

The Viral Effects of Covid-19 on the Brain and How to Survive It

Fever? Fatigue? Shortness of Breath? Anxiety? Chest Pain? Confusion? Faintness? Cool clammy Skin?

Basically, all viruses look like a spaceship that is able to land on our cell membranes and either inject their junk or be ushered into the cell by connecting and meshing membranes with one of our cell surface proteins called ACE2. The virus then plugs its RNA code into our DNA machinery to make thousands of copies of itself. The covid-19 virus survives by using a human protein enzyme called GSK-3 that somehow assists with its replication as it does with many other flu viruses, SARS viruses, and those that cause Hepatitis (Saleh, et al., 2018). The GSK-3 enzyme is also responsible for the production of inflammatory proteins from our immune system that fight off infection (Fighting Coronavirus with Curcumin, 2020). Normally, GSK-3b is highly regulated, but in this case, GSK-3 gets hijacked and becomes a runaway train, responsible for viral production and the severe inflammatory effect that causes the onslaught of severe symptoms with Covid-19 (Fighting Coronavirus with Curcumin, 2020). Research shows there is a way to block GSK-3b, and therefore block both the replication of the virus and the severe inflammatory response at the same time, while boosting natural immune response (Rudd, 2020). GSK-3 over-activation is also associated with Alzheimer's, ALS, schizophrenia and bipolar disorder (Eldar-Finkelman & Martinez, 2011).

There are several modes of treatment that are being explored. One mode of treatment is to use GSK-3b inhibitors such as hydroxychloroquine (Embi, Sidek, & Ganesan, 2020), lithium, and zinc (Eldar-Finkelman & Martinez, GSK-3 inhibitors: preclinical and clinical focus on CNS, 2011). Evidence suggests that curcumin blocks viral cell entry, and replication, as well as targeting and destroying the viral cell membrane. Curcumin has been shown to prevent leakage of plasma proteins from the blood vessels that fill up the lungs, suppress fibrosis and remodeling of the lung, and to build our body's natural immune defenses to target and destroy viruses such as SARS-COV2 and RSV (Liu & Ying, 2020).

Long and Short: I don't have a dog in anybody's fight. I just want to get my patients well, which is my job and responsibility. None of my steady patients have had Covid-19 because they take zinc regularly, and have no major un-addressed underlying health problems. I believe that

the answer to Covid-19 treatment is to treat it at the onset of symptoms. None of my newly treated Covid-19 patients have needed hospitalization for which I am grateful, except one who was treated for dehydration and sent home the next day. All of them were treated at onset of symptoms. They have all gotten well within 6 to 10 days.

What in effect is happening, is that people who contract Covid-19 are being overwhelmed by rapid viral replication, and rapid de-regulation of the GSK-3 enzyme that sets in motion what becomes septic shock. This is essentially what happens: the blood vessels dilate, the blood flows into the tissues, the lungs fill up with fluid, the blood pressure drops, the heart rate rises, the temperature rises, and oxygen is depleted because the GSK-3 enzyme has become de-regulated and has set in motion an inflammatory cascade of events. If you can turn off the GSK-3 enzyme and stop the replication of the virus, then you have a chance to live. Rapid treatment with hydroxychloroquine, a steroid called budesonide (Pulmicort) by nebulizer, and azithromycin to stop a secondary bacterial infection have worked for the patients I have treated in this regard. I also prescribe high doses of zinc sulfate and Ester-C for antiviral protection. Both hydroxychloroquine and zinc are GSK-3 inhibitors. GSK-3 inhibitors block SARS CoV2 (Covid) replication and simultaneously, boost an immune response to destroy the virus (Rudd, 2020). The GSK3 enzyme is also thought to be responsible for causing the neuro tangles in Alzheimer's disease, bipolar disorder, cancer, inflammation, and diabetes (Beurel, Grieco, & Jope, 2015).

Plan and Suggestions:

1. Wash your hands with soap. Each virus contains it's own genetic code called RNA surrounded by a protein which is surrounded by a fatty layer. Soap destroys the outside fatty layer of the virus and kills it.

2. Lithium Orotate: This is a lithium supplement that is 5 mg per capsule. I take one capsule every night and recommend it to my adult clients. Lithium orotate can be compounded for children at a lower dose; check with your provider. Lithium has been found to have antiviral activity by inhibiting the entry and replication of viruses that cause severe acute respiratory syndrome (Nowak & Walkowiak, 2020). Lithium has been found to have the same GSK-3beta enzyme inhibiting properties as hydroxychloroquine and zinc (Nowak & Walkowiak, 2020). Why is GSK-3 so important? When activated, the GSK-3 enzyme is responsible for the

production of inflammatory proteins from our immune system that fight off infection; the GSK-3 enzyme over-stimulates our inflammatory response to Covid-19 (Fighting Coronavirus with Curcumin, 2020). The Covid-19 replicates so swiftly, that it overwhelms our system; the GSK-3 enzyme responds to the viral attack (Fighting Coronavirus with Curcumin, 2020). If you block GSK-3, you essentially block inflammation.

3. **Zinc:** Both hydroxychloroquine and zinc are GSK-3 inhibitors. GSK-3 inhibitors block SARS CoV2 (Covid) replication and simultaneously, boost an immune response to destroy the virus (Rudd, 2020). I use Zinc Supreme 30 mg capsules by *Designs for Health*: Take 2 caps at bedtime.

4. **Curcumin:** Evidence suggests that curcumin blocks viral cell entry, and replication, as well as targeting and destroying the viral cell membrane. Curcumin has been shown to prevent leakage of plasma proteins from the blood vessels that fill up the lungs, suppress fibrosis and remodeling of the lung, and to build our body's natural immune defenses to target and destroy viruses such as SARS-COV2 and RSV (Liu & Ying, 2020).

Bibliography

Beurel, E., Grieco, S. F., & Jope, R. S. (2015, April). Glycogen synthase kinase-3 (GSK3): regulation, actions, and diseases. *0*, 114-131. doi:doi: 10.1016/j.pharmthera.2014.11.016

Eldar-Finkelman, H., & Martinez, A. (2011, Oct. 31). GSK-3 inhibitors: preclinical and clinical focus on CNS. *Front. Mol. Neurosci.* Retrieved from <https://doi.org/10.3389/fnmol.2011.00032>

Embi, N., Sidek, H. M., & Ganesan, N. (2020, April). Is GSK3 β a molecular target of chloroquine treatment against COVID-19? *Drug discoveries & therapeutics*, 14(2). doi:10.5582/ddt.2020.03010

Fighting Coronavirus with Curcumin. (2020, March 5th). Retrieved from <https://www.geon.us/Diet/COV.htm>

Liu, Z., & Ying, Y. (2020, June 12th). The Inhibitory Effect of Curcumin on Virus-Induced Cytokine Storm and Its Potential Use in the Associated Severe Pneumonia. *Front. Cell Dev. Biol.* Retrieved from <https://doi.org/10.3389/fcell.2020.00479>

Nowak, J. K., & Walkowiak, J. (2020). Lithium and coronaviral infections. A scoping review. 9(93). doi:doi: 10.12688/f1000research.22299.2

Rudd, R. E. (2020, June 26). GSK-3 Inhibition as a Therapeutic Approach Against SARS CoV2: Dual Benefit of Inhibiting Viral Replication While Potentiating the Immune Response. *Front. Immunol.* Retrieved from <https://doi.org/10.3389/fimmu.2020.01638>

Saleh, M., Rüschenbaum, S., Welsch, C., Zeuzem, S., Moradpour, D., Gouttenoire, J., & Lange, C. M. (2018, Nov 27). Glycogen Synthase Kinase 3 β Enhances Hepatitis C Virus Replication by Supporting miR-122. *Front Microbiol*, 9, 2949. doi: 10.3389/fmicb.2018.02949