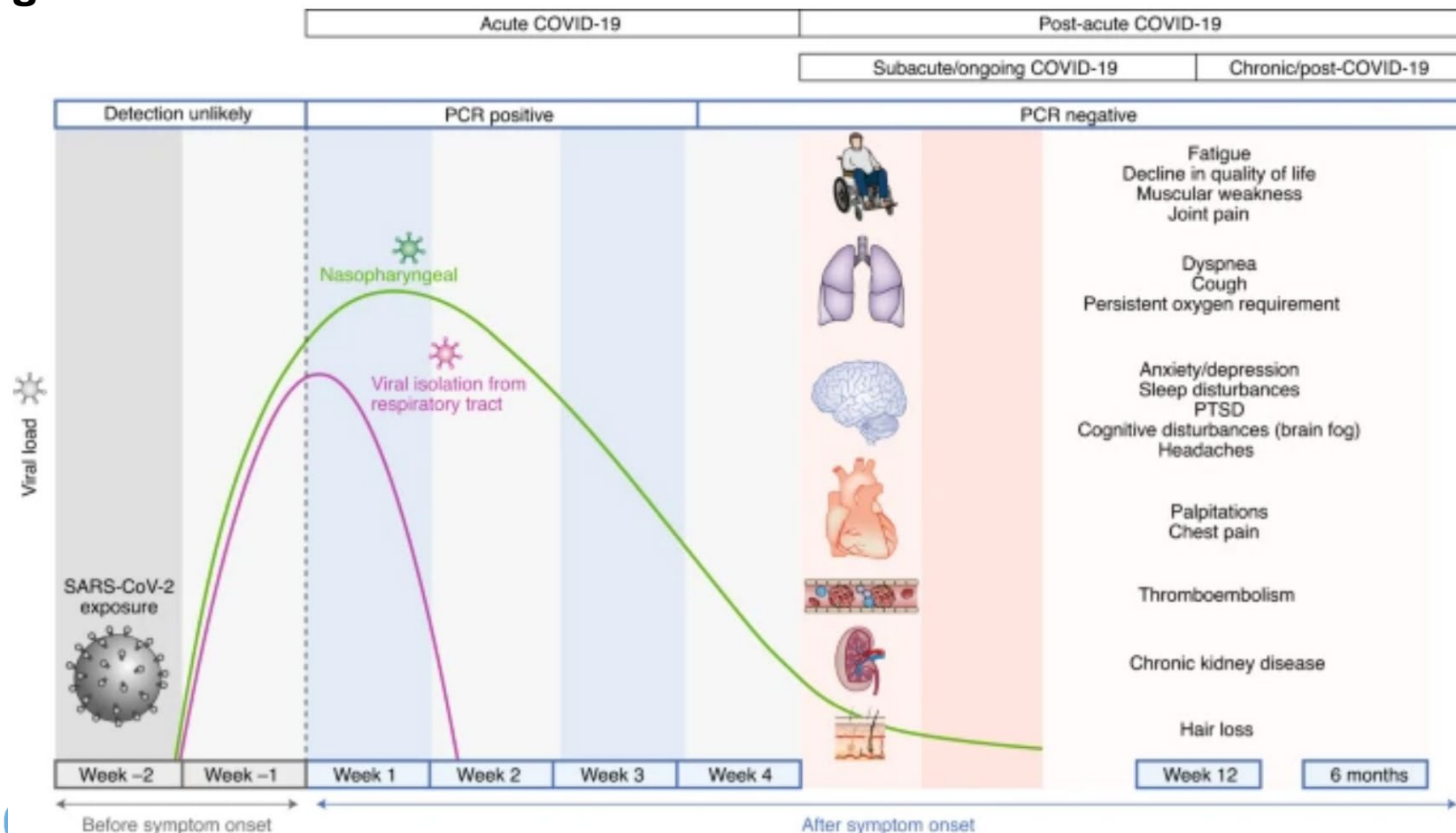
Percentage of patients with symptoms



Source: Agostino Gemelli University

DAILY ROUNDS

Long COVID Timeline

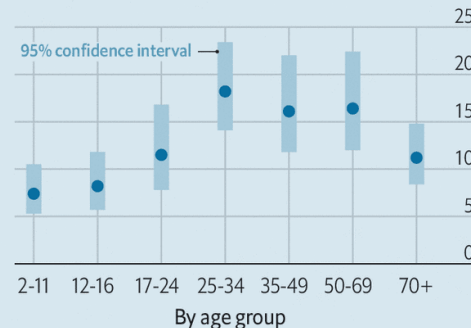


Long-COVID

- Estimated 10% of COVID-19 patients become long haulers
- This condition can impact anyone –
 - Old and young, but does increase with age
 - Healthy people
 - Those with co-morbidities
 - Patients who were hospitalized with COVID-19 d
 - Patients with very mild symptoms
 - Children
 - Recent study¹ found older age and allergic diseases were associated with higher risk of persistent symptoms
- People attending Long-covid clinics are predominantly middle-aged and mostly women. Ethnic minorities are under-represented, even though they have higher acute infection rates

The long run

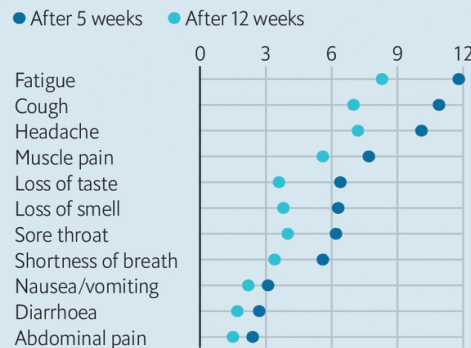
Britain, share of people testing positive for covid-19 with symptoms after 12 weeks, %
Self-reported



Source: ONS Coronavirus Infection Survey

A slow path to recovery

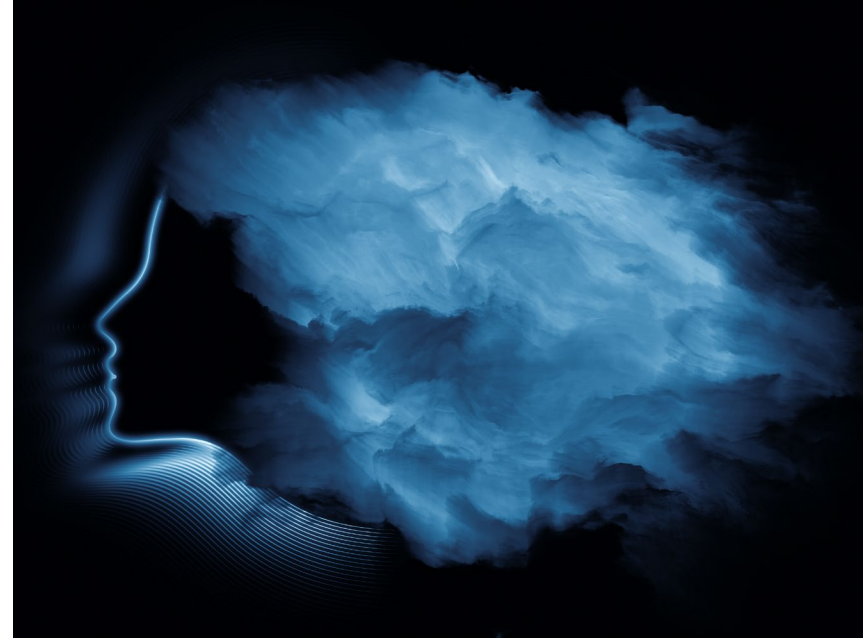
Britain, prevalence of symptoms among people testing positive for covid-19, %



Source: ONS Coronavirus Infection Survey

3 Broad types of Long-COVID patients

- Exercise intolerance
 - Feel out of breath and exhausted from even small tasks involving physical activity
- Cognitive complaints
 - Brain fog and memory problems
- Autonomic nervous system
 - Suffer from symptoms such as heart palpitations and dizziness



Long-COVID Hypotheses

1. Persistent viral infection

- Some patients never clear the virus completely
- They are not infectious but harbor some altered form of the pathogen which is not replicating
- Making some viral product that their bodies are trying to fight off

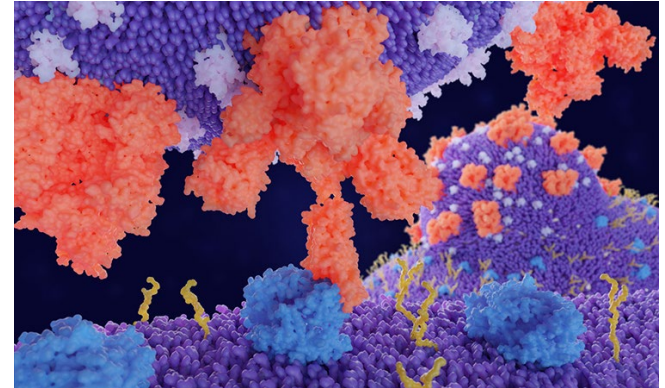
2. Autoimmune disorder

- The virus triggers an autoimmune reaction in the body
- Evidence of badly behaved macrophages, B-cells that produce auto-antibodies, or T-Cells that are exhausted!

3. Consequence of tissue damage caused by inflammation during the initial, acute infection

- The fight put up by the body against the acute illness causes irreparable collateral damage

4. SARS-CoV-2 spike protein causing long-term gene expression changes¹



Treatment

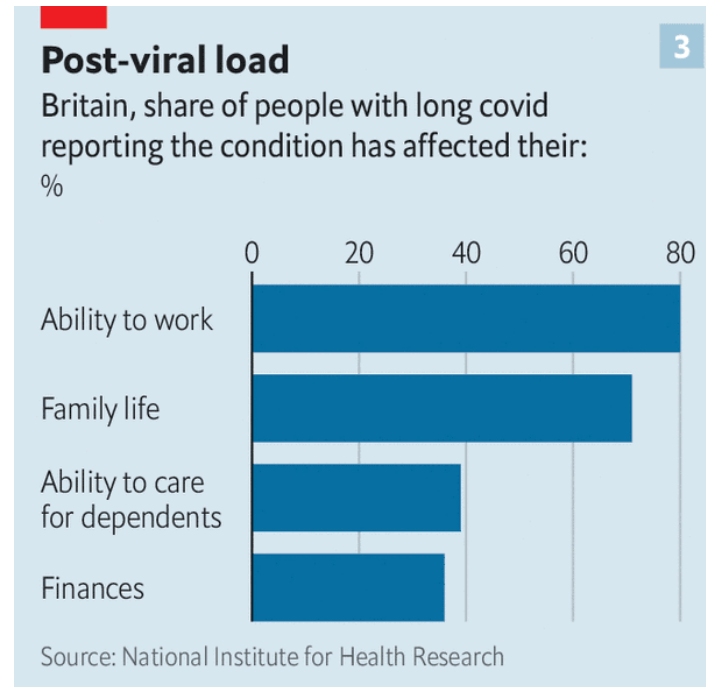
- Treatments that may address underlying pathology:
 - Anti-inflammatory drugs, drugs for immune disorders
- Treating the symptoms/Rehabilitation:
 - If stretching of the stomach causes an autonomic-nervous-system reaction – eat smaller meals
 - If movement causes hypotension – wear compression stockings
 - Low CO2 levels - breathing exercises to help with CO2 retention
 - Brain fog - Cognitive rehabilitation
- Third of long-haulers have symptom improvement after receiving a COVID vaccine
 - Maybe coincidental
 - Maybe only temporary



Opera Singers Teaching Long-COVID patients on how to breath

Potential Impact on Employers

- Increased absence
- Decreased performance
- Flexibility
- Accommodations
- Loss of talent



The Economist

How are we doing?

Daily new confirmed COVID-19 cases per million people

Shown is the rolling 7-day average. The number of confirmed cases is lower than the number of actual cases; the main reason for that is limited testing.

Our World
in Data



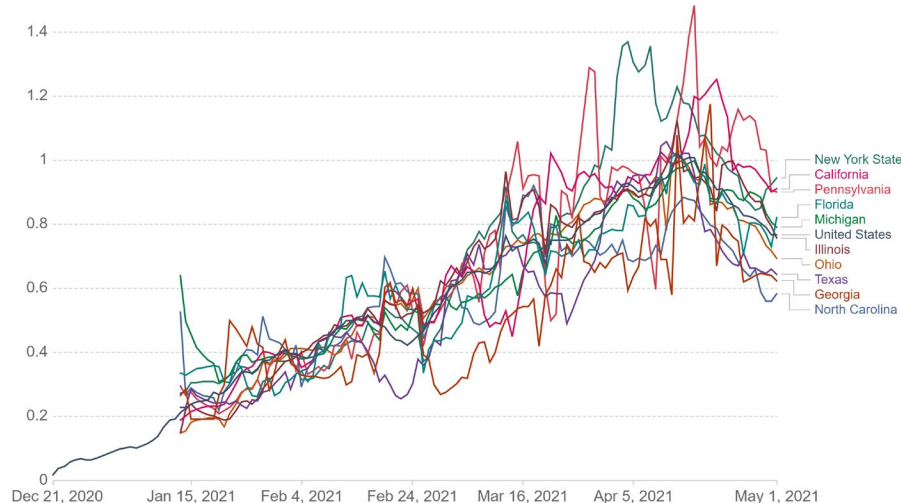
Source: Johns Hopkins University CSSE COVID-19 Data

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US: Daily COVID-19 vaccine doses administered per 100 people

Shown is the rolling 7-day average per 100 people in the total population. This is counted as a single dose, and may not equal the total number of people vaccinated, depending on the specific dose regime (e.g. people receive multiple doses).

Our World
in Data



Source: Centers for Disease Control and Prevention – Last updated May 1, 18:50 (Eastern Time)

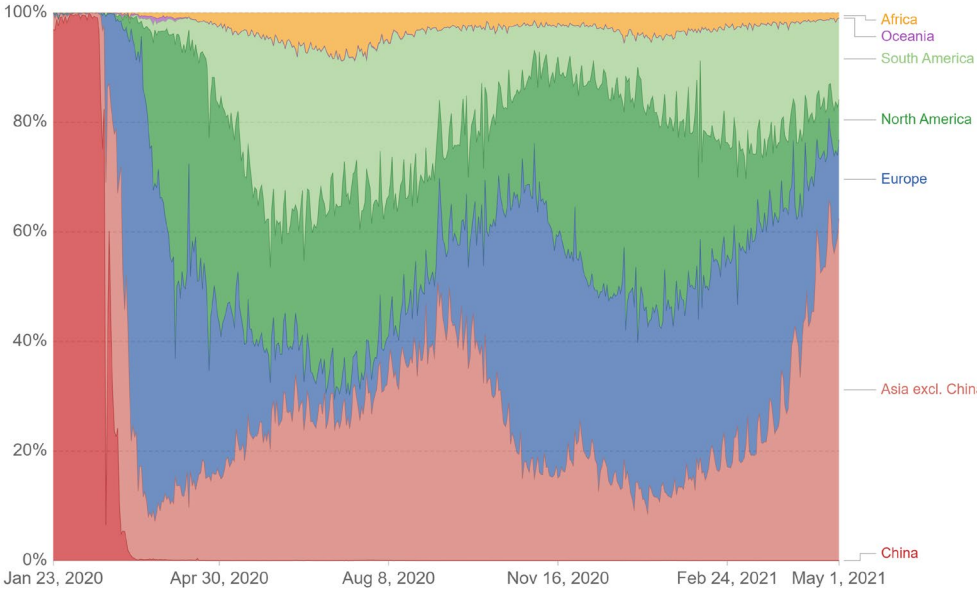
OurWorldInData.org/us-states-vaccinations • CC BY

100M People Fully Vaccinated

Rest of world

Daily confirmed COVID-19 cases

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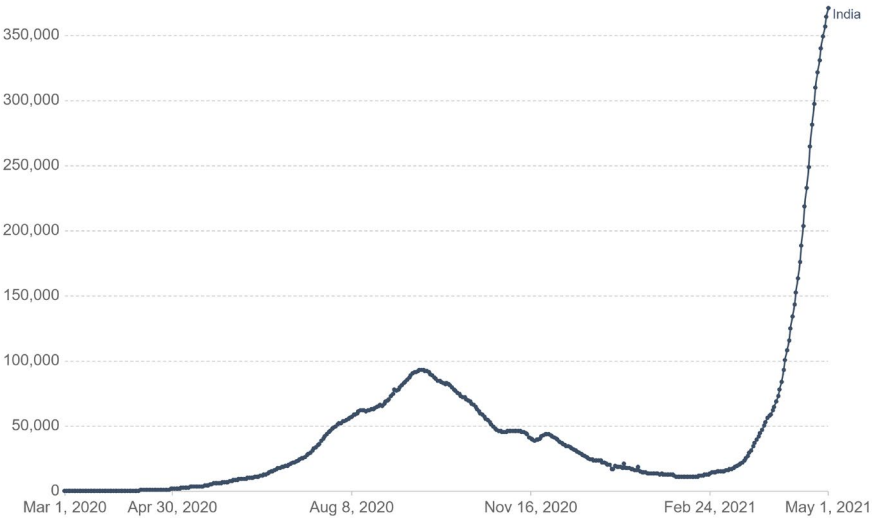


Source: Johns Hopkins University CSSE COVID-19 Data – Last updated 2 May, 09:03 (London time)

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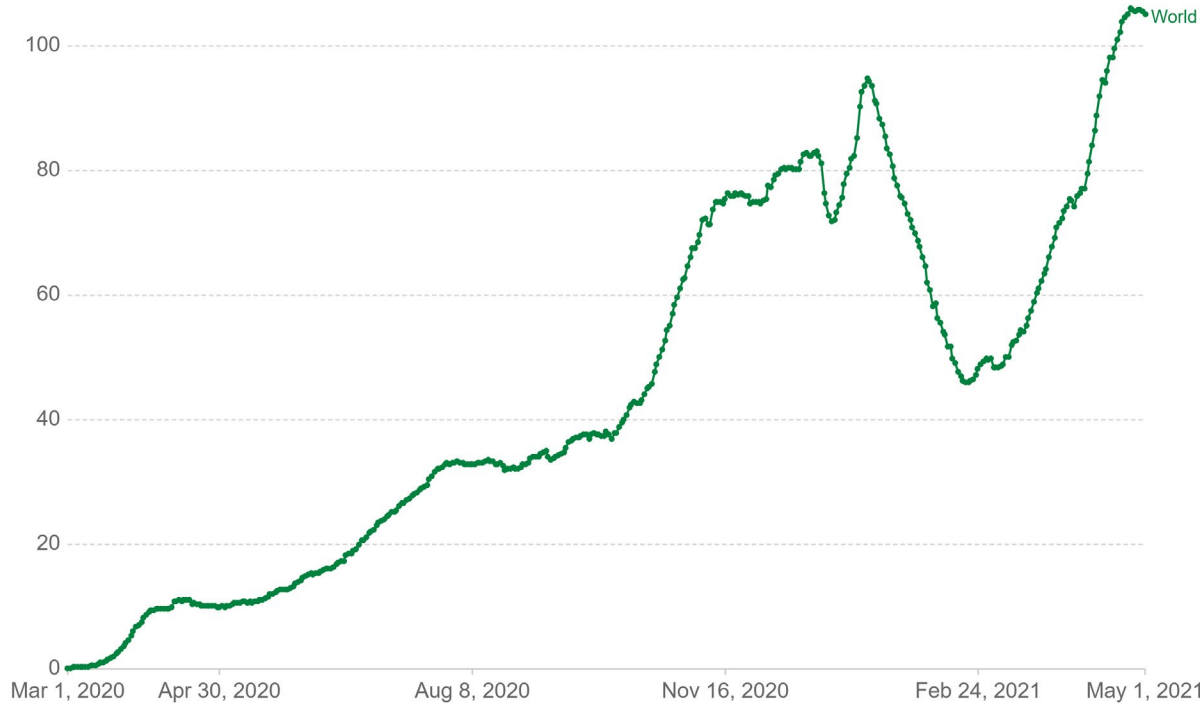


Source: Johns Hopkins University CSSE COVID-19 Data

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Daily new confirmed COVID-19 cases per million people

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Source: Johns Hopkins University CSSE COVID-19 Data

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Questions

Upcoming NEBGH virtual events:

- **May 5:** Benefits Communications: Lessons from a Purpose-Driven Ad Agency
- **Jun. 2:** Hate Crimes and Mental Health: Strategies and Resources for Employers
- **Jun. 10/17:** Where Do We Go From Here? Employee Health & Wellbeing for a New Era