

THINK ZINC!

Doctors "Stop CoVid-19 in its Tracks" – get Blacked out by CDC and MSM *Hydroxychloroquine + Zinc could be a 100% Cure*

By John-Paul Leonard, Apr. 11-12, 2020.¹

"Your Money or Your Life!" sometimes seems to be a motto of the medical industry – but now it's on a national scale.

We are forced to accept terrible damages to our nation's health, economy and civil liberties.

The only happy ending to this nightmare would be a quick cure for the virus. Is this cure being hushed up?

On March 23, talk show host Sean Hannity called up VP Mike Pence about Dr. Vladimir Zelenko's "miracle drug" cocktail:

Hannity: Mr. Vice President... a doctor in the New York area ... has a regimen:²

Hydroxychloroquine, 200 mg 2x/day, 5 days. Azithromycin, 500 mg 1x/day, 5 days. Zinc sulfate, 220 mg, 1x/day, 5 days...

His results, we have had zero deaths, zero hospitalizations, zero intubations, zero."

Instant insight: Your immune system is like a motor, where hydroxychloroquine is a fuel pump, zinc is the fuel. The pump CAN rev up the motor – but only IF there's enough fuel in the tank.

Pence responded, "What we see in some of those anecdotal studies, we're going to put to the test," then went on about hydroxychloroquine and vaccines. "Zinc sulfate" fell on a blind spot or deaf ear.³ It was not put to the test, of course. Instead, the CDC stripped any mention of "anecdotal studies" from their website.⁴

Well-established science indicates that Zinc is probably the main actor, with hydroxychloroquine (HCQ) in an accessory role.⁵ Dr. Cardillo in Los Angeles: "Every patient I've prescribed it to has been very, very ill and within 8 to 12 hours, they were basically symptom-free." (He doesn't bother with the Azithromycin.)⁶

¹ Online at <http://www.progressivepress.com/dox/thinkzinc.pdf>

The author's academic background is an MBA in Finance from UC Berkeley.

² Dr. Vladimir Zelenko: Cocktail of HCQ, Zinc Sulfate and Azithromycin showing phenomenal results with 900 coronavirus patients treated – <https://tinyurl.com/HCQ-Zinc-Zelenko>

³ <https://www.mediamatters.org/sean-hannity/sean-hannity-reads-mike-pence-letter-unidentified-doctor-detailing-drug-regimen-doctor>

⁴ <https://www.sott.net/article/432257-CDC-strips-page-on-hydroxychloroquine-of-unusual-guidance-for-doctors>

⁵ "As zinc deficiency frequently occurs in elderly patients and in those with cardiovascular disease, chronic pulmonary disease, or diabetes, we hypothesize that CQ/HCQ plus zinc supplementation may be more effective in reducing COVID-19 morbidity and mortality than CQ or HCQ in monotherapy."

https://www.researchgate.net/publication/340510315_Does_Zinc_Supplementation_Enhance_the_Clinical_Efficacy_of_ChloroquineHydroxychloroquine_to_Win_Todays_Battle_Against_COVID-19

⁶ LA doctor seeing success with hydroxychloroquine to treat COVID-19

<https://abc7news.com/coronavirus-drug-covid-19-malaria-hydroxychloroquine/6079864/>

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A quick and safe cure costing less than \$10 in meds. It might save 100,000 lives and trillions of dollars. What is the Task Force waiting for?

So much effort is spent on vaccines that won't be ready until after the pandemic is over, yet no one has time to look at the most promising drug combination we've seen.

To be fair, Trump saved thousands of lives by "touting the off-label drug HCQ," making it the most popular treatment among doctors around the world.⁷ True, the White House missing the zinc link is also costing, but Trump and Pence are only reflecting dismissive attitudes that prevail in the medical field.

This humble gray mineral is obviously not the kind of sexy, fascinating product to fire imaginations and galvanize a task force into action, nor to hype your stock for the next new vaccine IPO. Big Pharma doesn't run TV ads enticing you to plant healthy garden vegetables, either.

But we're not talking here about garden variety zinc lozenges. We're talking about a dose of 200 or 225 mg of zinc, that's 20 times the daily requirement. Then, by helping zinc enter your cells, HCQ multiplies that by 5 or 10 x. So you're getting a superdose of 100 to 200 times the normal daily requirement of zinc. Armed with all the ammo it needs, your turbocharged immune system is now ready to slaughter Covid19! (At least in the early and middle stages of the disease. Do not wait to tank up until the virus has damaged the lungs.)

Zinc is the centerpiece of a healthy immune system, blocking pathogens while preventing inflammation. We've known this since zinc deficiency symptoms were first identified around 1960. The role of zinc transporters like HCQ in fending off respiratory viruses was described already in 1974.⁸ Trust me, HCQ and zinc are not the latest quack fad. The link between zinc and resistance to infection, is as serious and solid as anything we know in medicine.⁹ Zinc on its own may not be a silver bullet -- but zinc deficiency can make coronavirus into a fatal bullet.

⁷ Largest Statistically Significant Study by 6,200 Multi-Country Physicians on COVID-19 Uncovers Treatment Patterns <https://www.businesswire.com/news/home/20200402005460/en>

⁸ "Inhibition of the Particle-associated RNA-dependent RNA Polymerase Activity of Influenza Viruses by Chelating Agents" <https://www.microbiologyresearch.org/content/journal/jgv/10.1099/0022-1317-23-1-59>

Ionophores are chelating agents that transport ions across cell membranes. Chelation is the binding of metal ions into a compound that your body can work with, for instance to remove it from the bloodstream, to bring it into your cells, or to use it to make proteins.

⁹ Zinc as a Gatekeeper of Immune Function,

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5748737/>

"After the discovery of zinc deficiency in the 1960s, it soon became clear that zinc is essential for the function of the immune system. Zinc ions are involved in regulating intracellular signaling pathways in innate and adaptive immune cells. Zinc homeostasis is largely controlled via the expression and action of zinc "importers" (ZIP 1–14) ... Here, we report molecular mechanisms underlying the development of a pro-inflammatory phenotype during zinc deficiency. Furthermore, we describe links between altered zinc homeostasis and disease development. Consequently, the benefits of zinc supplementation for a malfunctioning immune system become clear."

It is true that viruses can sometimes exploit excess zinc to replicate their own proteins, but this is the exception to the rule, as the level of free zinc in cells is very tightly controlled; too much of it becomes toxic.

See: Role of Zn²⁺ Ions in Host-Virus Interactions <https://jvi.asm.org/content/82/23/11486>

There's been a lot of wrangling about whether hydroxychloroquine (HCQ) really works. Deskbound types insist on controlled, randomized, double-blind trials, while doctors in the field say patients don't want a placebo, they want the real thing. I'd like to see a Trump-Cardillo trial -- one bunch gets HCQ + Azithromycin, the other gets HCQ + high dose zinc.

Zinc Facts

1. Zinc plays a central, crucial role in our immune system, which needs the right balance of zinc (homeostasis) both to kill germs and to control inflammation.¹⁰
2. Zinc blocks the replication of respiratory viruses within cells.¹¹
3. Hydroxychloroquine multiplies the effect of zinc by bringing it into cells where it's needed.¹²
4. Low zinc levels are linked to all these chronic conditions that account for over 99% of deaths from SARS-CoV-2 (CoVID-19): - old age, hypertension, heart disease, diabetes, male gender, cancer, and obesity. There's so much data on this I put it in the Appendix.

The immune system is what makes all the difference between a mild case of coronavirus and a fatal one. It's why 99% of Covid-19 fatalities deaths are older people with chronic conditions. Their weaker immune system is not up to the challenge of the novel coronavirus, but with extra ammunition -- extra zinc -- it should do the job.

Women are of Iron, Men are of Zinc

Why do men account for up to 70% of coronavirus fatalities?¹³ One factor may be our different reproductive organs. Men need more zinc, women need more iron. The prostate gland and semen contain high levels of zinc. The recommended daily intake of zinc is 11 mg for men vs. 8 mg for women. Men are more likely not to get enough zinc to maintain a healthy immune system. In one study, 49% of the men, but only 15% of the women, "were at risk of zinc deficiency, with dietary zinc intakes of less than the Estimated Average Requirement."¹⁴ Most of the body's zinc is bound up in muscle protein, bone, the skin, the nervous system and the cerebral cortex etc. Zinc is a component in thousands of human proteins. The body runs lean on zinc, there is not much of it free floating in the blood or inside cells available to surge against a sudden infection. The

So the body runs lean on zinc, there is not much of it free floating in the blood or inside cells. The solution is zinc supplementation when needed to combat infection. Short-term high doses of zinc are not harmful.

¹⁰ The Role of Zinc in Antiviral Immunity <https://academic.oup.com/advances/article/10/4/696/5476413>

"Zinc status is a critical factor that can influence antiviral immunity, particularly as zinc-deficient populations are often most at risk of acquiring viral infections"

¹¹ Effect of Zinc Salts on Respiratory Syncytial Virus Replication
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC353050/>

"Zinc supplementation decreases the morbidity of lower respiratory tract infection "

¹² Zn(2+) inhibits coronavirus and arterivirus RNA polymerase activity in vitro and zinc ionophores block the replication of these viruses in cell culture. (Dutch study) <https://www.ncbi.nlm.nih.gov/pubmed/21079686>

"Increasing the intracellular Zn(2+) concentration with zinc-ionophores like pyrithione (PT) can efficiently impair the replication of a variety of RNA viruses."

¹³ Why is the coronavirus so much more deadly for men than for women?

<https://www.latimes.com/science/story/2020-03-21/why-is-the-coronavirus-more-deadly-for-men-than-for-women>

"Italian health authorities last week reported that among 13,882 cases of COVID-19 and 803 deaths between Feb. 21 and Mar. 12, men accounted for 58% of all cases and 72% of deaths."

¹⁴ Dietary Zinc Intake and Its Association with Metabolic Syndrome Indicators among Chinese Adults: An Analysis of the China Nutritional Transition Cohort Survey 2015. <https://www.ncbi.nlm.nih.gov/pubmed/29738427>

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solution is zinc supplementation as needed.¹⁵ Short-term high doses of zinc are not harmful. An excellent source of information on zinc supplementation with copious the references is at the Linus Pauling Institute – Oregon State University website.¹⁶

Fun fact: iron and zinc compete with each other for bio-availability, and perhaps in other ways in our body, because they are chemically similar. Why are women more often vegetarians than men? Perhaps too much zinc from meat interferes with their iron needs. Men have more of their body mass in zinc-intensive features like bones, muscles, and hair – which they lose as they get older. Equilibrium ("homeostasis") of iron as well as zinc is important for immune health. It has been shown that "excess iron ... associates with compromised immunity, cancer, cardiovascular disease, and inflammation"¹⁷ – and this could result from low zinc. A conjecture: Might our basically different requirements for zinc and iron have favored the selection of different pathways for other processes as well, thus increasing gender dependence on zinc and iron respectively? (I wasn't able to find data on this.)

Zinc's Links to Old Age and other Causes of Death in Coronavirus Cases

In a normal flu season, if an old man dies from a cardiovascular condition complicated by the flu, it's usually counted as a death from heart disease -- the chronic condition -- rather than the temporary illness. This year, the same case is more likely counted as a coronavirus death. Patients with heart conditions are at higher risk of getting coronavirus, and are being counted as Covid-19 cases and deaths. Patients are avoiding hospitals out of fear of the virus.¹⁸

A statistician could make a case that these deaths from chronic conditions may be ultimately attributable to an underlying chronic zinc deficiency. It depends how you look at it. You could see it as a latent epidemic of chronic zinc deficiency, which is now being exploited by an opportunistic pathogen. Of course, the coroner can't write "old age" or "being male" as a cause of death. But these and all the other chronic conditions that mark 99% of coronavirus deaths -- hypertension, heart disease, diabetes, cancer, and obesity -- are correlated with zinc deficiency.

Zn is for Zinc – it's the last element in alphabetical order, but it could become the first word in coronavirus therapy, and in pandemic prevention. There is a lot of science to support this idea, so we'll link to some of the peer-reviewed medical research on it.

Australian researchers recently established not only one but four "diverse stages of viral replication cycles that are inhibited by zinc. In vitro studies have demonstrated a number of mechanisms by which zinc interferes with the viral replication cycle. These include free virus inactivation (1), inhibition of viral uncoating (2), viral genome transcription (3), and viral protein translation and polyprotein processing (4)."¹⁹

¹⁵ https://en.wikipedia.org/wiki/Zinc_deficiency "The most common cause is reduced dietary intake."

¹⁶ <https://lpi.oregonstate.edu/mic/minerals/zinc> They also have an interesting article about the immune system <https://lpi.oregonstate.edu/mic/health-disease/immunity-in-brief>

¹⁷ <https://www.oatext.com/The-Re-Emerging-Role-of-Iron-in-Infection-and-Immunity.php>

¹⁸ Where Have All the Heart Attacks Gone? Except for treating Covid-19, many hospitals seem to be eerily quiet. <https://www.nytimes.com/2020/04/06/well/live/coronavirus-doctors-hospitals-emergency-care-heart-attack-stroke.html> Patients are avoiding hospitals out of fear of the virus. Patients with heart conditions are also at risk of getting the virus and are being counted as Covid-19 cases and deaths.

¹⁹ The Role of Zinc in Antiviral Immunity (April 2019, Australian paper)

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In the article "Zinc as a Gatekeeper of Immune Function,"²⁰ we find that "Zinc is essential for the function of the immune system." When viruses attack our cells and try to turn them into virus factories, zinc can block the virus copying process. A balanced level of zinc also prevents autoimmune reactions like excessive inflammation. You may have read that in CoVid19, inflammation of the lungs can be as dangerous as the virus itself.

You probably also know that one of the problems with vitamins and minerals is bio-availability. How much of our intake actually gets to where it's needed? As we age, our body gets less efficient at absorbing zinc from our food. So even zinc supplements wouldn't be strong enough to fight off an aggressive virus like Covid-19, and most doctors aren't using them.

However, scientists have found that zinc needs a little help getting into the cells to do its job. Zinc ions have a positive charge, and so does the cell membrane, so they tend to repel each other. To overcome this barrier, our body has chemicals called "zinc importers" or "ionophores." These "shuttle" or "transporter" chemicals bond to the zinc "cargo", carry it into the cell, and release it there.

Hydroxychloroquine is a zinc transporter chemical or "ionophore." It seems to have some antiviral and anti-inflammatory properties of its own,²¹ but the results with SARS-Cov-19 are criticized as not consistent. It's likely that HCQ only works well when the patient's blood has enough free zinc ("serum zinc") for it to utilize. Zinc levels require a special test, so we usually don't know if a patient has a zinc deficiency. The trials done with HCQ so far don't seem to have taken zinc levels into account. Also, HCQ is often being given too late. So we're getting uneven results.

Zinc therapy for coronaviruses using a transporter chemical was proposed already in Nov. 2010 by Dutch researchers in their article "Zn(2+) [zinc ion] inhibits coronavirus ... and zinc ionophores block the replication of these viruses in cell culture."²² The example they gave of a "shuttle" or transporter chemical was pyrithione, rather than chloroquine (CQ) or HCQ, but the principle is the same.

This is the paper referenced in a Youtube video posted on March 17 by the Medmaster WebCram online epidemiology course,²³ which gives a very clear explanation of zinc ionophore therapy. The video shows how an ionophore pulls Zinc inside the cell, and explains the lab

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6628855/> caption to Figure 1. With thanks to Dr. Eric Beeth for this important source

²⁰ Ibid. Zinc as a Gatekeeper of Immune Function, <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5748737/>

²¹ The antiinflammatory and antiviral effects of hydroxychloroquine in two patients with acquired immunodeficiency syndrome and active inflammatory arthritis (1996)

<https://www.ncbi.nlm.nih.gov/pubmed/8546725> "HCQ may exert simultaneous anti-inflammatory and antiviral effects in patients with HIV infection and inflammatory arthritis."

²² Ibid. Zn(2+) inhibits coronavirus and arterivirus RNA polymerase activity in vitro and zinc ionophores block the replication of these viruses in cell culture. (Dutch study) <https://www.ncbi.nlm.nih.gov/pubmed/21079686>

²³ COVID-19 Update 8: Zinc and chloroquine for the treatment of COVID-19? (WebCram)

<https://www.youtube.com/watch?v=BIymfznD7YA> I have transcribed key portions of the narrative here <https://blogs.sciencemag.org/pipeline/archives/2020/04/06/hydroxychloroquine-update-for-april-6>

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results, showing how increasing either the amount of Zinc or the transport chemical increases the virus blocking effect. "Now, here's the explanation why chloroquine might be effective in the treatment of COVID-19, because it is a zinc ionophore."

So Drs. Zelenko and Cardillo have done exactly what the scientists proposed, and it worked.

In a perfect world, with a momentous development that could save thousands of lives daily, health authorities would send someone to verify these claims ASAP.²⁴ That hasn't happened yet. That's why I took all the trouble to look up the evidence, to show it's very plausible and try to get medical people to give it a second look.²⁵ In fact, doctors and nurses working with infected patients would be wise to take a preventive dose of HCQ and zinc themselves.²⁶

And what is *your* doctor waiting for? Short-term high dose zinc supplementation is a completely safe procedure, with nothing to lose and everything to gain – a real "no-brainer."

Not to try HCQ plus zinc now violates the physician's vow of "First, Do No Harm."

If the HCQ+zinc cure works, it will be by helping the immune system to do its job. The coronavirus crisis suggests that public health policy needs to rely more on supporting immune health, and less on vaccinations, if we are to be prepared for novel threats.

In our society everything is profit-driven. Medicine is a business too. We all have an ethical duality in what we do. We need to make a living as well as being of service to others. That's a biological imperative, in every society and every walk of life. The education of doctors is also oriented towards profitable procedures. Modern medicine focuses on interventions that have enough economic value to support the medical infrastructure. So it is more oriented to drugs, surgery, etc. than to self-help through nutrition.

²⁴ It seems improbable that Zelenko could get away with claims of curing 900 patients without being furiously attacked. He came under fierce fire from local media when he overestimated the extent of the epidemic in his area. If this was the reaction for an honest guess, imagine the scandal that would arise if he were guilty of fraud, if even one patient would come forward and dispute his claims. So that could be a kind of a back-handed, tacit confirmation from the media.

²⁵ Nevada MD Armen Nikogosian explains why zinc ionophore therapy works

https://www.theepochtimes.com/old-drug-may-provide-promising-new-treatment-for-covid-19_3277523.html

²⁶ Proflaxis Using Hydroxychloroquine Plus Vitamins-Zinc During COVID-19 Pandemia

<https://www.clinicaltrials.gov/ct2/show/NCT04326725?cond=COVID&draw=2> Healthcare professionals in Turkey will be given just 200 mg of HCQ once every three weeks plus Vit. C and zinc until July to see if it prevents infection. (Dosage seems rather slight).

This ingrained indoctrination may be the main reason for the resistance of the medical profession to the HCQ+Zinc cure, which seems to work more as a quick assist to the immune system, rather than things like targeting pathways to override or correct physiological processes.

When you've invested a lifetime in a specialty, it's natural to apply that knowledge to the case at hand. It's less gratifying to acknowledge that this may be a nail for a simpler hammer, especially one that is seen as lower status. One that may need a bit of "unlearning" some of one's training.

APPENDIX on causes of death:

Links between zinc deficiency (i.e. a weak immune system) and the chronic conditions or "comorbidities" that mark 99% of deaths in coronavirus cases.

Age and Pre-existing conditions Image source: Johns Hopkins/Worldometers.info²⁷

Age (yrs)	Case Fatality Rate (%)	Pre-existing conditions	Case Fatality Rate (%)
80	14.8	Cardiovascular disease	10.5
70-79	8.0	Diabetes	7.3
60-69	3.6	Chronic respiratory disease	6.3
50-59	1.3	Hypertension	6.0
40-49	0.4	Cancer	5.6
30-39	0.2	No pre-existing conditions	0.9
20-29	0.2		
10-19	0.2		
	None		

A. Aging.

Why do the elderly have a much greater chance of dying from COVID19?

"Zinc deficiency in the elderly" (Japan, 2007) <https://www.ncbi.nlm.nih.gov/pubmed/18200755>

Zinc absorption in the elderly is significantly lower than that of the younger. Zinc deficiency is common in the elderly, especially those aged over 75. The symptoms of dermatitis, diarrhea etc., immunocompetence and wound healing are disturbed in those with zinc deficiency and zinc supplementation is necessary as a nutrient for a good quality of life in the elderly.

Zinc, aging, and immunosenescence: an overview <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4321209/> (2015)

"it has been estimated that people older than 65 have an intake of zinc below the 50% recommended level (2). A recent study in a group of 102 elderly European people revealed that 44% of them had Zn deficiency and 20% had high Zn deficiency (62).

Zinc Intake and Resistance to H1N1 Influenza <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2866616/>

Pertinent to bacterial pneumonia-complicating influenza, a 1-year study of 420 nursing home patients ... found that participants with plasma concentrations of zinc greater than 70 µg/dL had a significantly lower risk of pneumonia requiring antibiotics than did participants with plasma zinc levels of less than 70 µg/dL.⁷

Zinc treatment is likely to be most efficacious when administered with a mixture of other micronutrients.⁸ In nature, micronutrient deficiencies seldom occur alone, and micronutrients act

²⁷

https://www.hopkinsguides.com/hopkins/view/Johns_Hopkins_ABX_Guide/540747/all/Coronavirus_COVID_19_SARS_CoV_2

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in concert. For example, the methionine cycle–transsulfuration pathway requires folate, riboflavin, pyridoxine, cobalamine, choline/betaine, methionine, and zinc for several reactions.⁹ Food fortification is an effective method for prevention of nutrient deficiencies.

Serum zinc and pneumonia in nursing home elderly. (2008)

<https://www.ncbi.nlm.nih.gov/pubmed/17921398/>

Compared with subjects with low zinc concentrations, subjects with normal final serum zinc concentrations had a lower incidence of pneumonia, fewer (by almost 50%) new antibiotic prescriptions, a shorter duration of pneumonia, and fewer days of antibiotic use.

B. Hypertension and cardiovascular disease

Prevalence of Zinc Deficiency in Cardiac Surgery Patients.

<https://www.ncbi.nlm.nih.gov/pubmed/28882495>

"Of 56 patients 53% (n=30) had abnormally low plasma zinc levels (<12µmol/L... zinc deficiency is common in cardiac surgery patients, especially in the presence of hypertension, hypercholesterolaemia or obesity."

The Relationship between Serum Zinc Level and Heart Failure: A Meta-Analysis

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5845493/>

"there is a significant association between low serum zinc levels and heart failure."

Zinc deficiency is an independent risk factor for prehypertension in healthy subjects.

<https://www.ncbi.nlm.nih.gov/pubmed/31262235>

Dietary zinc intake is inversely associated with systolic blood pressure in young obese women.

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3796663/>

"results suggest that zinc deficiency is an independent risk factor of an elevated blood pressure"

Zinc deficiency induces hypertension by promoting renal Na⁺ reabsorption.

<https://www.ncbi.nlm.nih.gov/pubmed/30649891>

"Zn²⁺ deficiency (ZnD) is a common comorbidity of many chronic diseases"

(That's what I mean about this also being a zinc deficiency epidemic)

C. Cancer

Zinc: A promising agent in dietary chemoprevention of cancer

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3102454/>

It is now reported that zinc status is compromised in cancer patients compared to healthy people. ... Zinc deficiency and cell mediated immune dysfunctions were frequently present in patients with head and neck cancer and zinc deficiency was associated with an increased tumour size and the overall stage of the cancer.

Zinc supplements can halt the growth of esophageal cancer cells, study says

<https://www.sciencedaily.com/releases/2017/09/170928121656.htm>

Zinc selectively halts the growth of cancer cells but not normal esophageal epithelial cells.

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Association between serum zinc levels and lung cancer: a meta-analysis of observational studies
<https://wjso.biomedcentral.com/articles/10.1186/s12957-019-1617-5>
serum zinc levels were significantly lower in lung cancer patients than that in controls.

D. Diabetes

Effects of zinc supplementation on diabetes mellitus: a systematic review and meta-analysis (2012)

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3407731/>

Studies on humans have shown the beneficial effects of Zinc supplementation in patients with diabetes.

Diabetes is one of main co-morbidities with Covid19 (35% of deaths are in patients with diabetes)

Role of Zinc Supplementation on Diabetes

<https://www.imedpub.com/articles/role-of-zinc-supplementation-on-diabetes.pdf>

Zinc is essential for storage of insulin and for processing of insulin in the body. In diabetic patients the content of zinc is greatly decreased in the pancreas

Scientists prove the role of zinc in type 2 diabetes mellitus

<https://medicalxpress.com/news/2017-11-scientists-role-zinc-diabetes-mellitus.html>

zinc metabolism disorders play an important role in the development of diabetes.

<https://lpi.oregonstate.edu/mic/minerals/zinc>

There is a close relationship between zinc and insulin action. . . . Zinc is also understood to stimulate glucose uptake and metabolism by insulin-sensitive tissues through triggering the intracellular insulin signaling pathway (94).

E. Obesity

Zinc Deficiency Exacerbates Macrophage Infiltration into Adipose Tissue

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3681543/>

"Zn deficiency is associated with obesity and comorbid conditions that include insulin resistance and type 2 diabetes."

What does all this prove?

- First, we set out to test the claim by Zelenko and Cardillo that zinc plus HCQ cures the disease.
- We note that 99% of deaths from coronavirus involve chronic conditions.
- We find that all of these conditions are related to zinc deficiency, and that zinc supplementation is recommended for them.
- We note that it is well established that adequate Zinc is essential to the proper functioning of the immune system, that it inhibits viral replication at four different stages of the cycles, and that it specifically has been shown to inhibit coronaviruses.
- Therefore, there is a strong presumption that fatalities from Covid-19 do involve zinc deficiency, and might be prevented by zinc supplementation.
- Accordingly, there is good reason to believe claims by several practitioners²⁸ that high dose Zinc supplementation, enhanced by HCQ, may indeed cure coronavirus.

²⁸ Beeth, Cardillo, Nikogosian, and Zelenko

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The essence of the scientific method is predictive validity. This is what Francis Bacon meant when he formalized the method. You make a prediction about the world, then you see if it lines up with how the world behaves. We have just reviewed many reasons to predict that HCQ+Zinc may cure Covid-19. This has now been confirmed by a number of practitioners.

What these practitioners are doing adheres more closely to the fundamentals of the scientific method than what some official experts are doing – illogical and dangerous steps like banning HCQ as a dangerous drug, when it's on the WHO honor roll of safe, essential medicines. They regularly make the error of confusing the exception and the rule. This is like refusing to give firearms to your own soldiers, because of isolated cases of friendly fire. Such an army would be wiped out by an enemy in no time.

There is no intrinsic relationship between authority and truth. Appeal to authority is one of the basic logical fallacies.

Authoritarians respond that known authorities are more likely to be correct. Even if that might sometimes be true, it cannot always be relied on.²⁹ When there is a lot at stake, you need facts, not opinions. You need to actually test assumptions through the scientific method, in a practical setting. And when the test has already been done, if you still doubt it, then you confirm it, you replicate it. You don't ignore it.

April 12 Update

Trial, Error, Comic Relief, and Zinc Blindness

<https://www.webmd.com/lung/news/20200409/chloroquine-zinc-tested-to-block-covid-infection>

I stand corrected -- So they ARE going to test zinc+HCQ -- but only as a prophylactic? No cure needed? Obviously there is no pandemic panic after all, we can all go back to work now. While we wait for test results next year. What's the rush? Why not make it a 50-year longitudinal trial, that should certainly show something.

Parody or reality? "In a 40,000-person trial led by the University of Oxford in England, participants in Asia will receive chloroquine or a placebo, and in Europe, hydroxychloroquine or a placebo. That trial is expected to take a year." Meanwhile, in Egypt and China, 1,600,000 people will build a pyramid and a pagoda to test pyramid power. Closer to home, California's UC Davis offers a year's supply of onions to low-income families, in what could become the world's largest and most moist-eyed experiment with ionophores.

Seriously, this is tragic. I had expected Oxford to be the home of brain over brawn.³⁰ Why HCQ in Europe and CQ in China? Here's an educated guess.

Yesterday I referenced a paper from the Journal of Virology by two Chinese researchers, Zhang and Liu, summarizing China's experience: "Potential interventions for novel coronavirus in

²⁹ More on this on the Alternative Hypothesis channel "The Authoritarian View of Knowledge: Peer Review"

https://www.youtube.com/watch?v=zR38CtjD_o and "The Expertise of Experts"

<https://www.youtube.com/watch?v=J8nk7GrB-zs> . See also They Don't Care About You

<https://www.youtube.com/watch?v=Bpqb9LDfARg> and

https://scholar.princeton.edu/sites/default/files/mgilens/files/gilens_and_page_2014_-_testing_theories_of_american_politics.doc.pdf which shows that policy decisions are made by oligarchy, not by the

people. This is the root cause of our failure against the coronavirus challenge.

³⁰ Description of the Oxford study <https://clinicaltrials.gov/ct2/show/NCT04303507>

China: A systematic review.³¹ They take note both of Chloroquine (CQ), and of the action of zinc ionophores – but *separately*. One paper showing CQ inhibits SARS-CoV-1, the other about it being a zinc transporter. It's like one person read one paper, another the other paper, and nobody put two and two together. Nobody in China and nobody in Oxford and nobody in France, apparently. Although the paper "Chloroquine is a Zinc Ionophore" was published in *CHINA* in 2014, and research papers suggesting zinc ionophore therapy have been around since the 1970's, they missed it in their review. The French observed that HCQ is similar to CQ but safer, and ran with that on its own. I am reminded of the old French RR XING warning, "One train can hide another" (*Un train peut en cacher un autre*). Similarly, one thought can mask another. CQ and HCQ aren't ONLY zinc transporters. They have some antiviral function of their own, and that makes people ignore that they are zinc ionophores.

The story of Dr. Raoult,³² the long-haired French iconoclast and staunchest advocate of HCQ, would lend itself to an epic thriller (a sequel to *The Eyes of Darkness?*). A giant protagonist, variously styled the world's greatest microbiologist and an irresponsible quack, his work attracted the ire of medical orthodoxy³³ and the admiration of the Yellow Vests. At first, the French government reacted by banning HCQ except as a last resort (where it is too late), but on April 9th, prime minister Macron visited Raoult's Marseille fiefdom personally. There, "Raoult gave Macron the results of a new study on 1,061 patients showing a 91 percent success rate."³⁴ It has still not mollified his critics. Most of his patients probably were mild cases – which in my hypothesis means the HCQ worked partly with their serum zinc, partly by itself. I am asking Dr. Raoult if he will supplement with zinc to help more severe, high-risk cases, who are most at risk because they suffer from comorbidity conditions, which are linked to zinc deficiency.

As for zinc in China, Zhang and Liu referenced the 2010 Dutch paper that uses the naturally occurring substance pyrithione as the zinc ionophore, without generalizing that finding to CQ. Pyrithione was investigated in the 1950's for use against fungi and bacteria,³⁵ but is now used mainly in zinc pyrithione, a different, very toxic, synthetic compound that goes into dandruff shampoos. Very confusing. If natural pyrithione were used, you'd have to warn people not to take the shampoo internally. HCQ is far less toxic, and also has the advantage that it's already a popular anti-malaria treatment, although a prescription is still needed, as higher doses are dangerous for certain heart conditions.

The media naturally follow the zinc blindness of the medical establishment. For example, the respected journal *Business Insider* published "Coronavirus treatments: A list of the most promising medical treatments for COVID-19" on April 7th, without any mention of zinc, but

³¹ Ibid. Potential interventions for novel coronavirus in China: A systematic review
<https://onlinelibrary.wiley.com/doi/10.1002/jmv.25707>

"Chloroquine is a 9-aminoquinoline known since 1934. Apart from its well-known antimalarial effects, the drug also has many interesting biochemical properties including antiviral effect...90 Moreover, chloroquine was also found to be a potent inhibitor of SARS coronavirus infection through interfering with ACE2, one of cell surface binding sites for S protein of SARS-CoV.91"

³² https://en.wikipedia.org/wiki/Didier_Raoult

³³ E.g. <https://blogs.sciencemag.org/pipeline/archives/2020/04/11/the-latest-hydroxychloroquine-data-as-of-april-11>

³⁴ <https://www.france24.com/en/20200409-macron-visits-marseille-doctor-behind-virus-cure-touted-by-trump>

³⁵ <https://www.sciencedirect.com/topics/medicine-and-dentistry/pyrithione> Pyrithione or pyridinethione is a natural substance with the formula C₅H₅NOS, an extract from the Persian shallot, and should not be confused with synthetic zinc pyrithione, C₁₀H₈N₂O₂S₂Zn.

headlining the CDC mantra "There are no medical treatments for patients infected with the novel COVID-19 virus."

McGill University is planning a trial of Quercetin based on evidence that it might block the ACE2 receptor site.³⁶

On April 8 it was reported that an Australian team is starting trials with intravenous zinc.³⁷ "Past published studies have also shown that high doses of zinc can protect vital organs such as the heart, kidneys and liver against the damage caused by a lack of oxygen... we hope to show that we can save lives by limiting the impact of the symptoms. We are expecting to have preliminary results of the trial available after only seven days."

They make no mention of a zinc ionophore. Australia's drug regulatory agency has banned hydroxychloroquine: "Australia's drugs regulator has been forced to restrict powers to prescribe a drug undergoing clinical trials to treat Covid-19, because doctors have been inappropriately prescribing it to themselves and their family members despite its potentially deadly side-effects."³⁸ (Know-it-alls will botch the job every time.)

Yet a poll of 6200 physicians worldwide confirmed that HCQ is the drug of choice for doctors fighting Covid-19, the medical survey firm Sermo found. "Hydroxychloroquine was overall chosen as the most effective therapy amongst COVID-19 treaters from a list of 15 options. (37% of COVID-19 treaters)"³⁹ And, "Hydroxychloroquine was approved for medical use in the United States in 1955. It is on the World Health Organization's List of Essential Medicines, the safest and most effective medicines needed in a health system," according to Wikipedia.

There is one prophylactic trial going forward with zinc. "Mahir Ozmen, a professor of surgery at the Istinye University, School of Medicine in Istanbul, Turkey, says he thinks the best way to use chloroquine is in combination with zinc and vitamins C and D. He is running a clinical trial, testing to see whether this combination protects health care workers and their immediate families – including his own." That's great too, but right now, a pound of cure is worth a ton of prevention.⁴⁰ We need a means of preventing mild cases that become critical, so we can avoid the double catastrophe of health and economic disasters.

The lesson in all this is do your own research, take care of your own body. Vitamin C, D and E as well as zinc supplements are good for your immune system.⁴¹

A natural zinc helper molecule is quercetin,⁴² which occurs in onions, especially the pungent yellow or red ones that are also higher in anti-oxidants. I am trying quercetin and zinc as a

³⁶ <https://www.mcgill.ca/oss/article/health/quercetin-take-or-not-take>

³⁷ World-first trial to test benefit of intravenous zinc in COVID-19 fight

<https://about.unimelb.edu.au/newsroom/news/2020/april/world-first-trial-to-test-benefit-of-intravenous-zinc-in-covid-19-fight>

³⁸ <https://www.theguardian.com/world/2020/mar/25/australian-doctors-warned-off-after-prescribing-potentially-deadly-covid-19-trial-drug-to-themselves>

³⁹ <https://www.businesswire.com/news/home/20200402005460/en>

⁴⁰ For prevention, here is a protocol from Dr Eric Beeth in Brussels

<http://www.progressivepress.com/dox/Dr-Eric-Beeth-urgent-SARS-CoV-2-guideline-for-60+.pdf>

⁴¹ <https://www.healthline.com/nutrition/immune-boosting-supplements#1> .-Vitamin-D

"In a 2019 review of randomized control studies in 11,321 people, supplementing with vitamin D significantly decreased the risk of respiratory infections in people deficient in this vitamin and lowered infection risk in those with adequate vitamin D levels."

⁴² Quercetin as an Antiviral Agent Inhibits Influenza A Virus (IAV) Entry

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4728566/>

Zinc ionophore activity of quercetin and epigallocatechin-gallate: from Hepa 1-6 cells to a liposome model.

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prophylactic.⁴³ Gargling with diluted tea tree oil or peroxide can help. I also use a nasal saline rinse for a stuffy nose. No, salt water doesn't kill viruses, but it can *remove* a mass of mucus and viruses, reducing the viral load. The quantity counts. It's not just whether you encounter the virus, it's whether you encounter more than your immune system can handle. That's another reason the CDC made a huge mistake telling people not to wear simple masks that reduced the amount of virus we breathe.⁴⁴

The quick success of zinc therapy may indicate that our immune system does recognize the pathogen, but is overwhelmed by the quantity of virus. That is, your cells "know" to block the intruders, but there isn't enough zinc to go around. Perhaps a vaccine might help to recognize the virus earlier, but there are also reports of people testing positive after negative. If correct, this could be related to fluctuations in immune health. Having your own immune health is vastly more valuable than waiting for a vaccine.

Medicine is a huge field, no one person can know all of it. Doctors have very little time for each patient. Equip yourself, Learn what you need.

And question authority. Science builds on knowledge, not authority. If war is too important to be left to the generals, public health and the battle against the coronavirus are much too important to be left to the CDC. See my earlier blog posts⁴⁵ about their bungling that facilitated the pandemic. It's time to purge the incompetent and corrupt from this headquarters of criminal negligence – and the option to replace it outright should also be on the table!⁴⁶

"Robert F. Kennedy Jr. claims the CDC owns patents on at least 57 different vaccines, and profits \$4.1 billion per year in vaccination sales. According to RFK Jr., the CDC is not an independent government agency but is actually a subsidiary of Big Pharma."⁴⁷ RFK is particularly incensed at the CDC's insistence on approving vaccines to contain mercury. He also says vaccine companies have been absolved of any product liability.⁴⁸

The virologist with the Zinc Lozenges

The earliest mention of zinc therapy for Covid-19 may be an email from senior pathologist Dr. James Robb on February 26.⁴⁹

Subject: What I am doing for the upcoming COVID-19 (coronavirus) pandemic

<https://www.ncbi.nlm.nih.gov/pubmed/25050823>

"quercetin may serve as an effective oral immunomodulator for improving cell-mediated immune defense"

<https://www.ncbi.nlm.nih.gov/pubmed/32184034>

⁴³ <https://nutritionalpharmacology.wordpress.com/2020/03/21/combating-covid-19-with-zinc-and-quercetin/>

⁴⁴ I discuss this "bungling" by the CDC in my earlier blog <http://www.progressivepress.com/blog-entry/common-sense-vs-coronavirus>

⁴⁵ <http://www.progressivepress.com/blog-entry/common-sense-vs-coronavirus>

⁴⁶ See paragraphs "Playing With Fire" through "What is the CDC for anyway" here

http://www.progressivepress.com/blog-entry/common-sense-vs-coronavirus#_ednref12

⁴⁷ <https://nworeport.me/2018/07/02/robert-kennedy-jr-cdc-is-a-privately-owned-vaccine-company/> See also <https://thewatchtowers.org/robert-f-kennedy-jr-goes-scorched-earth-on-bill-gates/> and Robert F. Kennedy Jr: My response to John Oliver <https://www.youtube.com/watch?v=7ViZRj4V1VM>

⁴⁸ 42 U.S. Code § 300aa–22. Standards of responsibility <https://www.law.cornell.edu/uscode/text/42/300aa-22> No vaccine manufacturer shall be liable in a civil action for damages arising from a vaccine-related injury or death associated with the administration of a vaccine after October 1, 1988

⁴⁹ <https://slippedisc.com/2020/03/some-expert-advice-on-coronavirus/>

Dear Colleagues,

As some of you may recall, when I was a professor of pathology at the University of California San Diego, I was one of the first molecular virologists in the world to work on coronaviruses (the 1970s). I was the first to demonstrate the number of genes the virus contained. Since then, I have kept up with the coronavirus field...

[recommends washing hands etc.] ...

4) Stock up now with zinc lozenges. These lozenges have been proven to be effective in blocking coronavirus (and most other viruses) from multiplying in your throat and nasopharynx. Use as directed several times each day when you begin to feel ANY "cold-like" symptoms beginning. It is best to lie down and let the lozenge dissolve in the back of your throat and nasopharynx. Cold-Eeze lozenges is one brand available."

What this eminent virologist is prescribing for his friends is a dose to relieve symptoms, but not necessarily a cure. Curing Covid-19 by adding high-dose zinc to the HCQ+Az cocktail was apparently Dr. Vladimir Zelenko's idea.

Raoult Counters

Dr. Raoult is a great believer in thinking outside of the box.⁵⁰

Professor Didier Raoult has been widely criticized for his methods used in the fight against the coronavirus. He replied,

"In the crisis caused by the coronavirus epidemic, we seems to be putting the cart before the horse, that is to say that we imposed a method before even asking ourselves what problem we need to solve."

He is particularly criticized for the fact that his patients are not selected in "randomized controlled trials" (RCT), as is customary.

The Marseille microbiologist counterattacks and explains that "randomized trials, which western countries have adopted as a methodological standard in the current crisis, are a concept imported from the world of chronic diseases." According to him, this research method is not at all adapted to the current situation and the urgency it calls for.⁵¹

Instead of looking at "drugs already on the market, readily available and which we are familiar with in terms of safety and availability," he regrets the methodology adopted by Europe which "has chosen to test several protocols in huge studies, the results of which will not be available for several weeks and which relate to molecules which, in any case, cannot be marketed quickly."

⁵⁰ Translation from a French newspaper <https://www.ladepeche.fr/2020/04/08/lutte-contre-le-coronavirus-pour-didier-raoult-on-a-mis-la-charrette-avant-les-boeufs,8838172.php>

⁵¹ I agree with Dr Raoult on this point. Doctors and bureaucrats have very different perspectives. I worked in a hospital for a time as a young man. One of the doctors confided his secret to me. He said, In fact, every case is a little different. You can't go by the playbook. What we do is as much sympathetic magic as science. We try different combinations of things on a hunch, until something works.

What that means is that in practice, you often have a sample size of n=1. There is nothing to randomize.

Novel coronavirus is also something unique. If you find something that works, you go with it.

That's what years of medical school are for, to have wide knowledge that you can work with, and not just to follow simple rules, made by people who have never seen the patient.

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For Didier Raoult, "this shows that, at some point, using your head for thinking gave way to a methodological routine."

Precisely! As Charles de Gaulle quipped, "*C'est magnifique, mais ce n'est pas la guerre,*" as I quoted in my "Common Sense vs. the Coronavirus"⁵² blog, in regard to our penchant for hypertechnological overkill and our chronic inability to find practical solutions.

I hope this data has the best chance of reaching conscientious and open-minded doctors who are ready to save their patients, and stop the losses of thousands of lives and livelihoods, jobs, businesses, and economies around the world.

⁵² <http://www.progressivepress.com/news/common-sense-vs-coronavirus>