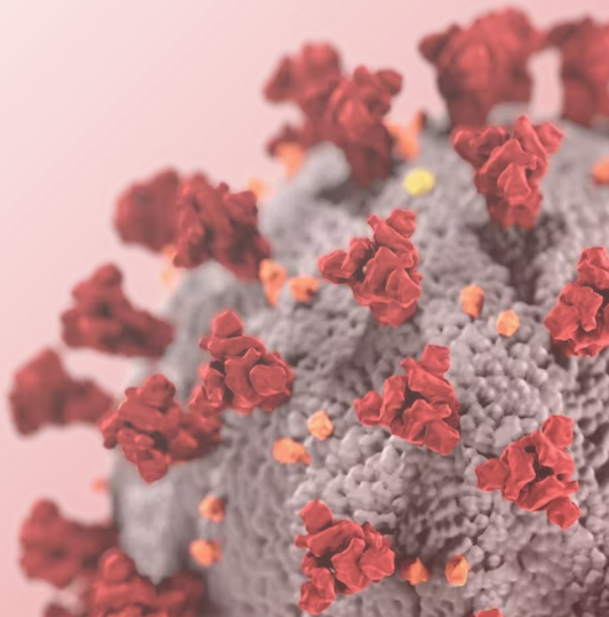
FLCCC ALLIANCE EDUCATIONAL CONFERENCE 2022

UNDERSTANDING & TREATING
SPIKE PROTEIN-INDUCED DISEASES

October 14-16, 2022 • Orlando, Florida

COVID S-Spike pathology (Spikopathy) and chronic disease (re-)activation



Yusuf (JP) Saleeby, MD
PHA Founder & Director
CHM Medical Director

Disclosures

I am owner of Carolina Holistic Medicine

I am Director of the Priority Health Academy [501(c)3 nonprofit]

I sit on the Medical Advisory board of the UK's LDN Research Trust

I am not involved with any Pharmaceutical or Nutraceutical companies

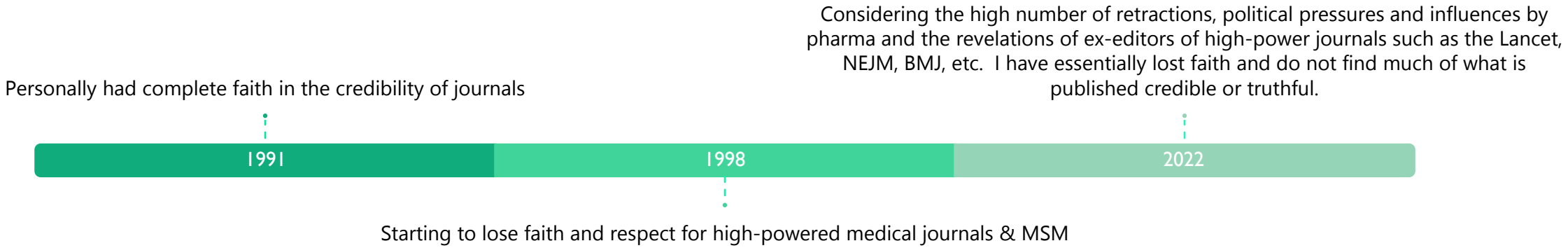
I have no conflicts of interest

Evidence Based Medicine (EBM) disclosure

My position on EBM: Since the promotion of EBM in the early 1990s by luminaries such as Dr. Archibald Cochrane and Dr. David Sachett I had aligned myself to the value of this in medicine. However, in light of what has happened in the world of peer-reviewed medical journals in the past two-decades I cannot in good faith and honesty be compelled to believe that all that is printed in medical and scientific journals is truthful and unbiased. The credibility of high-powered journals such as Lancet, New England Journal of Medicine, British Medical Journal, Journal of the American Medical Association, The Annals of Internal Medicine and others has been lost and their value in the world of medicine is questionable.

The Fathers of EBM: Archibald Cochrane, MD and David Sachett, MD promoted this philosophy which put in the peanut gallery observational findings by practitioners and critical thinking, and skepticism of what was in print. Dr. Sachett felt his medical education and residence was so poor and outdated he entered a 2nd residence late in his career after 20-years practicing.

I always have to say: **"Whose Evidence"** give me a topic and I can find two conflicting peer-review articles in 10 minutes with opposing views and conclusions.



EBM Disclosure References

Reference articles as far back as 2010 regarding corruption of our medical journals as former-editors comment from Lancet, BMJ and NEJM the problem with Pharma's influence. This is nothing new in the past few years, it is a decade+ old problem.

1. https://www.minnpost.com/second-opinion/2010/05/ex-editor-nejm-tells-how-big-pharma-has-corrupted-academic-institutions/ (May 2010)
2. https://ahrp.org/medical-journals-complicit-in-corruption-of-medicine/ (Nov 2010)
3. https://participatorymedicine.org/epatients/2012/03/former-nejm-editors-on-the-corruption-of-american-medicine-ny-times.html (Mar 2012)
4. https://ethicalnag.org/2012/09/26/medical-journals-information-laundering-big-pharma/ (Sept 2012)
5. https://newspunch.com/editor-medical-journal-fraudulent/ (Mar 2018 - regarding vaccines research)
6. https://statmodeling.stat.columbia.edu/2022/02/22/former-editor-of-british-medical-journal-says-we-should-assume-that-the-research-is-fraudulent-until-there-is-some-evidence-to-support-it-having-happened-and-been-honestly-reported/ (Feb 2022) *accessed 10/8/2022*

Learning Points

- **Activation or re-activation of chronic disorders** with COVID, Long-COVID and SARS-coV2-mRNA vaccines
  - Hunt for answers
  - Disorders to consider
  - Layers and overlapping
  - A few alternative (CAM) therapies

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- For Long-COVID some 35% - 82.3% of COVID sufferers will have neurological symptoms (this is only neurological, not counting cardiac, etc.)
- ACE2 Receptors are involved and there are about 72 tissues with ACE2-R we currently know of that are affected.
- There is a Th2-tilt response (Th1:Th2 imbalance)
- There is Loss of T-reg function
- There is a Reduction in Glutathione (GSH)
- Furin cleavage in SARS-S-spike is a factor in increasing pathology (S1 subcomponent)

Liotta EM, Batra A, Clark JR, Shlobin NA, Hoffman SC, Orban ZS, Koralnik IJ. Frequent neurologic manifestations and encephalopathy-associated morbidity in Covid-19 patients. Ann Clin Transl Neurol. 2020 Nov;7(11):2221-2230. doi: 10.1002/acn3.51210. Epub 2020 Oct 5. PMID: 33016619; PMCID: PMC7664279.

Nolen, L.T., Mukerji, S.S. & Mejia, N.I. Post-acute neurological consequences of COVID-19: an unequal burden. *Nat Med* 28, 20–23 (2022). https://doi.org/10.1038/s41591-021-01647-5

Hamming I, Timens W, Bulthuis ML, Lely AT, Navis G, van Goor H. Tissue distribution of ACE2 protein, the functional receptor for SARS coronavirus. A first step in understanding SARS pathogenesis. J Pathol. 2004 Jun;203(2):631-7. doi: 10.1002/path.1570. PMID: 15141377; PMCID: PMC7167720.

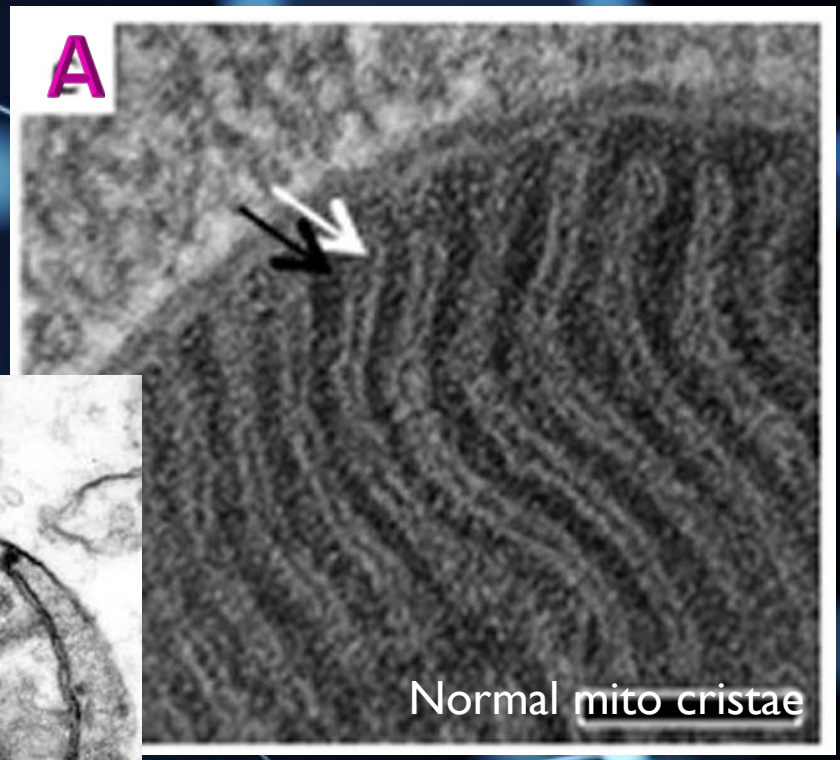


- With COVID infections and the S-spike pathology we see a reduction in Oxygen tension and an increase in the release of Histamine.
- 50% of COVID ICU survivors go on to PASC. 30+% of outpatient COVID victims have PASC.
- This may be the issues with the vaccine injured as well.
- Gives rise to MCAS, CIRS, MSIDS [call it what you like].

DAMPS and PAMPS

DAMPS and PAMPS are disease modulating patterns: Damage or Pathogen associated molecular patterns which result in neuro inflammation and dysregulation.

Mitochondrial dysregulation occurs.



[A]: Jiang, Yf., Lin, Ss., Chen, Jm. *et al.* Electron tomographic analysis reveals ultrastructural features of mitochondrial cristae architecture which reflect energetic state and aging. *Sci Rep* **7,** 45474 (2017).

[B]: Baloyannis, S. J. (2019). Mitochondria and Alzheimer's Disease: An Electron Microscopy Study. In (Ed.), Redirecting Alzheimer Strategy - Tracing Memory Loss to Self Pathology. IntechOpen.

MAVS

Mitochondrial antiviral signaling protein (MAVS) MAVS is also known as IFN-β promoter stimulator I (IPS-1), or virus induced signaling adaptor (VISA). It is a protein that is essential for antiviral innate immunity. MAVS is located in the inner membrane of the mitochondria, peroxisomes, and endoplasmic reticulum (ER).

Upon viral infection, a group of cytosolic proteins will detect the presence of the virus and bind to MAVS, thereby activating MAVS. The activation of MAVS leads the virally infected cell to secrete cytokines. This induces an immune response which kills the host's virally infected cells, resulting in clearance of the virus. Cytokine storms however can produce collateral damage.

MAVS Part II

Mitochondrial antiviral signaling protein (MAVS) negatively affected by SARS-coV-2 virus and M-protein.

Can affect TLRs (TLR4), NF-kB, NLRP3, RIG-1 and others. Need Zinc and vitamin A to keep under control. Aid us in fighting off viral infections and attacks.

SARS-CoV-2 membrane glycoprotein **M** as a negative regulator of the innate immune response.

- Zotta, A., Hooftman, A. & O'Neill, L.A.J. SARS-CoV-2 targets MAVS for immune evasion. *Nat Cell Biol* **23,** 682–683 (2021).
- Fu, YZ., Wang, SY., Zheng, ZQ. *et al.* SARS-CoV-2 membrane glycoprotein M antagonizes the MAVS-mediated innate antiviral response. *Cell Mol Immunol* **18,** 613–620 (2021).

HERV

HERVs **(Human endogenous Retrovirus particles)** – Fragments of ancient retroviruses that have been woven into human DNA. Endogenous retroviruses can play an active role in **shaping genomes**. About **8% of our human DNA is made up of HERVs**. Most ancient HERVs tend not to be pathological, but more recent HERV incorporations can lead to pathology in humans.

HERVs activated by COVID caused by but not limited to EBV, CMV, influenza virus and result in conditions that appear to be MS, Alz Dz, Schizophrenia. HERV expression by COVID infection can be seen in T-lymphocytes associated with poor respiratory outcomes.

HERV-W (a type) protein is linked to post-COVID neurological symptoms. If we are able to reduce expression, we can get a handle on HERV associated inflammation. Targeting EBV, CMV, Herpes zoster, etc.

T2DM

- Unfortunately, those with T2DM are more affected. DAMPS occur in greater numbers with folks with glucose metabolism dysregulation.
    - Shin JJ, Lee EK, Park TJ, Kim W. Damage-associated molecular patterns and their pathological relevance in diabetes mellitus. Ageing Res Rev. 2015 Nov;24(Pt A):66-76.
- Those with anosmia have white matter changes much like those seen with Alzheimer's disease.
    - Tian, Qu et al. Olfaction, cognitive impairment, and PET biomarkers in community-dwelling older adults. *Journal of Alzheimer's Disease*. 2022;86(3):1275-1285.
- Loss of Thymus T-cell and T-regs. Increase in histamine.
    - Branco ACCC, Yoshikawa FSY, Pietrobon AJ, Sato MN. Role of Histamine in Modulating the Immune Response and Inflammation. Mediators Inflamm. 2018 Aug 27;2018:9524075.

SARS example

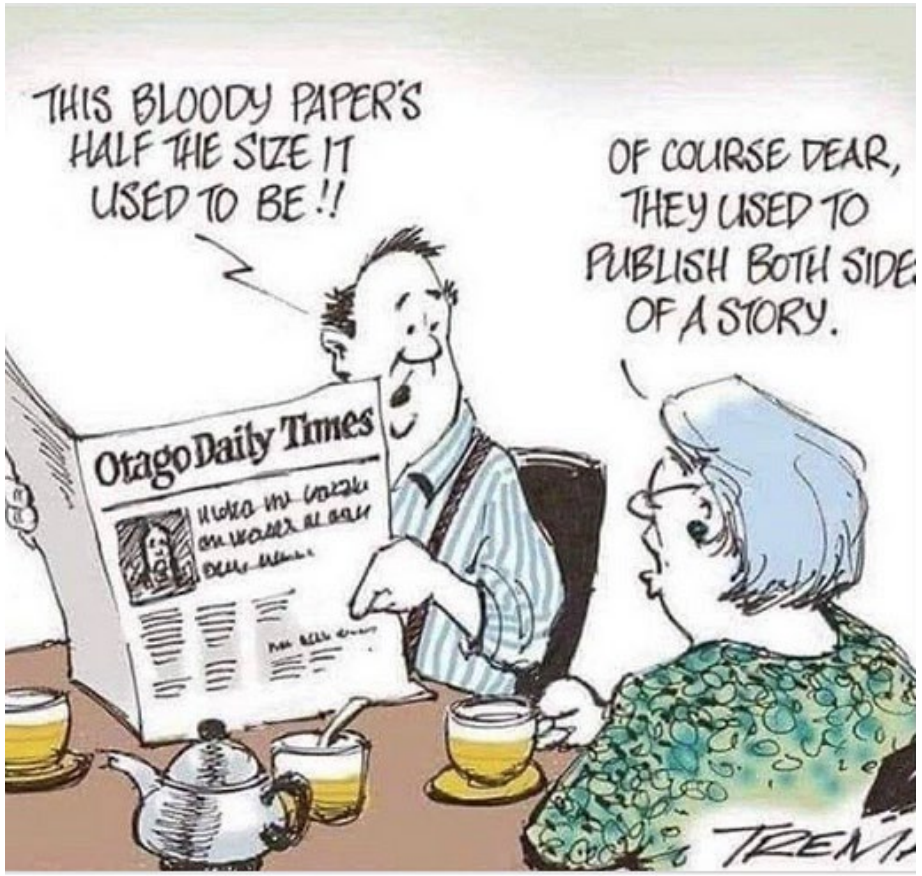
What we witnessed 20-yrs ago

Increase in T2DM seen years after infection.

Chinese SARS patients had an increase in T2DM/IRS 12-years later. Hyperinsulinemia, IR, T1DM and T2DM

50% of these patients without prior history of developed T2DM

- Yang JK, Lin SS, Ji XJ, Guo LM. Binding of SARS coronavirus to its receptor damages islets and causes acute diabetes. Acta Diabetol. 2010 Sep;47(3):193-9.



The Scientist JULY 17, 2020 issue:

Could COVID-19 Trigger Chronic Disease in Some People?

A handful of viruses have been associated with long-term, debilitating symptoms in a subset of those who become infected. Early signs hint that SARS-CoV-2 may do the same.

https://www.the-scientist.com/news-opinion/could-covid-19-trigger-chronic-disease-in-some-people-67749

CNN Health March 22, 2022 issue:

How long Covid concerns are ramping up progress on other chronic diseases

By Jessica DuLong, CNN

https://www.cnn.com/2022/03/22/health/long-covid-chronic-illness-autoimmune-wellness

Activation or Re-activation of chronic diseases after COVID (or vaccination)

- Mechanism of action?
- Once viral RNA or proteins slip inside immune cells—either through infection or other uptake mechanisms—they could disrupt mitochondrial function, altering the cells' metabolism and function and making them more likely to trigger autoimmune reactions. S-spike (S1) does same.
- Probably many more MOA yet to be discovered. Stay tuned.

- Alyammahi SK, Abdin SM, Alhamad DW, Elgendy SM, Altell AT, Omar HA. The dynamic association between COVID-19 and chronic disorders: An updated insight into prevalence, mechanisms and therapeutic modalities. Infect Genet Evol. 2021 Jan;87:104647.
- Proal Amy D., VanElzakker Michael B., Long COVID or Post-acute Sequelae of COVID-19 (PASC): An Overview of Biological Factors That May Contribute to Persistent Symptoms, Journal of Frontiers in Microbiology, Vol 12, (2021), https://www.frontiersin.org/articles/10.3389/fmicb.2021.698169

Effect (Focus on Neuro)

Reduction in O2

Neuroinflammation

Microhemorrhages

Silent Hypoxia results in increased histamine release via mast cell activation.

12.5% in one study shows cognitive impairment, in another study it is much higher.

Depression / Anxiety disorders

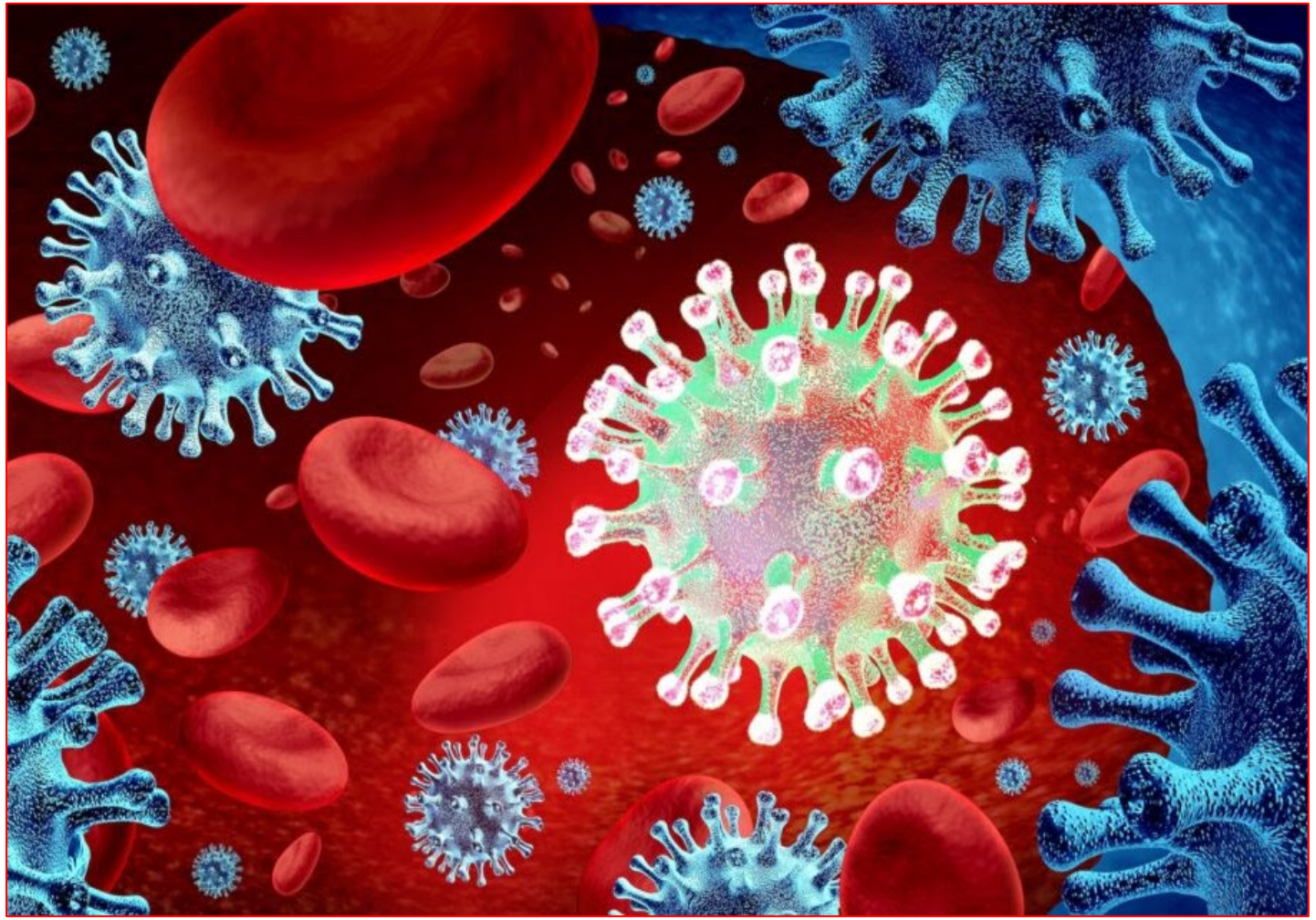
Sleep disruption

Many other symptoms/syndromes and conditions

Can be seen up to 16 months after COVID infection or vaccine

- Dondaine, T., Ruthmann, F., Vuotto, F. *et al.* Long-term cognitive impairments following COVID-19: a possible impact of hypoxia. *J Neurol* **269,** 3982–3989 (2022).
- https://www.uptodate.com/contents/covid-19-evaluation-and-management-of-adults-with-persistent-symptoms-following-acute-illness-long-covid#H1200905678

Activation or Re-activation of chronic diseases after COVID (or vaccination)



Is the PASC (or Long-Haulers/Long-COVID) a pathology itself or is it an activation of an underlying etiology? Or a little of both?

Can the SARS-coV-2 virus activate an occult disorder or reactivate a known existing chronic illness?

Can this explain why some are having symptoms and others do not?

What do we know thus far?

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Activation or Re-activation of chronic diseases after COVID (or vaccination)

- Vector borne illnesses such as Lyme (Borrelia) and other tick/flea/mosquito borne infectious diseases referred to as co-infections.
- "Coinfections" such as Babesia, Bartonella, Ehrlichia and others.
- Viral infections (EBV, CMV, HHV6 [A & B], Parvo, others)
- Chlamydia and Mycoplasma infections; PANS and PANDAS
- Intestinal Permeability (Leaky Gut) and Dysbiosis / SIBO
- Environmental Toxin burden (Heavy Metals, PFOS, PCB, VOA, Glyphosate related)
- Traumatic Brain Injury (Post-Concussion Syndrome)

Activation or Re-activation of chronic diseases after COVID (or vaccination)

- ME/CFS (Myalgic Encephalomyelitis/Chronic Fatigue Syndrome) &/or Fibromyalgia
- Mycotoxin Illness / Chemical Sensitivity / MCAS / CIRS
- Breast Implant Illness (BII) and many other Autoimmune disorders
- CranioCervical Instability, (CCI), Postural orthostatic tachycardia syndrome (POTS), Tethered Cord Syndrome, Chiari Malformation, Complex Regional Pain Syndrome (CRPS), Ehlers-Danlos Syndrome (EDS)
- Malignancy/neoplasia

Word on the street (What does the Mayo Clinic have to say)

- People who had severe illness with COVID-19 might experience organ damage affecting the:
  - **Heart and vascular tissue**
  - **Lungs**
  - **Kidneys**
  - **Skin**
  - **Brain**
  - **Immune system dysregulation (Inflammation pathways)**

    - *Not clear how long these effects might last.*

- https://www.mayoclinic.org/diseases-conditions/coronavirus/in-depth/coronavirus-long-term-effects/art-20490351 (accessed 10/2022)

Having underlying chronic illness makes one more susceptible to COVID and COVID bad outcomes

With a COVID infection we can witness an untoward effect on existing chronic illness

Mechanism for activation of existing known or unknown chronic illness and pro-inflammatory conditions (next slide)

- Alyammahi SK, Abdin SM, Alhamad DW, Elgendy SM, Altell AT, Omar HA. The dynamic association between COVID-19 and chronic disorders: An updated insight into prevalence, mechanisms and therapeutic modalities. Infect Genent Evol. 2021 Jan;87:104647.

MOA for activation / reactivation

The multi-organ involvement of SARS-CoV-2 in patients summarizing the hallmarks of the viral infection across different systems.

Disease	SARS-CoV-2 targets	SARS-CoV-2 mechanism of action in the comorbidity	SARS-CoV-2 induced symptoms	Ref.
Diabetes	ACE2 in pancreatic beta cells	Impairment of the glucose-stimulated insulin secretion Cytokine storm	Diabetic ketoacidosis	(Chee et al., 2020; Lyu et al., 2018)
Cardiovascular diseases	ACE2 expressing cardiomyocytes	Direct cardiomyocytes infection Th1 response Cytokine storm Increase IL6, Decrease plakoglobin	Arrythmia, oedema, electrolyte imbalance, myocarditis, myocardial infarction	(Guo et al., 2020a; Siripanthong et al., 2020)
Respiratory diseases	ACE2-expressing pneumocytes	Cytokine storm	ARDS, pulmonary thrombosis, pulmonary fibrosis	(Xu et al., 2020b; Spagnolo et al., 2020)
Renal Disease	ACE2 expressing renal tubules	Cytokine storm, organ cross-talk, lung – kidney axis	AKI	(Wrapp et al., 2020; Panitchote et al., 2019)
Liver Disease	ACE2 expressing hepato-endothelial cells, and bile duct	Cytokine storm	Increase in AST, ALT	(Hamming et al., 2004; Duan et al., 2003)
Blood disorders	ACE2 expressing Endothelial cells	Cytokine storm, elevated IL-6, D-dimer, CRP, fibrinogen, Coagulation	Disseminated intravascular coagulation	(Li et al., 2020b; Connors and Levy, 2020)

Open in a separate window

Abbreviations: ACE2, Angiotensin-converting enzyme 2; IL-6, Interleukin 6; ALT, alanine aminotransferase; AST, aspartate aminotransferase; CRP, C-reactive protein; AKI, acute kidney injury; ARDS, Acute respiratory distress syndrome.

MOA for activation / reactivation

- Detrimental Effects of S-Spike Protein (S_1)
  - SARS-CoV-2 Enters into target cells
  - Endothelial damage
  - Proinflammatory cytokine release
  - TLR activation
  - Microglia stimulation
  - Molecular mimicry with chaperon and heat shock proteins

- Table I. TC Theoharides , P Conti. Be aware of SARS-CoV-2 spike protein: There is more than meets the eye. *Journal of Biological Regulators and Homeostatic Agents*. 2021, 35(3): 833-838 https://doi.org/10.23812/THEO_EDIT_3_21

That nasty S-Spike Protein

A paper reported that certain antibodies in the blood of infected patients appear to change the shape of the spike protein so as to make it more likely to bind to cells [1,2].

A 2nd paper showed that the spike protein by itself (*without being part of the corona virus*) can damage endothelial cells and disrupt the blood-brain barrier [3].

These findings may be even more relevant to the pathogenesis of long-COVID syndrome that may affect as many as 50% of those infected with SARS-CoV-2. In COVID-19, a response to oxidative stress is required by increasing anti-oxidant enzymes.

1. TC Theoharides , P Conti. Be aware of SARS-CoV-2 spike protein: There is more than meets the eye. *Journal of Biological Regulators and Homeostatic Agents*. 2021, 35(3): 833-838

2. Paladino L, Vitale AM, Caruso BC et al. The role of molecular chaperones in virus infection and implications for understanding and treating COVID-19. J Clin Med 2020; 9(11).

3. Lei Y, Zhang J, Schiavon CR, et al. SARS-CoV-2 Spike protein impairs endothelial function via downregulation of ACE 2. Circ Res 2021; 128(9):1323-6.

Crossing the BBB and effect on Mast Cells and TLRs

- S-spike protein shares antigenic epitopes with human molecular chaperons resulting in autoimmunity (reported in one study as having effect against endothelial cells)
- S-spike protein can alter the blood-brain barrier (BBB); The S1-protein promotes loss of barrier ability in humans leading to neuroinflammation (blood vessel damage and inflammation but no infection) in COVID-19 patient brains.
- SARS-coV-2 and other viruses lead to mast cell activation syndrome (MCAS); mast cells are involved in Long-COVID. Mast cells activated microglia in the brain leading to neuroinflammation.
- Microglia express Toll-like receptors (TLRs) activated by damage associated molecular patterns (DAMPs)
    - *References next slide*

- Buzhdygan TP, DeOre BJ, Baldwin-Leclair A, et al. The SARS-CoV-2 spike protein alters barrier function in 2D static and 3D microfluidic in-vitro models of the human blood-brain barrier. Neurobiol Dis 2020; 146:105131.

- Rhea EM, Logsdon AF, Hansen KM, et al. The S1 protein of SARS-CoV-2 crosses the blood-brain barrier in mice. Nat Neurosci 2021; 24(3):368-78.

- Tremblay ME, Madore C, Bordeleau M, Tian L, Verkhratsky A. Neuropathobiology of COVID-19: The role for glia. Front Cell Neurosci 2020; 14:592214.

- Lee MH, Perl DP, Nair G et al. Microvascular injury in the brains of patients with Covid-19. N Engl J Med 2021; 384(5):481-3.

- Helms J, Kremer S, Merdji H et al. Neurologic features in severe SARS-CoV-2 Infection. N Engl J Med 2020; 382(23):2268-70.

Spike protein pathology and need for early anti-inflammatory agents.

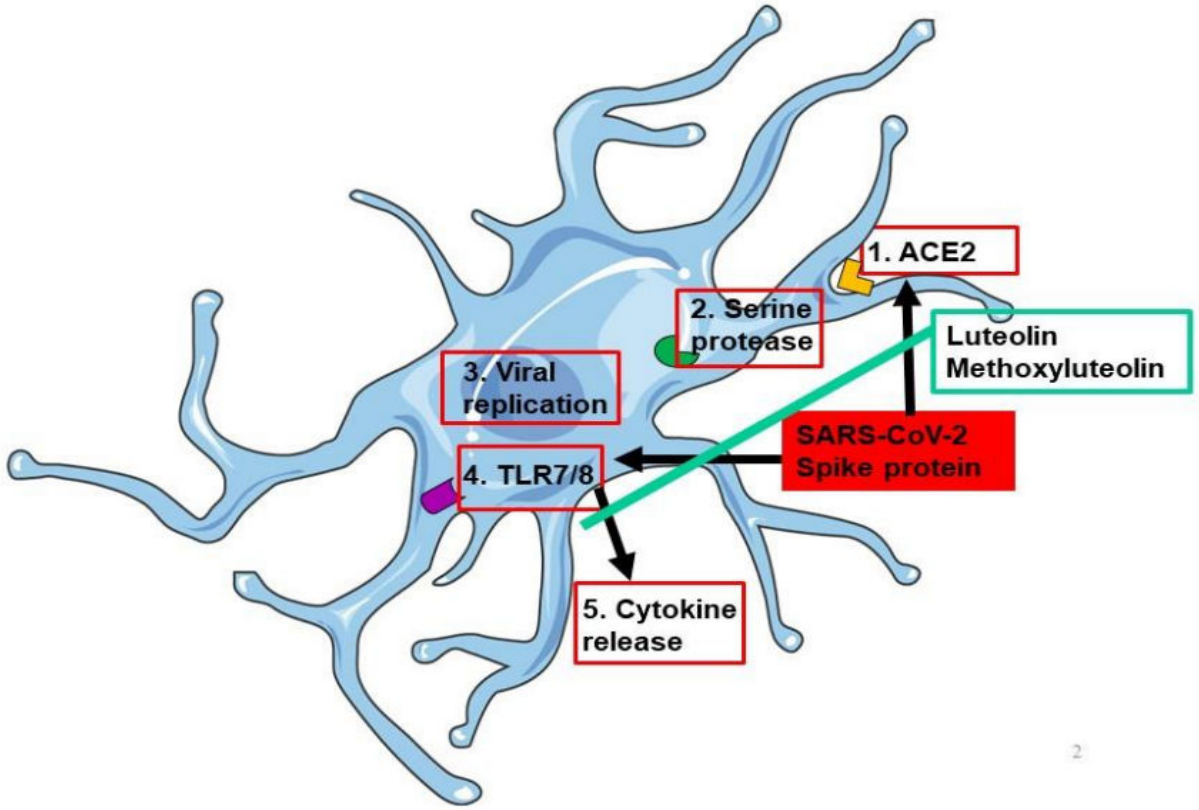


Fig. 1. *Diagrammatic representation of how luteolin and methoxyluteolin could block SARS-CoV-2 Spike protein from stimulating microglia. The biologic action of SARS-CoV-2 Spike protein could be via different steps (red rectangles): (1) Spike protein binding to its ACE2 receptor; (2) Activation of serine proteinases responsible for "priming" the Spike protein for entry into the cells; (3) Viral replication within the nucleus; (4) Activation of TLR7/8 found in the endosomes by single-stranded RNA viruses like SARS-CoV-2; (5) Production of proinflammatory cytokines. Luteolin and methoxyluteolin could protect against SARS-CoV-2 Spike protein-associated damage by interfering (green line) at practically all steps.*

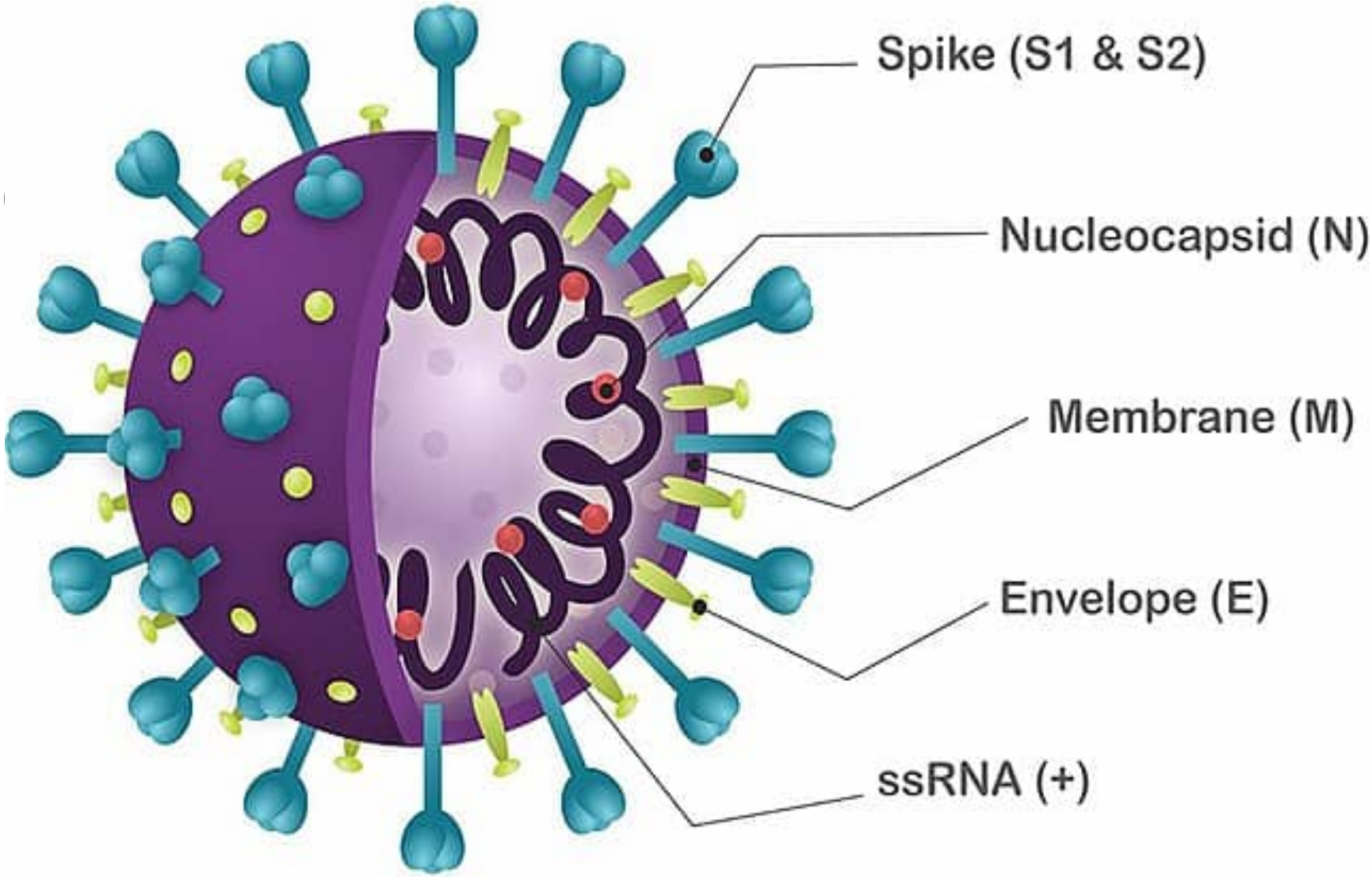
Theoharides TC. COVID-19, pulmonary mast cells, cytokine storms, and beneficial actions of luteolin. Biofactors. 2020 May;46(3):306-308.

Spike brothers: S1 & S2

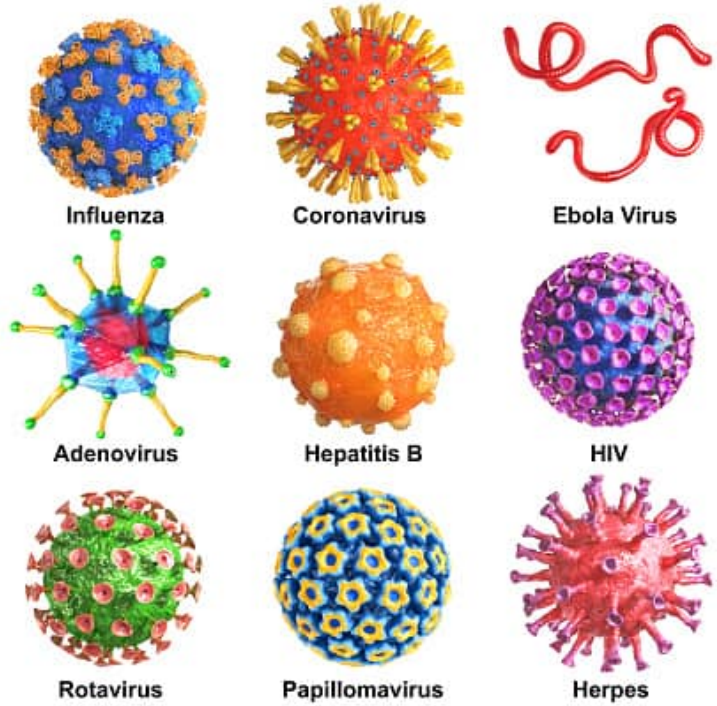
- The spike (S) protein of SARS-CoV-2, which plays a key role in the receptor recognition and cell membrane fusion process, is composed of two subunits, S1 and S2. The S1 subunit contains a receptor-binding domain that recognizes and binds to the host receptor angiotensin-converting enzyme 2, while the S2 subunit mediates viral cell membrane fusion by forming a six-helical bundle via the two-heptad repeat domain.

- Huang, Y., Yang, C., Xu, Xf. *et al.* Structural and functional properties of SARS-CoV-2 spike protein: potential antivirus drug development for COVID-19. *Acta Pharmacol Sin* **41**, 1141–1149 (2020)

- Zheng J. SARS-CoV-2: an emerging coronavirus that causes a global threat. *Int J Biol Sci*. (2020) 16:1678–85


Spike (S1 & S2)
Nucleocapsid (N)
Membrane (M)
Envelope (E)
ssRNA (+)

SARS-CoV-2


Influenza
Coronavirus
Ebola Virus
Adenovirus
Hepatitis B
HIV
Rotavirus
Papillomavirus
Herpes

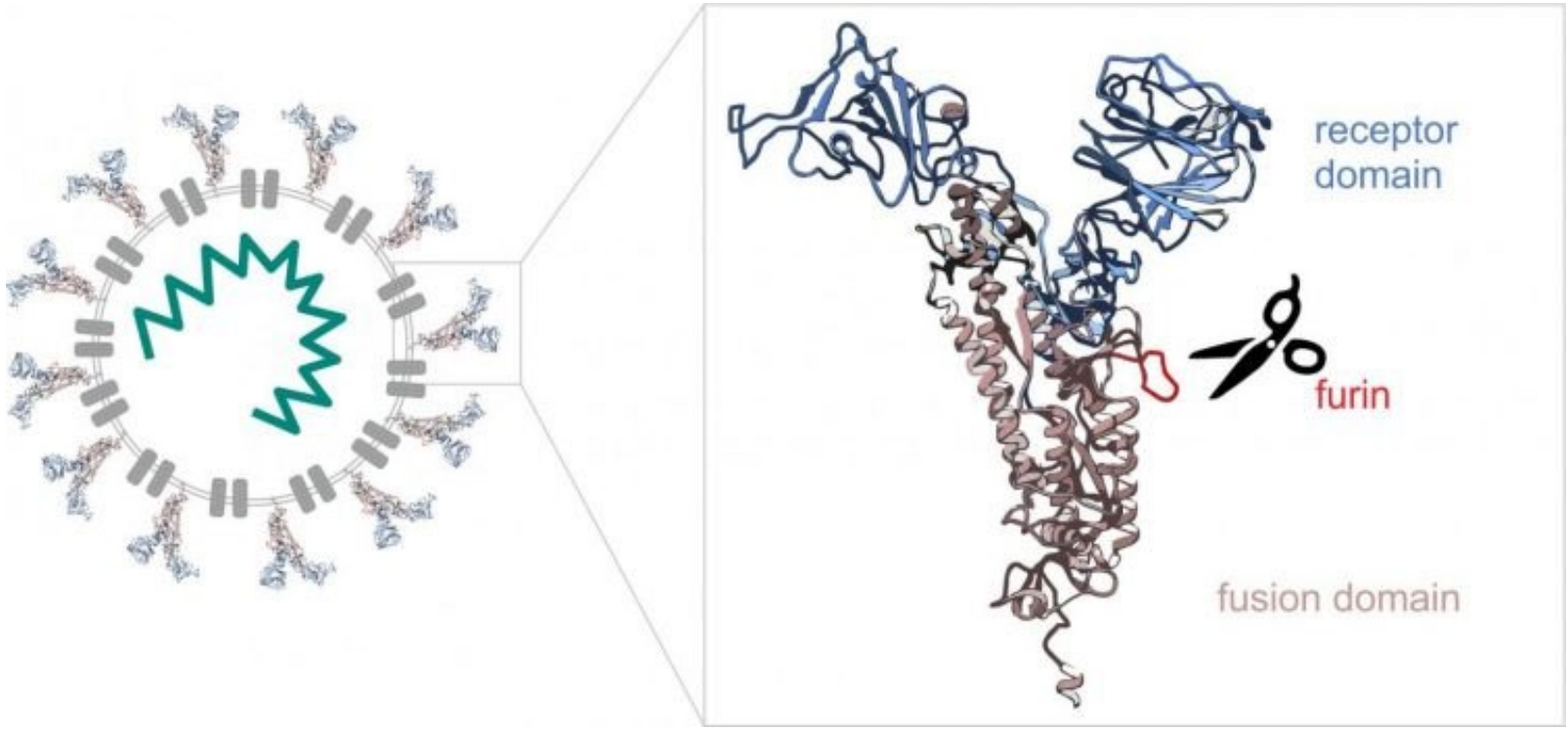
Spike brothers: S1 & S2 (part 2)

- S-spike is cleaved into S1 and S2 by host **Furin** Golgi-resident proteases. **Trypsin** is also involved in the process of cleavage, making the S1 spike portion more contagious, pathogenic and able to bind to host cells (ACE2-R) for more rapid viral fusion (binding of viral membrane to host cell membrane). The S2 subunit (embedded into the viral envelope) is involved in fusion and entry by bringing host cells and virus together. The spike protein of SARS-CoV-2- S, has a 10 to 20 times greater affinity for ACE2-R than that of SARS-CoV(1), which may contribute to greater infectivity.

- Huang, Y., Yang, C., Xu, Xf. *et al.* Structural and functional properties of SARS-CoV-2 spike protein: potential antivirus drug development for COVID-19. *Acta Pharmacol Sin* **41**, 1141–1149 (2020)
- Zheng J. SARS-CoV-2: an emerging coronavirus that causes a global threat. *Int J Biol Sci*. (2020) 16:1678–85

Our current Sl-subunit is much more pathological than Sls of past coronaviruses

- Furin cleavage motif makes for a more aggressive virus seen with SARS-CoV-2 versus other CoVs. This S1 subcomponent is the pathological aspect.
- Why was a replicating vaccine developed using this subunit?



https://www.drugtargetreview.com/news/76116/furin-cleavage-motif-makes-sars-cov-2-more-aggressive-than-other-covs-find-scientists/

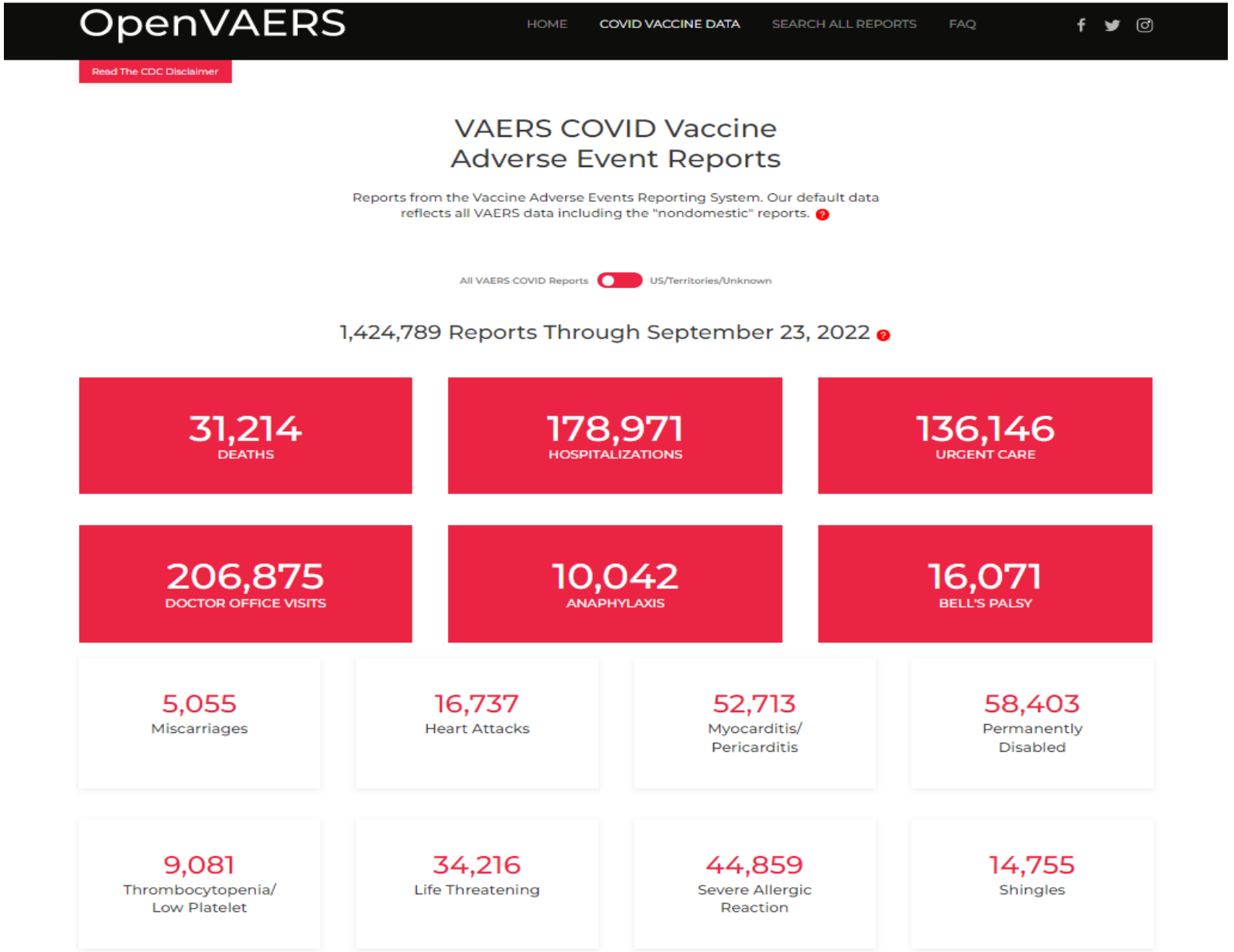
mRNA Tx was Total S-spike, not S1 or S2

- Vaccine development or immunotherapy quite possibly should have focused on less pathological S2-component vs S1.
- Insult is similar regardless of how you get the S-spike (Infection with coronavirus or inoculation with mRNA "vaccines")
- Amplification of effect may be worse given the mechanism of action of the mRNA therapy.

What does the CDC, NIH, WHO and MSM say?

- Mass disinformation and misinformation campaign to convince public of the safety of the vaccines and how effective they are in lowering incidence of infection and/or mitigating disease.
- **Truth is quite the opposite:**

- https://www.openvaers.com/covid-data
  - Date Acquired 10//9/2022




May
95% Protection
World Health Organization
Jun
70% Protection
Jul
50% Protection
Aug
No protection, but reduces the spread
Sep
Doesn't reduce the spread, but reduces severity
Oct
Doesn't reduce severity, but reduces hospitalizations
Nov
Doesn't reduce hospitalizations, but you aren't going to die
Dec
You die, but you go to heaven

What other researchers/sources have to say:

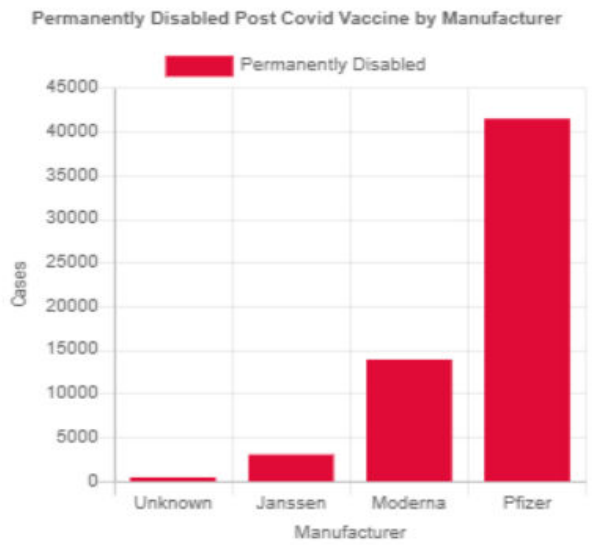
OpenVAERS

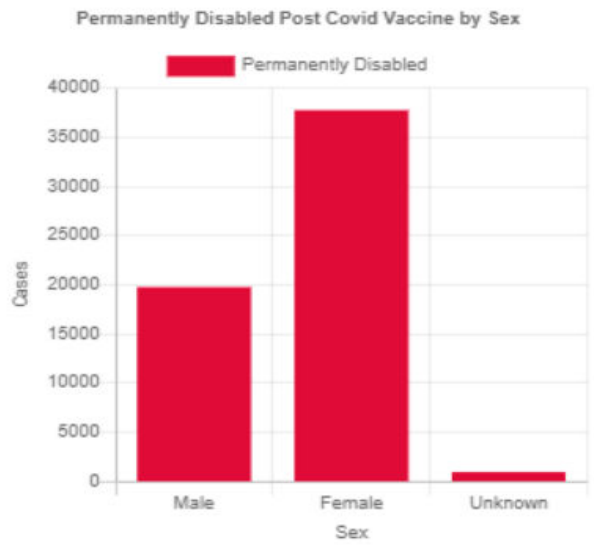
HOME COVID VACCINE DATA SEARCH ALL REPORTS FAQ

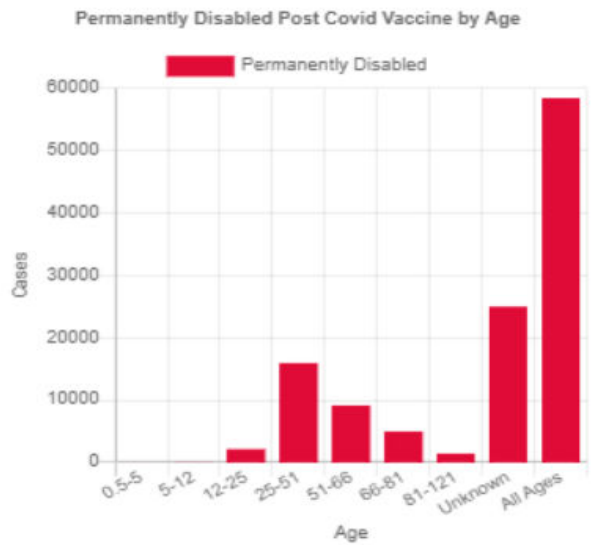
Read The CDC Disclaimer

VAERS COVID Vaccine Permanently Disabled Reports

Through September 23, 2022







https://www.openvaers.com/covid-data/disabled acquired 10/9/2022

Activation or Re-activation of chronic diseases after COVID (or vaccination)

- What is SADS?
- Although commonly referred to as **Sudden Adult Death Syndrome (SADS)**, it is also known by the term **Sudden Arrhythmic Death Syndrome. ICD-10: R96.0**
- Dx and Code associated with unknown etiology of sudden cardiac death. Many COVID-Vaccine related deaths are classified by those in denial of true cause of death.

Activation or Re-activation of chronic diseases after COVID (or vaccination)

- **Five Case studies:**

- Anaphylaxis after 1st Pfizer Vaxx: $8K ER bill, EpiPen, etc. Lyme Pt and did recover
- Post Vaxx loss of ability to walk and other neurological disorders (Parkinsonian like)- slow recovery
- Post Vaxx Autoimmune (T1DM) after 2nd Pfizer vaxx
- Post Vaxx Neurological; 1st vaxx – flaccidity and twitching – Lyme Pt; near full recovery but long course.
- Post Vaxx Mood/Anxiety disorder: After 2 primary vaxx and one booster… extreme Anxiety/Agitation and presumed underlying Tick-Borne Illness (clinical Dx, serology pending).

Activation or Re-activation of chronic diseases after COVID (or vaccination)

- **Anaphylaxis after 1st Pfizer Vaxx: $8K ER bill, EpiPen, etc. Lyme Pt and did recover**

51 YO WF long standing history of Chronic Lyme Disease for over 20 years;

In 2020 she was considered in a state of "remission" with few symptoms but requiring maintenance of nutraceuticals to support immune system. Several chronic issues: Multiple Chemical Sensitivity; Several Food Allergies, Chronic Heavy Metal Toxicity; Viral Burden (EBV); Mood disorder; Hypothyroidism;

November 11, 2021: Received a second Pfizer Vaccine – within 30-minutes had anaphylaxis reaction requiring immediate EpiPen self-administration, EMS and EM visit for several hours, IV steroids, etc. Finally cleared to go home. Visit was $8,000.

Follow up Clinic visit: November 17, 2021; recovered from acute aspect of vaccine reaction but having a hard time recovering with brain fog and symptoms of "Lyme and Viral burden" breaking through. Added Ketotifen and Melatonin to her existing regimen (to counter MCAS)

Last visit July 13th, 2022: Back in remission state (related to CLD); Still dealing with fatigue; home FIR sauna, Has softshell HBOT at home. Uses daily. IV GSH.

Activation or Re-activation of chronic diseases after COVID (or vaccination)

- **Post Vaxx loss of ability to walk and other neurological disorders (Park's like)- slow recovery**
- 70 YO WF relatively good health until her 2nd COVID vaccine (Pfizer #1: 2/26/2021; #2: 3/19/2021 felt badly right away bur much worse 3/26/2021 necessitating Neuro work up, Lumbar puncture, CT, MRI; 2nd opinion from Duke University; disagreement about Parkinsonism or not; Park. meds may have made her symptoms worse.
- Started with our center June 8th, 2021: Presented in wheelchair unable to ambulate; Flat affect; Parkinsonian in movement disorder and resting tremor; Started LDN, Other supplements to support.
- Lost F/u for a few months as was with Neuro and started on Rytary® (Carbidopa-Levodopa) which after escalating her dose make her worse; She returned to our center after 3 months to continue CAM protocols. Diagnosed with LYME disease (chronic) 5/17/2022 and started on Doxy/Ceftin regimen plus herbal tinctures. Regained ambulatory function, wheelchair to walker to cane and then finally walking without assistance; slow gait, resting tremor on & off. IVM started 8/10/2021 and continued til 5/17/2022 EOD dosing for 80-more days. Family indecisive about what path to take; seeking 3rd opinion a Mayo Clinic in September 2022. Condition waxes and wanes.

Activation or Re-activation of chronic diseases after COVID (or vaccination)

- **Post Vaxx Autoimmune (T1DM) after 2nd Pfizer vaxx**
- 67 YO WF with Hx of IRS controlled initially with meds and then with lifestyle modifications was able to wean off all T2DM Meds. Was on Glipizide until 3/2022 then off. Glucose held it own until Combo of Vaccines: Pfizer on 8/11.2021 and 9/2/2021. Arm was very sore; had soreness in past with PNA and Flu vaccines when taken. Quite possibly had COVID in 11/2019 but never checked.
- Now on her 7/28/2022 visit to our office she is on a CGM and A1C of 7.6%; insulin 1 mU/mL; HOMA-B 16%; Placed on Lantis by another PCP.
- Biomarkers for autoimmune Diabetes were (+);
- On 8/18/2022 upon review of labs we placed her on IVM, LDN and Spermidine; Also, Mito Support, Omega3FA and discussed Tresiba and Toujeo as alternatives.

Activation or Re-activation of chronic diseases after COVID (or vaccination)

- **Post Vaxx Neurological; 1st vaxx – flaccidity & twitching – Lyme Pt; near full recovery long-term course**.
- 49 YO WF healthcare worker required to obtain vaccination due to mandates
- Hx of CLD (first Dx mid-2015) and was in remission up until first J&J Vaccine (7/30/2021)
- Despite IVM dosing pre-vaccine, Shortly (days) after J&J in July 2021 she had Right Sided flaccidity, facial and hemi body, involuntary movement disorder, twitching, resting tremors (mostly Right sided); and insomnia; Return of many of her original CLD symptoms. Aggressive Tx for CLD and COVID vaxx injury with IVM and FLCCC protocol. BTW: Neuro & Psych workup had no answers, Normal MRI, LP, etc.
- September 2, 2021: Zn, Quercetin, Vit C&D, NAC, GSH; IVM, LDN and previously effective Lyme Dz Tx restarted
- Upon her 10/2021 follow up noted improvements and near resolution (aside from occ. nose twitch).
- Upon her 7/26/2022 visit she endorsed feeling well; but with occasional setbacks due to job stress, some symptoms of hypothyroidism returning but addressed with TRT. We continue her on Vaxx injury protocol.

Activation or Re-activation of chronic diseases after COVID (or vaccination)

- **Post Vaxx Mood/Anxiety disorder: After 2 primary vaxx and one booster… extreme Anxiety/Agitation and presumed underlying Tick-Borne Illness based on PHM, symptoms and lifestyle/residence.**
- 75 YO WM with Hx of Post-COVID19 Long-Haulers, mild insomnia, OCD
- Had Moderna mRNA Covid vaxx x 4 doses
- Onset in 2022 of worsening OCD and insomnia and mood disorder with agitation and severe anxiety.
- Psychiatry attempted multiple meds for Anxiety & Insomnia without good results. Polypharmacy ensued and risk for Serotonin Syndrome due to combo of meds.
- Visit on 7/22/2022 and 8/12/2022 to establish care and place on FLCCC protocol (long-haulers and post-vaxx injury) with IVM, LDN, etc. Within 2 days following IVM evidence of resolution of 50% of sxs.
- Patient was convinced by MSM PCP (NP) to abandon our recommendations on 8/22/2022 and "stick with MSM psych meds only"… Pt. elected to "pause our therapy"… spoke with son, Pt. not doing well without IVM and LDN.


WHAT'S WRONG? IS IT THE BOOSTER SHOTS?
THAT'S IMPOSSIBLE, IT MUST BE CLIMATE CHANGE

Therapies

FLCCC Post-Vaccine and Long-COVID protocols:

- I-Recover Long-COVID Tx:
  https://covid19criticalcare.com/covid-19-protocols/i-recover-long-covid-treatment/
- I-Recover Post Vaxx Tx:
  https://covid19criticalcare.com/covid-19-protocols/i-recover-post-vaccine-treatment/

I-RECOVER

LONG COVID TREATMENT

An Approach to Treating Long COVID

Up to 80% of patients experience prolonged illness after COVID-19, characterized by prolonged malaise, headaches, generalized fatigue, sleep difficulties, hair loss, smell disorder, decreased appetite, painful joints, dyspnea, chest pain and cognitive dysfunction. Long COVID may persist for months after acute infection, and it is likely that patients who did not receive adequate treatment during the symptomatic phase are much more likely to develop long COVID. Treatment should be individualized to clinical signs and symptoms.

FIRST LINE THERAPIES

In order of priority; not all required.

- **Prednisone:** 10-15 mg daily for 3 weeks. Taper to 10 mg for three days, then 5 mg for three days, then stop.
- **Ivermectin:** 0.2–0.3 mg/kg daily for 2-3 weeks.
- **Low dose naltrexone (LDN):** Begin with 1 mg daily, increase to 4.5 mg daily as required.
  May take 2-3 months for full effect.
- **Intermittent daily fasting and/or periodic daily fasts:**
  Fasting promotes autophagy, the body's protective mechanism to remove misfolded, foreign and damaged proteins. It also promotes mitophagy and the release of stem cells. It is likely that promoting autophagy will aid in the removal of the spike protein. NOTE: Hydroxychloroquine inhibits autophagy and should be avoided in patients undergoing intermittent fasting.
- **Spermidine and/or Resveratrol:**
  These compounds have been demonstrated to augment autophagy. Wheatgerm, mushrooms, grapefruit, apples and mango are high natural sources of spermidine. A bio-enhanced formulation containing trans-resveratrol from Japanese Knotwood Root appears to have good bio-availability.
- **Melatonin:** 8 mg at night (slow release/extended release preferred).
  Patients should pay attention to good sleep habits. Increase dose from 1 mg as tolerated (may cause severe bad dreams at high dosages).
- **Vitamin D:**
  The majority of those with long COVID continue to have Vitamin D deficiency. Patients may require a loading dose based on baseline Vitamin D levels (see Table 2). If baseline levels are unknown, the needed dose can be calculated from body weight or BMI (see Table 3).
- **Omega-3 fatty acids:** Vascepa, Lovaza or DHA/EPA 4 g day.
- **Aspirin:** 81 mg daily.
- **Curcumin (turmeric):** 500 mg twice daily.

SECOND LINE THERAPIES

If symptoms do not improve after 1-2 weeks continue steroids, Omega-3 fatty acids and LDN and add second line therapies as below.

About this Protocol

The information in this document is our recommended approach to COVID-19 based on the best (and most recent) literature.

It is provided as guidance to healthcare providers worldwide on the early treatment of COVID-19. Patients should always consult with their provider before starting any medical treatment.

New medications may be added and/or changes made to doses of existing medications as further evidence emerges. Please check our website at flccc.net to be sure you are using the latest version of this protocol.

For more information on nutritional therapeutics and how they can help with COVID-19, visit geni.us/COVID_nutrition

For additional information on long COVID treatment, the rationale behind these medications, and other optional treatments, see 'An Approach to Treating Long COVID'.

Long COVID Phenotypes

• Inflammatory phenotype (with high C-Reactive Protein) — likely due to persistent spike protein and immune activation.

• Microvascular and macrovascular clotting syndrome (with high D-dimer

I-RECOVER℠

POST-VACCINE TREATMENT PROTOCOL

Management of Post-Vaccine Syndrome

Major public health authorities do not recognize post-COVID-vaccine injuries; and there is no specific ICD classification code for this disease. However, while no official definition exists, a temporal correlation between receiving a COVID-19 vaccine and beginning or worsening of a patient's clinical manifestations is sufficient to diagnose as a COVID-19 vaccine-induced injury, when the symptoms are unexplained by other concurrent causes.

Since there are no published reports detailing the management of vaccine-injured patients, our treatment approach is based on the postulated pathogenetic mechanism, clinical observation, and patient anecdotes. Treatment must be individualized according to each patient's presenting symptoms and disease syndromes. It is likely that not all patients will respond equally to the same intervention; a particular intervention may be life-saving for one patient and totally ineffective for another.

Early treatment is essential; it is likely that the response to treatment will be attenuated when treatment is delayed.

FIRST LINE THERAPIES

Not symptom specific; listed in order of importance.

- **Intermittent daily fasting** or periodic daily fasts.
  Fasting has a profound effect on promoting immune system homeostasis, partly by stimulating the removal of damaged cells (autophagy) and mitochondria (mitophagy) and clearing misfolded and foreign proteins. Intermittent fasting and autophagy likely have an important role in promoting the breakdown and elimination of the spike protein. Fasting is contraindicated in patients under 18 (impairs growth) and during pregnancy and breastfeeding. Patients with diabetes, as well as those with serious underlying medical conditions, should consult their primary care provider prior to fasting, as changes in their medications may be required and these patients require close monitoring. Hydroxychloroquine may limit the benefit of intermittent fasting. See page 3 for tips on fasting.
- **Spermidine; (follow instructions on product) and/or Resveratrol; (500mg twice daily).**
  Spermidine, a naturally occurring polyamine, and resveratrol, a naturally occuring phytochemical, have been shown to promote autophagy. Wheatgerm, mushrooms, grapefruit, apples and mango are high natural sources of spermidine.
- **Ivermectin:** 0.2–0.3 mg/kg, daily for up to 4–6 weeks.
  Ivermectin has potent anti-inflammatory properties. It also binds to the spike protein, aiding in the elimination by the host. It is likely that ivermectin and intermittent fasting act synergistically to rid the body of the spike protein. Ivermectin is best taken with or just following a meal for greater absorption. A trial of ivermectin should be considered as first line therapy. It appears that patients can be grouped into two categories: i) ivermectin responders and ii) ivermectin non-responders. This distinction is important, as the latter are more difficult to treat and require more aggressive therapy. Due to the possible drug interaction between quercetin and ivermectin, these drugs should not be taken simultaneously (i.e., should be staggered morning and night).
- **Moderating physical activity:**
  Exercise can create worsening symptoms and lead to severe post-exertional fatigue. Patients should moderate activity to tolerable levels, and keep heart rate under 110 bpm. Stretching and low-resistance exercises are preferred over aerobic exercises.
- **Low dose naltrexone (LDN):** Begin with 1 mg/day and increase to 4.5 mg/day, as required. May take 2 to 3 months to see full effect.
  LDN has been demonstrated to have anti-inflammatory, analgesic and neuromodulating properties.
- **Melatonin:** 2–6 mg *slow release/extended release* prior to bedtime.
  Melatonin has anti-inflammatory and antioxidant properties and is a powerful regulator of mitochondrial function. The dose should be started at 750 mcg (µg) to 1 mg at night and increased as tolerated. Patients who are slow metabolizers may have very unpleasant and vivid dreams with higher doses.
- **Aspirin:** 81 mg/day.
- **Vitamin C:** 1000 mg orally three to four times a day.
  Vitamin C has important anti-inflammatory, antioxidant, and immune-enhancing properties, including increased synthesis of type I interferons. Avoid in patients with a history of kidney stones. Oral Vitamin C helps promote growth of protective bacterial populations in the microbiome.

About this Protocol

This document is primarily intended to assist healthcare professionals in providing appropriate medical care for vaccine-injured patients. Patients should always consult their healthcare provider before embarking on any new treatment.

Patients with post-vaccine syndrome must not receive further COVID-19 vaccines of any type. Likewise, patients with long COVID should avoid all COVID vaccinations.

Note that there are significant overlaps between the symptoms and features of long COVID and post-vaccine syndrome. However, a number of clinical features appear to be characteristic of post-vaccine syndrome; most notably, severe neurological symptoms appear to be more common following vaccination.

Please check our website at flccc.net/covid-19-protocols for updates to our COVID-19 protocols. New medications may be added and/or changes may be made to doses of existing medications as further evidence emerges.

For more information on nutritional therapeutics and how they can help with COVID-19, visit geni.us/COVID_nutrition

For Additional Potential Treatments, Disease-Specific Therapeutic Adjuncts, and References please see the complete guide, "An Approach to the Management of Post-Vaccine Syndrome," available at flccc.net/covid-19-protocols/i-recover-post-vaccine-

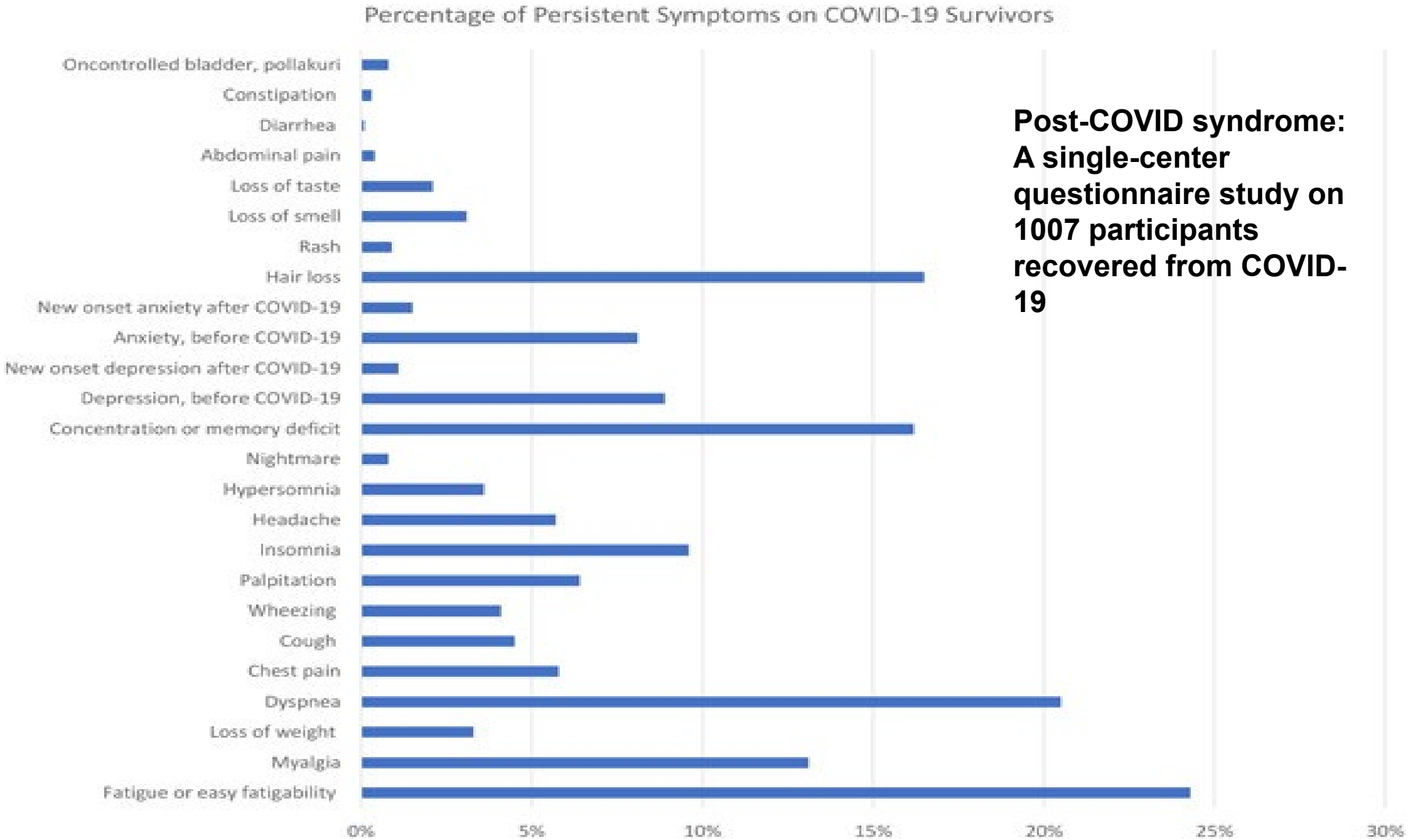
Lyme as an example. A disease I know very well.

Organs/systems affected by LYME & others (next few slides)

What we see observationally in our microcosm of LYME and COVID patients

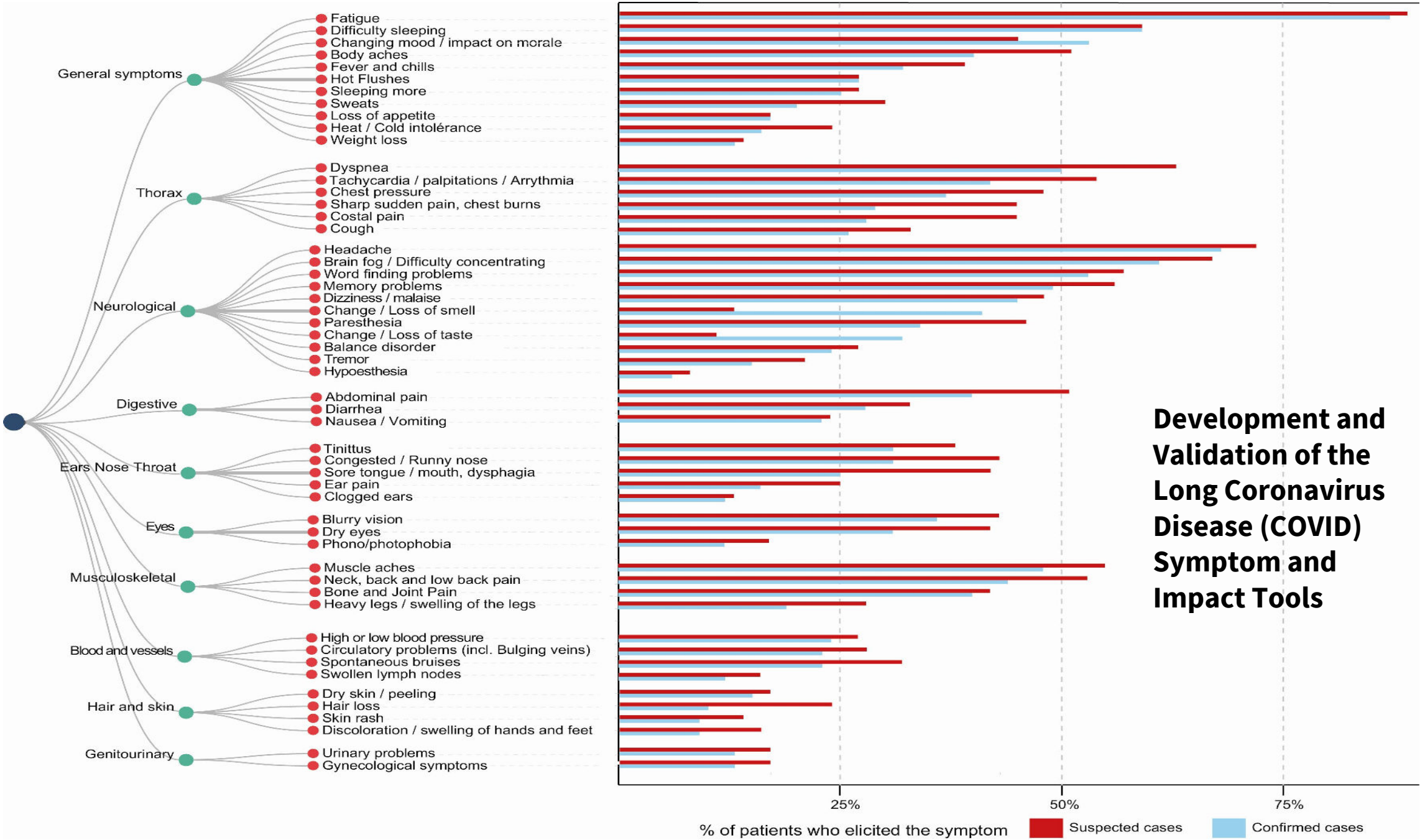
How we address it with protocols

No longer can one JUST treat COVID (Long-COVID) or Vaxx injury as a separate entity. One must also HUNT for other chronic underlying contributing disease. And treat the WHOLE.



Post-COVID syndrome: A single-center questionnaire study on 1007 participants recovered from COVID-19

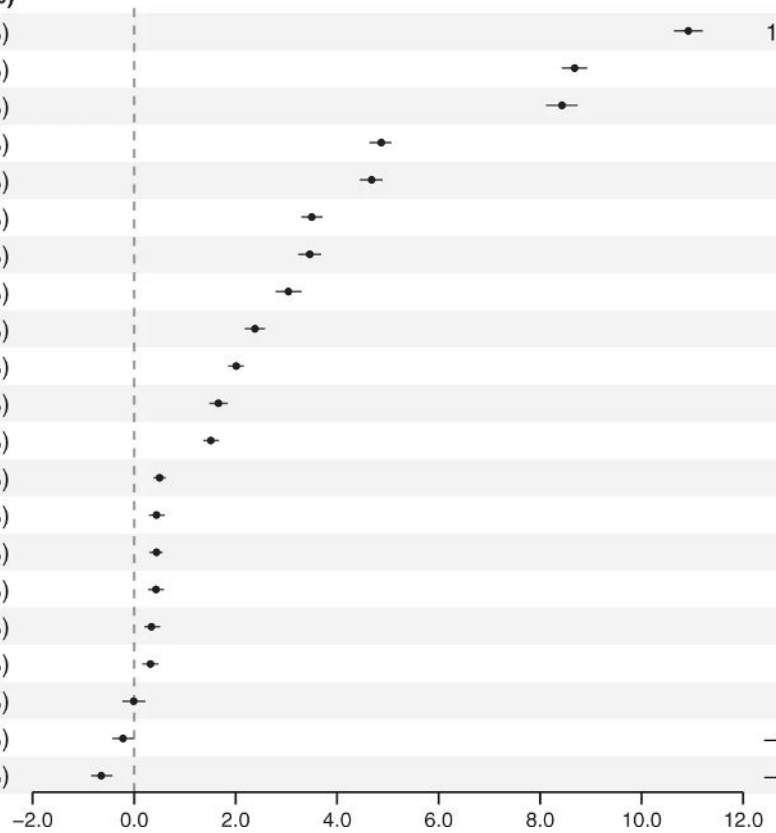
Kayaaslan B, Eser F, Kalem AK, Kaya G, Kaplan B, Kacar D, Hasanoglu I, Coskun B, Guner R. **Post-COVID syndrome: A single-center questionnaire study** on 1007 participants recovered from COVID-19. J Med Virol. 2021 Dec;93(12):6566-6574. doi: 10.1002/jmv.27198. Epub 2021 Jul 28.



Development and Validation of the Long Coronavirus Disease (COVID) Symptom and Impact Tools

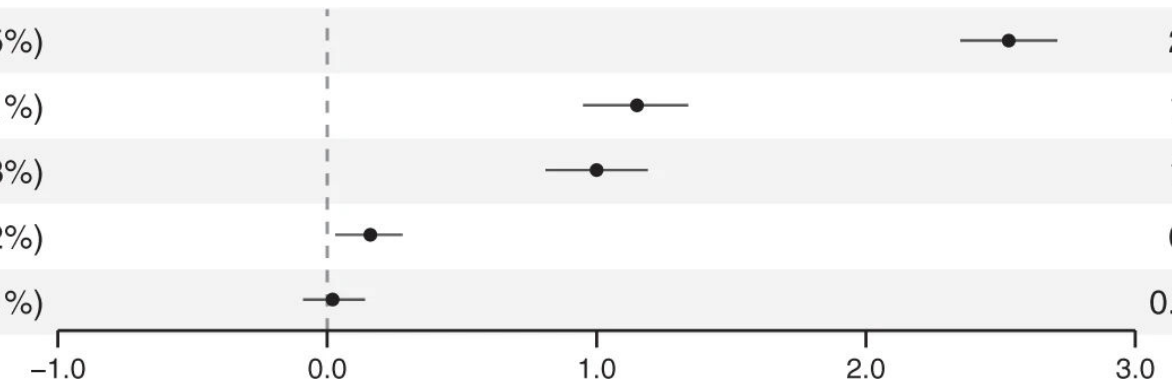
Viet-Thi Tran, et.al., Development and Validation of the **Long Coronavirus Disease (COVID) Symptom** and Impact Tools: A Set of Patient-Reported Instruments Constructed From Patients' Lived Experience, *Clinical Infectious Diseases*, Volume 74, Issue 2, 15 January 2022, Pages 278–287

Symptom	Positive (n,%)	Negative (n,%)	RD (95% C.I.)
Dysosmia	6,674 (10.9%)	604 (0.7%)	10.92 (10.64, 11.20)
Dysgeusia	5,365 (8.8%)	551 (0.6%)	8.68 (8.43, 8.93)
Fatigue/exhaustion	6,799 (11.1%)	2,868 (3.1%)	8.43 (8.12, 8.74)
Dyspnea	3,277 (5.4%)	813 (0.9%)	4.87 (4.64, 5.07)
Reduced strength legs/arms	3,381 (5.5%)	1,024 (1.1%)	4.68 (4.45, 4.90)
Sleeping legs/arms	2,841 (4.7%)	1,236 (1.3%)	3.50 (3.30, 3.71)
Muscle/joint pain	3,217 (5.3%)	1,772 (1.9%)	3.46 (3.24, 3.68)
Headache	3,740 (6.1%)	2,868 (3.1%)	3.04 (2.79, 3.30)
Dizziness	2,430 (4.0%)	1,495 (1.6%)	2.38 (2.18, 2.58)
Chest pain	1,695 (2.8%)	780 (0.8%)	2.01 (1.85, 2.16)
Hot flushes/sweat	2,047 (3.4%)	1,550 (1.7%)	1.66 (1.48, 1.84)
Reduced appetite	1,772 (2.9%)	1,176 (1.3%)	1.51 (1.36, 1.67)
Red runny eyes	822 (1.3%)	748 (0.8%)	0.50 (0.38, 0.62)
Abdominal pain	1,241 (2.0%)	1,410 (1.5%)	0.44 (0.29, 0.60)
Chills	966 (1.6%)	980 (1.1%)	0.44 (0.30, 0.56)
Nausea	1,179 (1.9%)	1,294 (1.4%)	0.43 (0.28, 0.59)
Diarrhoea	1,122 (1.8%)	1,338 (1.5%)	0.34 (0.20, 0.51)
Fever	1,362 (2.2%)	1,584 (1.7%)	0.32 (0.16, 0.48)
Cough	2,956 (4.8%)	4,077 (4.4%)	−0.01 (−0.23, 0.22)
Runny nose	2,376 (3.9%)	3,474 (3.8%)	−0.22 (−0.43, −0.01)
Sore throat	2,282 (3.7%)	3,690 (4.0%)	−0.65 (−0.85, −0.43)

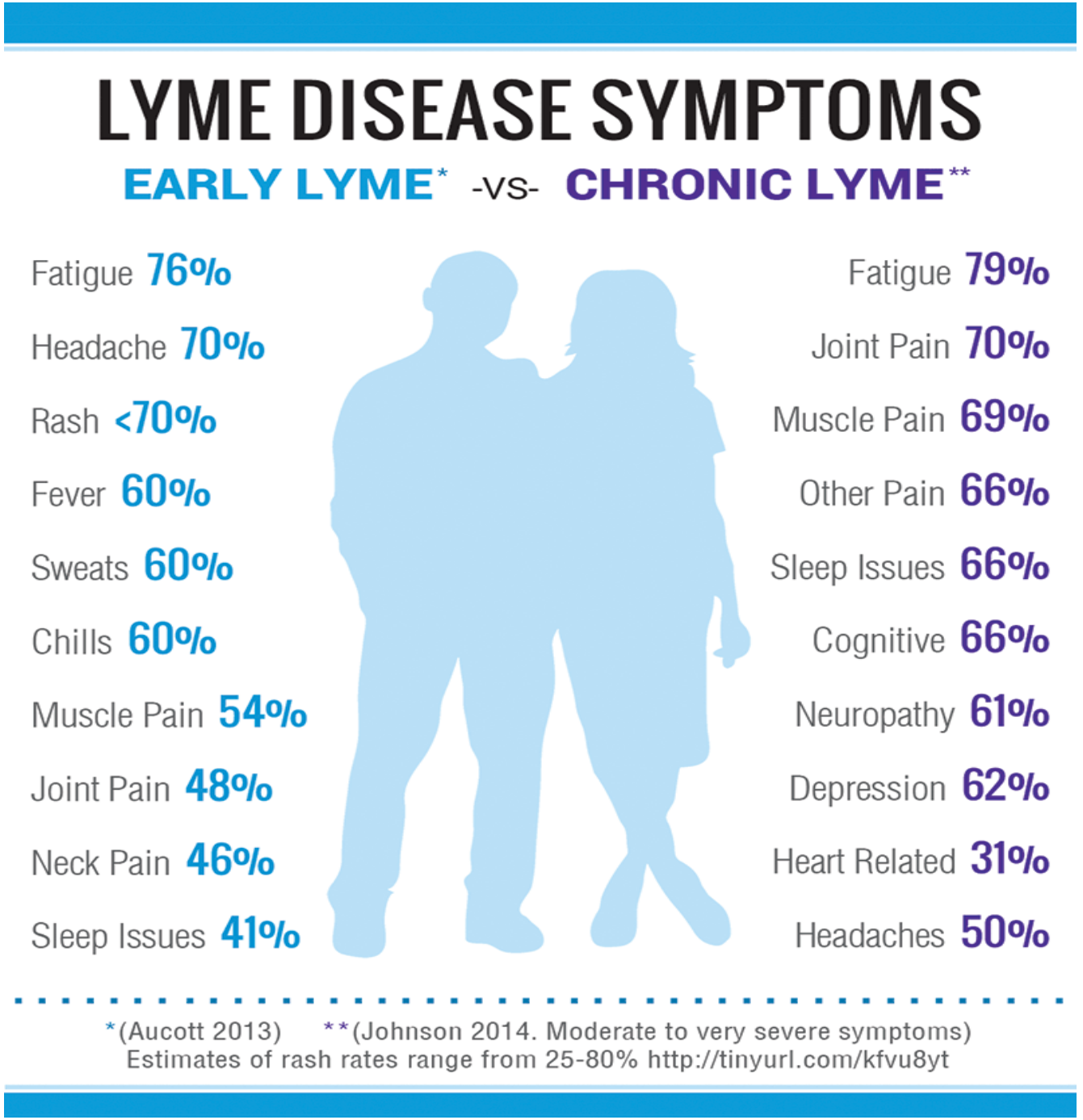


A nationwide questionnaire study of post-acute symptoms and health problems after SARS-CoV-2 infection in Denmark

Medical diagnosis	Positive (n,%)	Negative (n,%)	RD (95% C.I.)
Chronic fatigue syndrome	2,401 (4.0%)	1,329 (1.5%)	2.53 (2.35, 2.71)
Anxiety	1,900 (3.4%)	1,783 (2.1%)	1.15 (0.95, 1.34)
Depression	1,883 (3.5%)	1,870 (2.3%)	1.00 (0.81, 1.19)
PTSD	769 (1.3%)	1,100 (1.2%)	0.16 (0.03, 0.28)
Fibromyalgia	620 (1.0%)	986 (1.1%)	0.02 (−0.09, 0.14)



Top Symptoms of LYME:



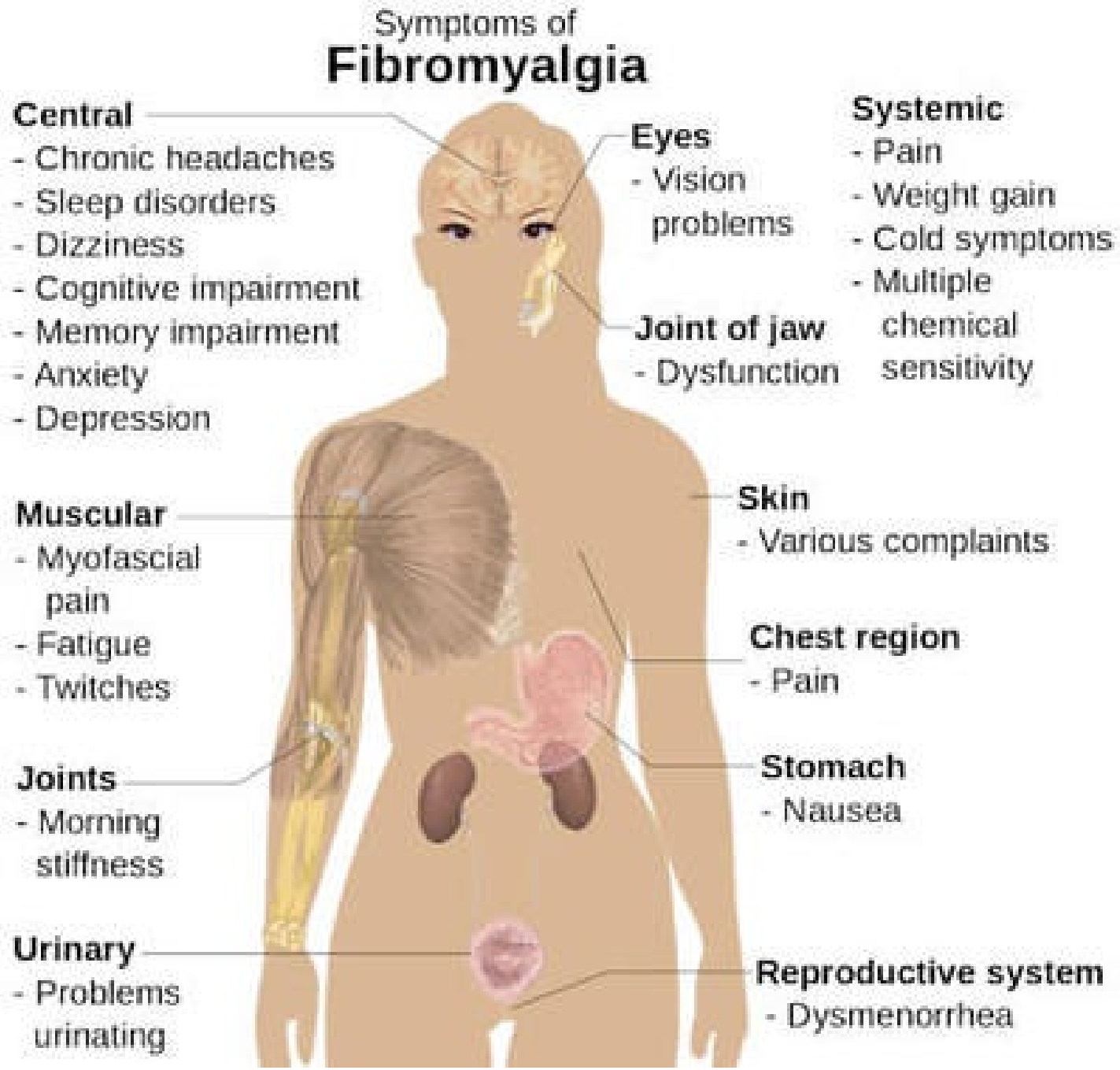
Top Symptoms of Mycotoxin Illness:

Symptoms of CIRS

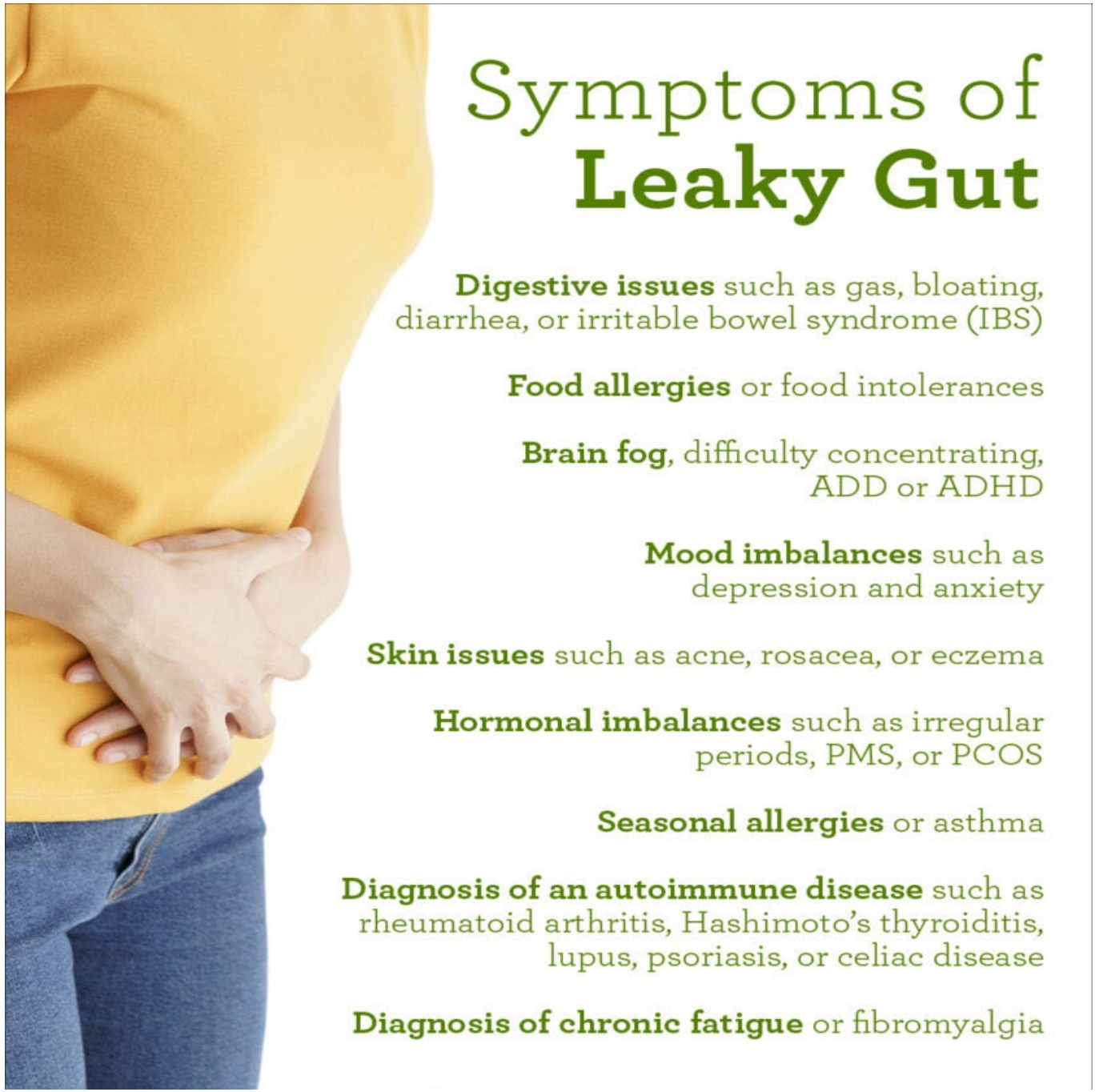
(Mold Illness)

PHYSICAL SYMPTOMS	PHYSICAL SYMPTOMS CONT.	COGNITIVE/EMOTIONAL SYMPTOMS
Fatigue/weakness	Abdominal pain	Memory issues
Vertigo	Diarrhea	Focus/concentration issues
Aches/muscle cramps	Joint pain	Word recollection issues
Metallic taste	Morning stiffness	Decreased learning of new knowledge
Tremors	Skin sensitivity	Confusion
Ice pick pain	Appetite swings	Disorientation
Headache	Sweats (especially night sweats)	Mood swings
Light sensitivity	Temperature regulation issues	Anxiety
Red eyes	Excessive thirst	Depression
Blurred vision	Increased urination	
Tearing	Static shocks	
Sinus problems	Numbness/tingling	
Cough	Shortness of breath	

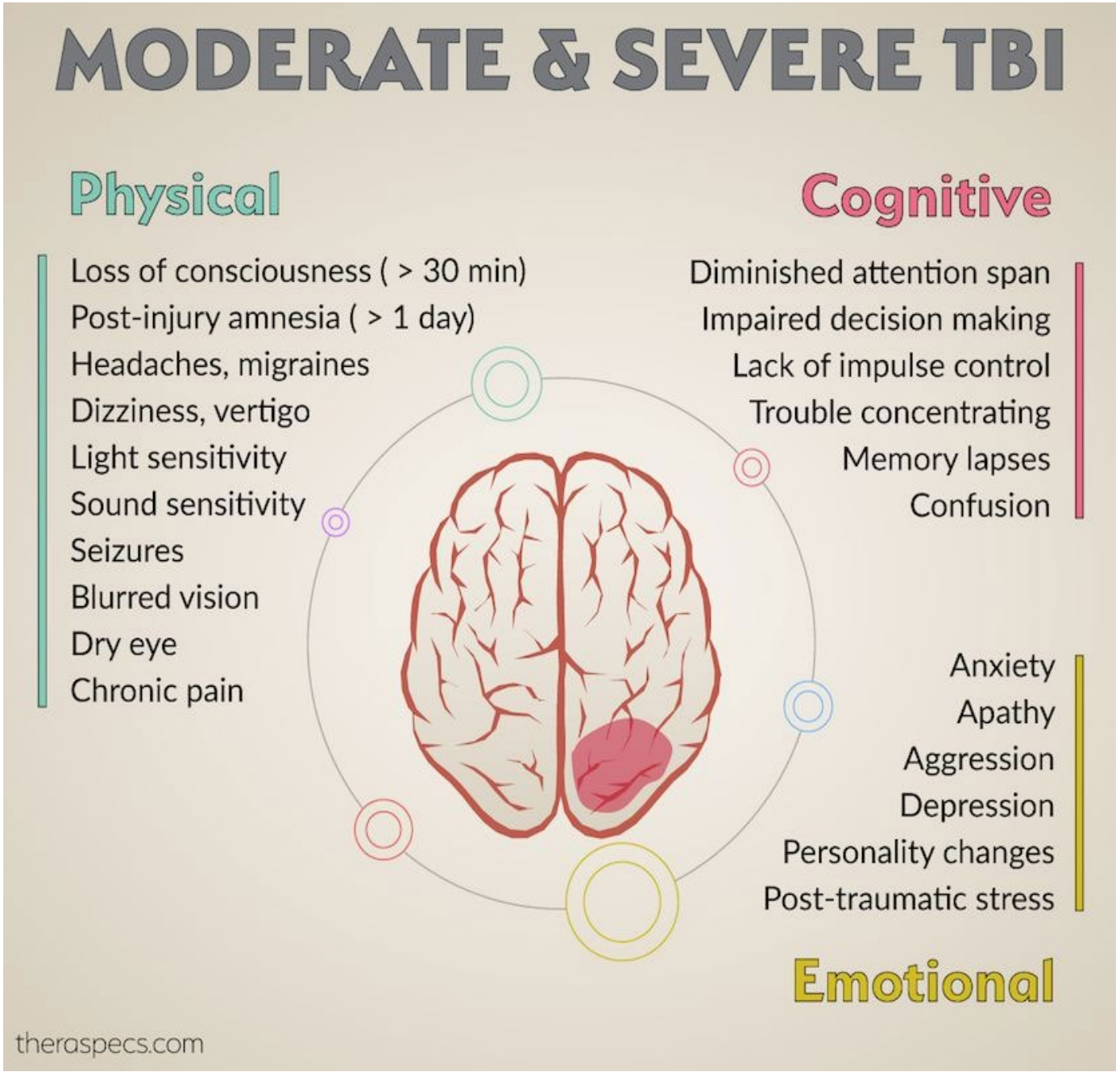
Top Symptoms of Fibromyalgia (ME/CFS)



Top Symptoms of Intestinal Permeability (Leaky Gut):



Top Symptoms of Post Concussion Syndrome (PCS); Traumatic Brain Injury
(TBI & mTBI)



Integrative (Alt.) Therapies – beyond the FLCCC protocol

Skullcap, Curcumin, Flavones - Minimize Th2 tilt (Th1 -> Th2) (Spermidine, Luteolin, Quercetin*)

Resveratrol (Res / trans-Res)/ Polygonum cuspidatum / Japanese Knotweed 1000mg/d

Momordica charanti / Bitter gourd

Stigmata maydis / Corn silk

Selenium, Vitamin A & D, Larch arabinogalactan, L-Lysine 1000mg TID, BCAAs 2-10grams/d

Lifestyle modification:

- Stabilize mast cells, remove triggers (environmental and dietary)
- Support micro and macronutrients and neurotransmitters. Support Mitochondria – Nutraceutical combination products
- Control IRS/T2DM & other chronic diseases
- Not all that needs to be done is found in a pill.

*-includes isoQuercetin and HydroxyQuercetin

*- *Luteolin not Lutein*

Other Integrative Therapies

Butterbur (*sans the pyrrolizidine alkaloids (PAs))*

Spirulina 2 – 8 grams per day; Helps suppress Th2; inhibits IL-4

Quercetin 1000mg/d Th2 to Th1 shift (*Hydroxy- or iso-Quercetin*)

β - Nicotinamide Mononucleotide (NMN) 250-500mg/d

Stinging nettle 300md QD reduce eosinophils

Andrographis 300-600 mg/day reduces Th2 cytokines, NF-kB [*Thailand recommended*]

Bilberry reduce inflammatory markers (blueberries)

Ginger reduces TNF-a and hs-CRP

Devil's claw reduces IL-6, IL-B and TNF-a

Boswellia serrata reduces leukotrienes, IL-6, IL-B and TNF-a

Cat's claw, Cryptolepis CLD treatment

Still Other Alternative Therapies

Synapsin® NS (Rg3 + nicotinamide) to put the fire out in the brain / good for neurological

Oxytocin NS multiple layers of protection and healing & recovery

Low Dose Naltrexone (LDN) - Anti-inflammatory and immune enhancing

Healing Peptides (SQ or Oral): e.g., Thymosin B-4-Frag (TB4-frag) and Body Protection Compound (BPC-157) and Thymosin Alpha-1 (TA-1)

Mitochondrial Support (ATP360 or similar) / Glutathione (GSH)

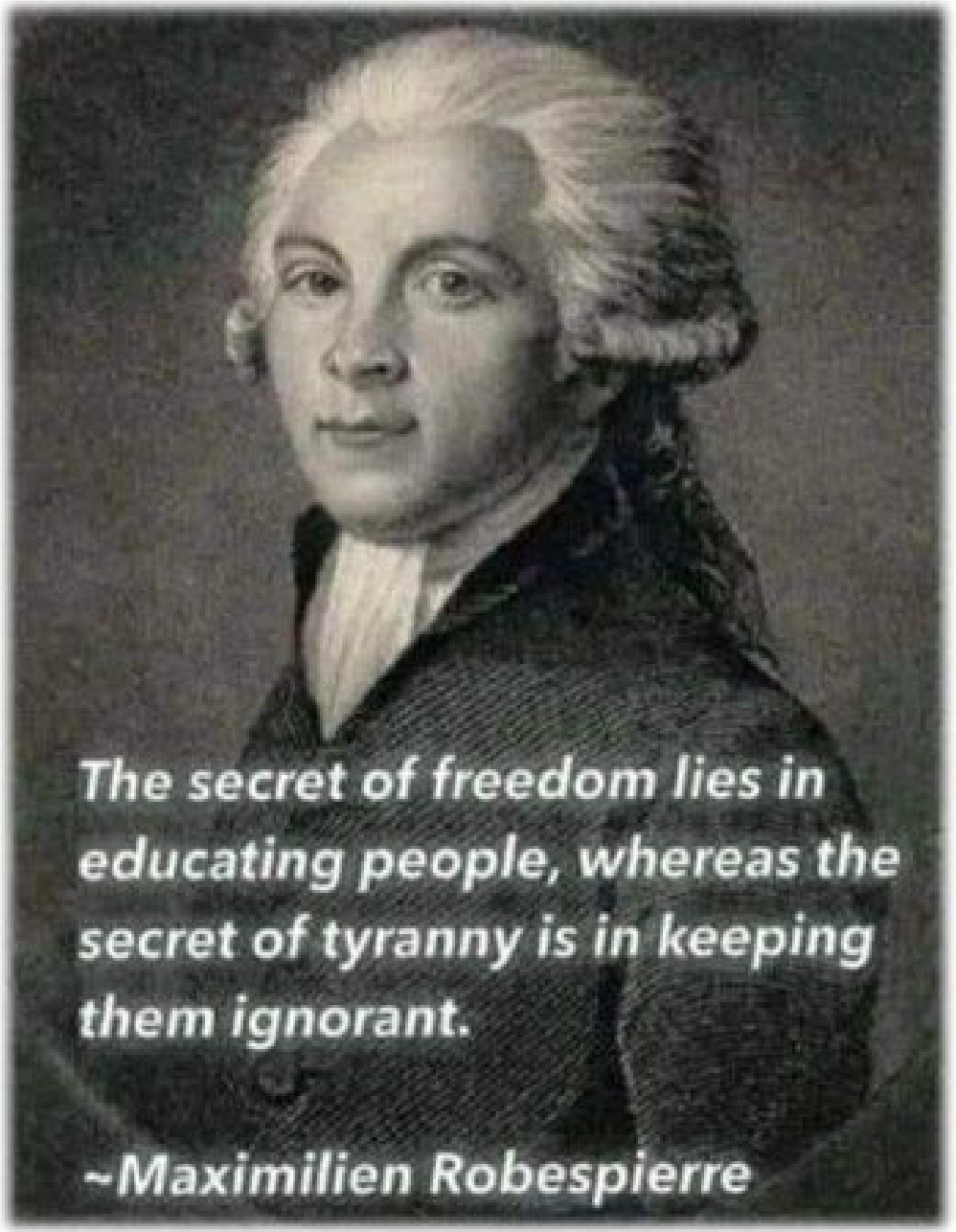
N-Acetyl L-Cysteine (NAC) - NAC + GSH

Methylene Blue (oral drops) – in the pipeline as a repurposed drug [*we are gathering data*]

O3 (ozone) therapy w/ UBI

HBOT (Hyperbaric therapy)

TCM/ Acupuncture, Pulsed EMF (PEMF), Energy Medicine . . .



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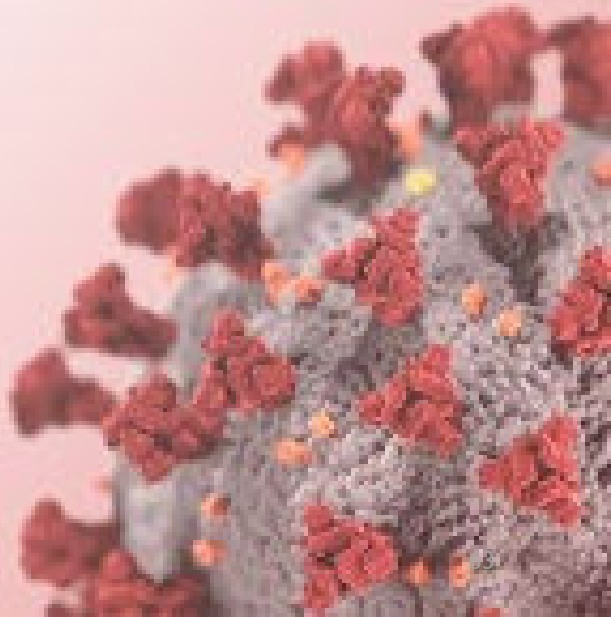

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