

COVID19 and Rare Neuroimmunologic Disorders

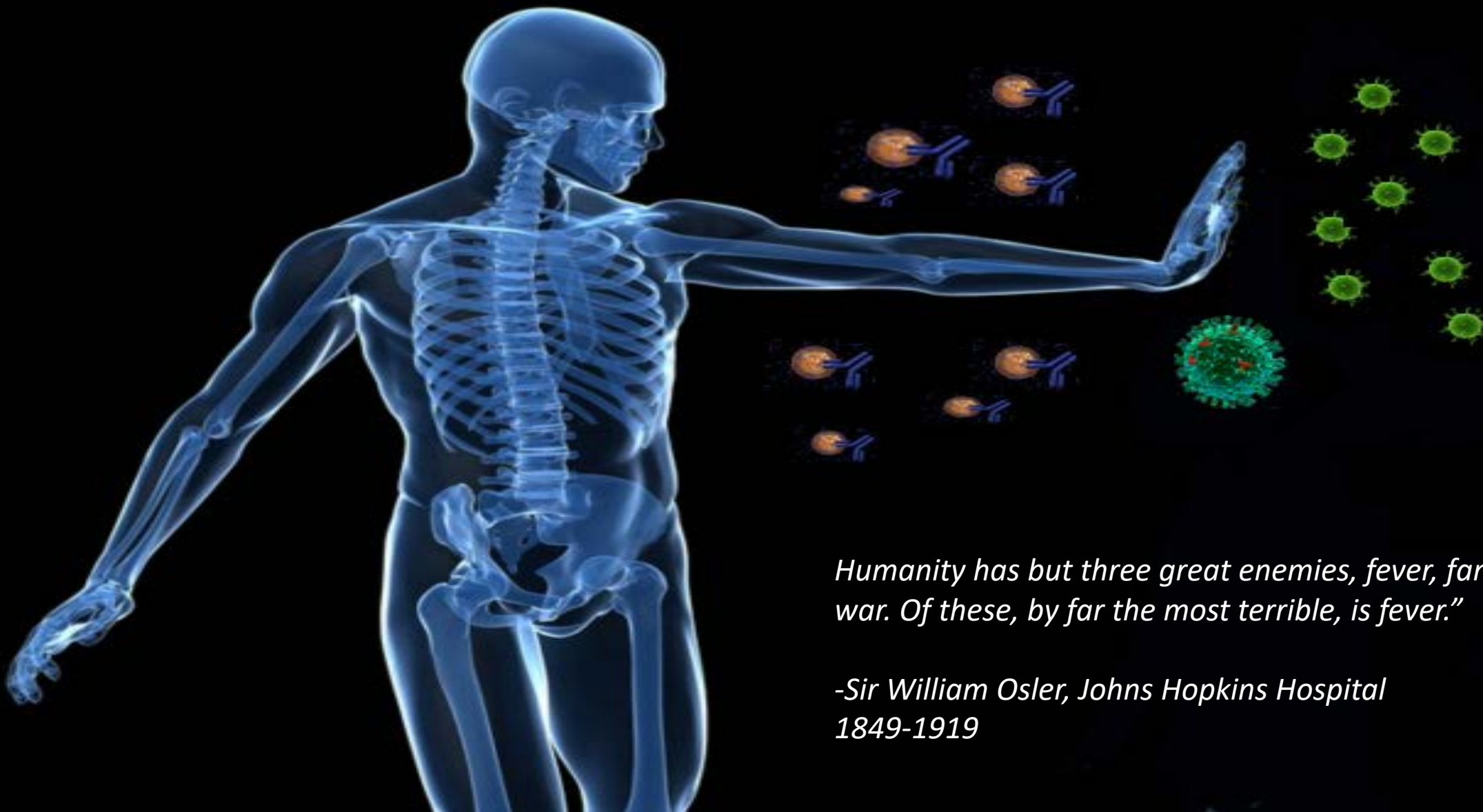
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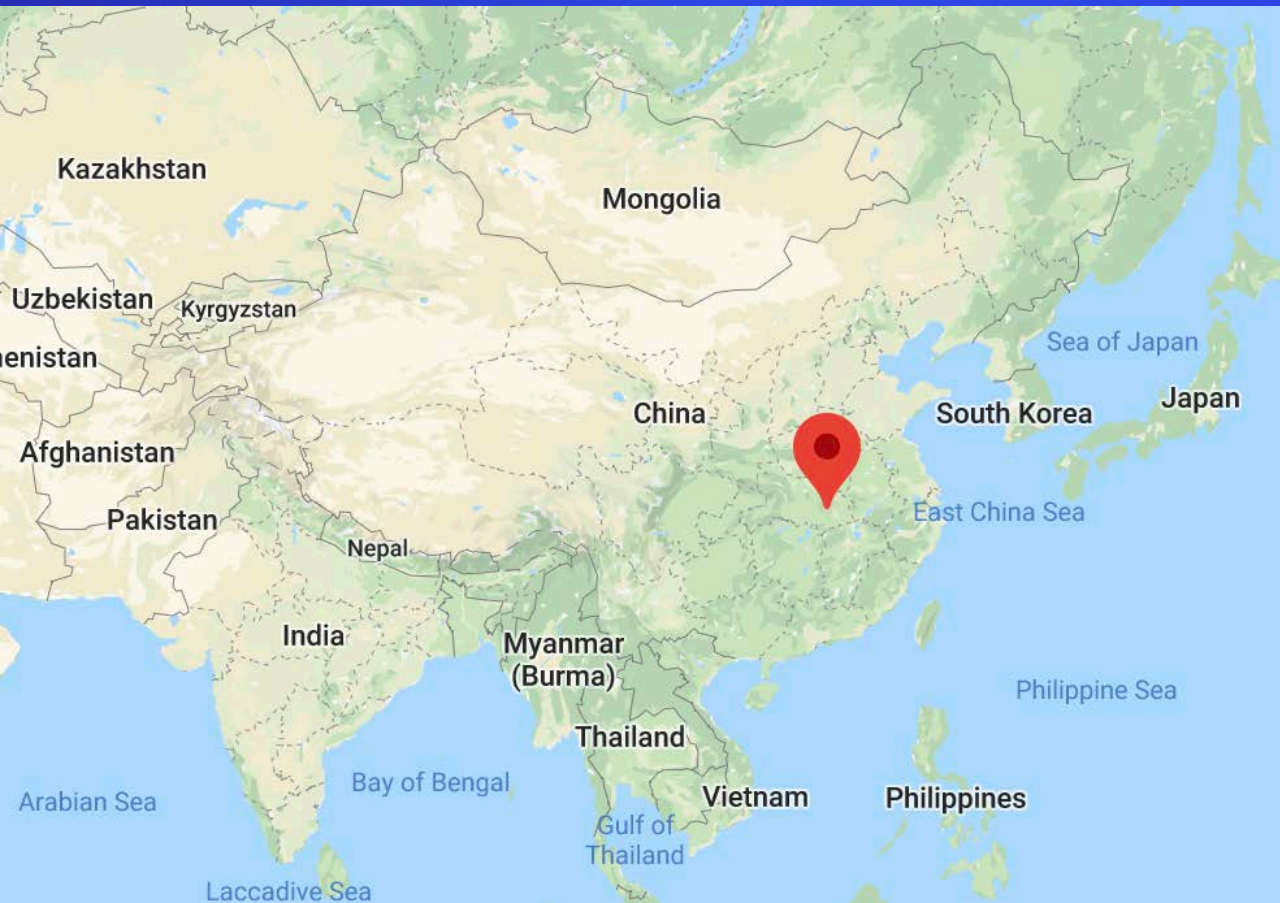
University of Texas Southwestern Medical Center



Humanity has but three great enemies, fever, famine, and war. Of these, by far the most terrible, is fever.”

*-Sir William Osler, Johns Hopkins Hospital
1849-1919*

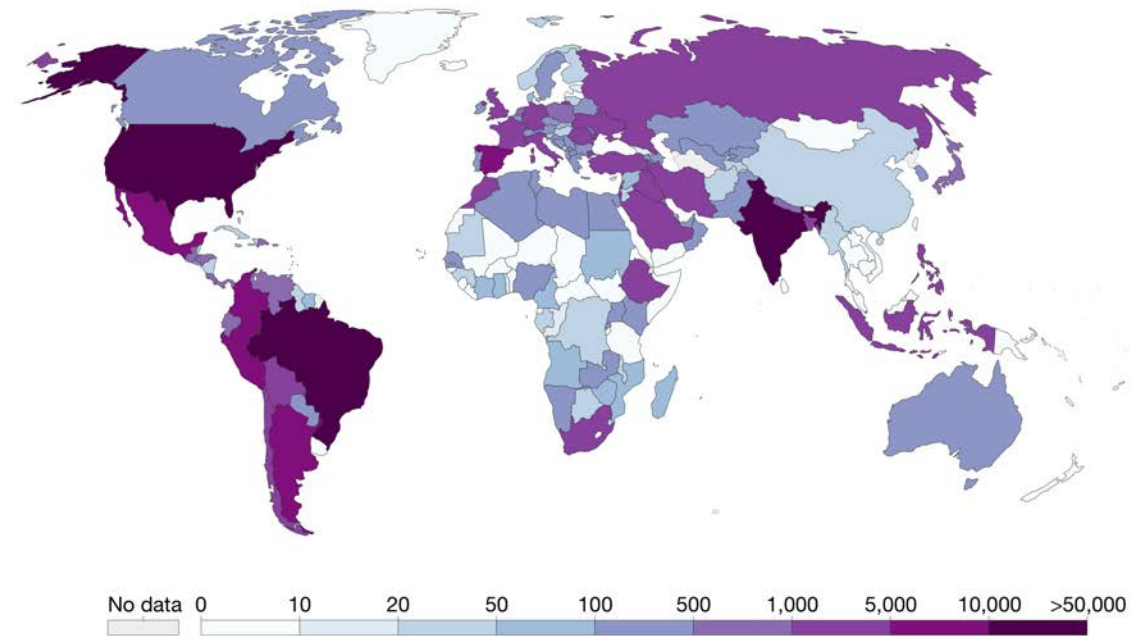
Epidemiology of SARS-CoV2



Daily new confirmed COVID-19 cases, Aug 28, 2020

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: European CDC – Situation Update Worldwide – Last updated 28 August, 10:34 (London time), Official data collated by Our World in Data
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Concerns for our community

- Does COVID cause any of the conditions the SRNA supports?
- Does my diagnosis make it more likely to have a complication from COVID?
- Does my medication make it more likely to have a complication from COVID?
- Does COVID infection cause relapses of my condition?
- When a COVID vaccine gets release, will it be safe for me to take the vaccine?

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Myelin Oligodendrocyte Glycoprotein Antibody–Associated Optic Neuritis and Myelitis in COVID-19

Siwei Zhou, MD, Edward C. Jones-Lopez, MD, Deepak J. Soneji, MD, PhD, Christina J. Azevedo, MD, MPH, and Vivek R. Patel, MD, FRCSC

Case Reports

> BMJ Case Rep. 2020 Aug 11;13(8):e236720. doi: 10.1136/bcr-2020-236720.

▶ Author information ▶ Copy

Acute transverse myelitis in COVID-19 infection

Chian Chiang Nicholas Chow¹, John Magnussen², Jerome Ip^{2 3}, Yuen Su²

Affiliations + expand

> J Neurol Sci. 2020 Jun 18;416:117001. doi: 10.1016/j.jns.2020.117001. Online ahead of print.

PMID: 32784242 PMCID: PMC7418

The association of SARS-CoV-2 infection and acute disseminated encephalomyelitis without prominent clinical pulmonary symptoms

Siamak Abdi¹, Askar Ghorbani², Farzad Fatehi³

Affiliations + expand

PMID: 32590204 PMCID: PMC7301801 DOI: 10.1016/j.jns.2020.117001

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Risk of COVID to our Population

- Diagnoses of TM, AFM, NMOSD, ON and ADEM do not seem to increase the risk of complications if infected with COVID
- Patients with pulmonary complications from their neurologic event *may* have a different risk profile

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Immunosuppressants

- Patients with NMOSD and anti-MOG antibody associated disease may be on an immunosuppressant.
- There is limited data relative to the impact of immunosuppression on COVID risks, but there are concerns and we recommend increased precautions

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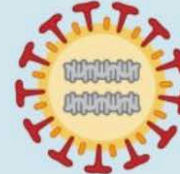

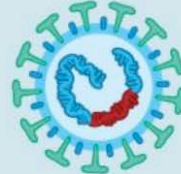
COVID and Relapses

- No known reported cases/data of COVID infection causing a recurrence of a rare neuroimmunological disorder.
- No known population data about COVID causing relapses in MS.

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Types of Vaccines

Types of vaccines	DNA and RNA	Live attenuated	Inactivated	Subunit	Viral vector
					
How it works	This vaccine uses DNA or RNA molecules to teach the immune system to target key viral proteins.	This is a weakened version of the actual virus.	An inactivated vaccine uses the whole virus after it has been killed with heat or chemicals.	This vaccine uses a piece of a virus' surface to focus your immune system on a single target.	This approach takes a harmless virus and uses it to deliver viral genes to build immunity.
Advantages	Easy and quick to design.	Stimulates a robust immune response without causing serious disease.	Safe because the virus is already dead and is easy to make.	Focuses the immune response on the most important part of the virus for protection and cannot cause infection.	Live viruses tend to elicit stronger immune responses than dead viruses or subunit vaccines.
Disadvantages	Never been done before. There are no licensed DNA or RNA vaccines currently in use.	May not be safe for those with compromised immune systems.	Not as effective as a live virus. Some previous inactivated vaccines have made the disease worse; safety for the novel coronavirus needs to be shown in clinical trials.	May not stimulate a strong response, other chemicals may need to be added to boost long-term immunity.	Important to pick a viral vector that is truly safe. An immune response to the viral vector could make the vaccine less effective.
Existing examples	• None	• Measles, Mumps and Rubella • Chickenpox	• Polio	• Pertussis • Hepatitis B • Human papillomavirus (HPV)	• Ebola • Veterinary medicine
Group testing this approach for COVID-19	• Moderna (RNA) • Inovio (DNA)	• Codagenix • Indian Immunologicals Ltd.	• Sinovac • Sinopharm	• Novavax • AdaptVac	• University of Oxford & AstraZeneca • CanSino Biologics • Johnson & Johnson

<https://www.sandiegouniontribune.com>

What can we do?

- Wash your hands
- Social distance
- Wear a mask

2020 RNDS



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Updates in Rehabilitation in Rare Neuroimmune Disorders