Are Enzymes a Key to COVID Endothelial Injury?

Analysis by Dr. Joseph Mercola Fact Checked

February 10, 2023

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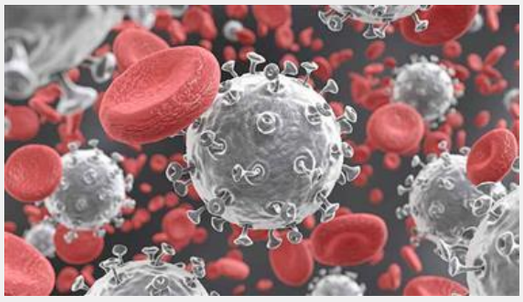
STORY AT-A-GLANCE



- Studies suggest damage to the endothelium, which are cells covering blood vessels, is contributing to the development of blood clots, or thrombosis, in the blood vessels of severely ill COVID-19 patients
- Enzymes may turn out to be the missing link in helping to break up clusters of clotting proteins involved in this dangerous thrombosis, which is linked to increased mortality in COVID-19
- Levels of Von Willebrand factor (VWF), a clotting protein released by endothelial cells, were found to be significantly elevated in COVID-19 patients in advanced stages of the disease
- Proteolytic enzymes such as lumbrokinase, serrapeptase and nattokinase also act as natural anticoagulants by breaking down the fibrin that forms blood clots

From Dr. Joseph Mercola

Since COVID-19 first entered the scene, exchange of ideas has basically been outlawed. By sharing my views and those from various experts throughout the pandemic on COVID treatments and the experimental COVID jabs, I became a main target of the White House, the political establishment and the global cabal.

Propaganda and pervasive censorship have been deployed to seize control over every part of your life, including your health, finances and food supply. The major media are key players and have been instrumental in creating and fueling fear.

I am republishing this article in its original form so that you can see how the progression unfolded.

Originally published: November 30, 2020

Enzymes catalyze many biological reactions in your body. They regulate the rate of these chemical reactions, speeding them up so necessary functions like digestion, muscle contractions and other aspects of cellular metabolism can occur.[1]

Enzymes are also emerging as key players in COVID-19, as studies suggest damage to the endothelium, which are cells covering blood vessels, is contributing to the development of blood clots, or thrombosis, in the blood vessels of severely ill COVID-19 patients.[2] Enzymes may turn out to be the missing link in helping to break up clusters of clotting proteins involved in this dangerous thrombosis.

Endothelium Damage Found in Critically Ill COVID-19 Cases

After noticing blackened fingers and toes — signs of what appeared to be microvascular thrombosis, or tiny blood clots in small blood vessels — in COVID-19 patients in advanced stages of the disease, physicians at the Yale School of Medicine began running clotting tests on their patients.[3]

Levels of Von Willebrand factor (VWF), a clotting protein released by endothelial cells, were found to be significantly elevated, which suggested to hematologist Alfred Lee that damaged endothelial cells may be releasing large quantities of VWF, leading to clots.[4] This prompted the team to screen for additional markers of endothelial cell and platelet activation in critically and noncritically ill COVID-19 patients.

The study, which was conducted in April 2020, included 68 hospitalized patients with COVID-19 and 13 asymptomatic controls. VWF antigen was significantly elevated in COVID-19 patients admitted to the intensive care unit (ICU) compared to non-ICU COVID-19 patients,[5] as was soluble platelet selectin (sP-selectin), which is sometimes used as a biomarker for infection and mortality.[6]

Specifically, mean VWF was 565% among ICU patients and 278% among non-ICU patients while soluble P-selectin was 15.9 ng/mL compared to 11.2 ng/mL.[7] "Our findings show that endotheliopathy is present in COVID-19 and is likely to be associated with critical illness and death. Early identification of endotheliopathy and strategies to mitigate its progression might improve outcomes in COVID-19," the researchers concluded.[8]

Likely not coincidentally, endothelial dysfunction is also associated with insulin resistance and plays a role in the vascular complications of diabetes,[9] as well as being involved in obesity and high blood pressure,[10] conditions that raise the risk of severe COVID-19.

Even mild obesity may raise the risk of COVID-19 severity — COVID-19 patients with mild obesity had a 2.5 times greater risk of respiratory failure and a five times greater risk of being admitted to an ICU compared to nonobese patients. Those with a BMI of 35 and over were also 12 times more likely to die from COVID-19.[11]

Another study looking into the impact of coexisting health conditions like high blood pressure, heart disease and diabetes on COVID-19 outcomes found they're linked to "poorer clinical outcomes," such as admission to an intensive care unit, a need for invasive ventilation or death.[12]

It's possible that the endothelial damage in all of these conditions plays a role in worsening COVID-19 outcomes, but it's unclear which comes first — endothelial damage or COVID-19.

Endothelial Cells Are the 'Main Target' of SARS-CoV-2

Imperial College London cardiologist Thomas Lüscher told The Scientist that the endothelium is the main target of SARS-CoV-2, the virus that causes COVID-19.[13] Under healthy conditions, blood cells can pass through the endothelium lining blood vessels, but when exposed to viral infections and other inflammatory agents, the endothelium becomes sticky and releases VWF.

The end result is a cascade of clotting and inflammation, both characteristics of severe COVID-19. According to a case report published April 8, 2020, "A hallmark of severe COVID-19 is coagulopathy, with 71.4% of patients who die of COVID-19 meeting … criteria for disseminated intravascular coagulation (DIC) while only 0.6% of patients who survive meet these criteria."[14]

Writing in the European Heart Journal, Lüscher argues, "COVID-19, particularly in the later complicated stages, represents an endothelial disease,"[15] which may help explain why multiple organ systems, including the lungs, heart, brain, kidney and vasculature, may be affected.

An additional study by Canadian researchers, published in Critical Care Explorations in September 2020, also revealed elevated VWF and soluble P-selectin levels in COVID-19 patients, along with higher glycocalyx-degradation products,[16] a sign of damage to the glycocalyx, which envelops the endothelium.[17] This can also be a sign of sepsis. Taken together, the research suggests that therapies targeting the endothelium may be useful for COVID-19, which is where enzymes come in.

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Enzymes Used to Treat COVID-19

With the role of coagulopathy in severe COVID-19 becoming clearer, researchers have experimented with **enzymes** in the treatment of the disease. Fibrinolytic therapy, which uses drugs or enzymes to break up blood clots, has been used in a Phase 1 clinical trial that showed the treatment reduced mortality and led to improvements in oxygenation.[18] Further, researchers wrote in the Journal of Thrombosis and Haemostasis:[19]

> *"There is evidence in both animals and humans that fibrinolytic therapy in acute lung injury and acute respiratory distress syndrome (ARDS) improves survival, which also points to fibrin deposition in the pulmonary microvasculature as a contributory cause of ARDS.*
>
> *This would be expected to be seen in patients with ARDS and concomitant diagnoses of DIC on their laboratory values such as what is observed in more than 70% of those who die of COVID-19."*

The researchers reported three case studies of patients with severe COVID-19 respiratory failure who were treated with tissue plasminogen activator (TPA), a serine protease enzyme found on endothelial cells that's involved in fibrinolysis, or the breakdown of blood clots.[20]

All three patients benefited from the treatment, with partial pressure of oxygen/FiO2 (P/F) ratios, a measure of lung function, improving from 38% to 100%.[21] While it should be noted that several of the authors have patents pending related to both coagulation/fibrinolysis diagnostics and therapeutics, the results suggest such treatments deserve further evaluation in certain COVID-19 patients.

An evaluation of organ tissues from people who died from COVID-19 also revealed extensive lung damage, including clotting, and long-term persistence of virus cells in pneumocytes and endothelial cells.[22]

The findings indicate that virus-infected cells may persist for long periods inside the lungs, contributing to scar tissue. In an interview with Reuters, study co-author Mauro Giacca, a professor at King's College London, described "really vast destruction of the architecture of the lungs," with healthy tissue "almost completely substituted by scar tissue,"[23] which could be responsible for cases of "long COVID," in which symptoms persist for months.

"It could very well be envisaged that one of the reasons why there are cases of long COVID is because there is vast destruction of lung (tissue)," he told Reuters. "Even if someone recovers from COVID, the damage that is done could be massive."[24] Dissolving scar tissue is another area where enzymes, particularly proteolytic enzymes, may be useful.

Three Top Enzymes Act as Natural Anticoagulants

Holistic prophylactic alternatives that might be beneficial against blood clots include proteolytic enzymes such as lumbrokinase, serrapeptase and nattokinase, all of which act as natural anticoagulants by breaking down the fibrin that forms the blood clot. Fibrin is a clotting material that restricts blood flow, found both in your bloodstream and connective tissue such as your muscles. Fibrin accumulation is also responsible for scar tissue.

It is important to understand that when using these enzymes for fibrinolytic therapy they need to be taken on an empty stomach, at least one hour before or two hours after meals. Otherwise these enzymes will be wasted in the digestion of your food and will be unable to serve their fibrinolytic purpose.

As noted in Scientific Reports, some of the key mechanisms by which proteolytic enzymes exert their anticoagulant effect include "defibrinogenation, inhibition of platelet aggregation, and/or interference with components of the blood coagulation cascade."[25] Here's a closer look at these important enzymes, all of which are available in supplement form or, in the case of nattokinase, via the food natto.

1. **Lumbrokinase —** This enzyme is about 300 times stronger than serrapeptase and nearly 30 times stronger than nattokinase,[26] making it my strong personal preference and recommendation if you are using a fibrinolytic enzyme. Extracted from earthworms, lumbrokinase is a highly effective antithrombotic agent that reduces blood viscosity and platelet aggregation[27] while also degrading fibrin, which is a key factor in clot formation.

2. **Serrapeptase —** Also known as serratiopeptidase, serrapeptase is produced in the gut of newborn Bombyx mori silkworms, allowing them to dissolve and escape from their cocoons. Research has shown it can help patients with chronic airway disease, lessening viscosity of sputum and reducing coughing.[28] Serrapeptase also breaks down fibrin and helps dissolve dead or damaged tissue without harming healthy tissue.[29]

3. **Nattokinase —** Produced by the bacteria Bacillus subtilis during the fermentation of soybeans to produce natto,[30] nattokinase is a strong thrombolytic[31] comparable to aspirin but without the serious side effects.[32]

   It's been shown to break down blood clots and reduce the risk of serious clotting[33] by dissolving excess fibrin in your blood vessels,[34] improving circulation and decreasing blood viscosity. Interestingly, in one in vitro study, the thrombolytic activity of equivalent amounts of nattokinase and TPA were found to be identical[35] — TPA, remember, is the enzyme that led to improvement in the three COVID-19 case studies.[36]

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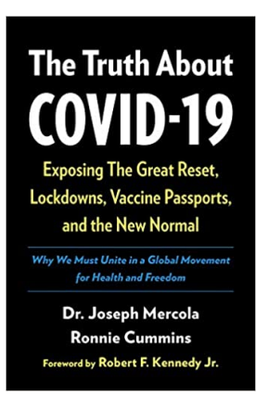

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by Doctor Joseph Mercola

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stoneharbor
Joined On 6/30/2008 1:05:17 PM
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Way before the endothelium becomes "sticky" and releases VWF as described here, it already has become weakened during a Covid attack because it has been depleted of vitamin C. This happens very quickly. Vitamin C is always supposed to be held at a high level in the vascular endothelium, as it is critical to the health of the circulatory system. But as soon as the virus is present, vitamin C is released from beneath the endothelial cells, into the blood plasma, to protect the rest of the body, thus leaving the endothelial cells vulnerable. If you lose vitamin C from the endothelium as it fights excess cell-free hemoglobin (which you get as the virus destroys red blood cells [RBCs], one by one), you lose the integrity of the endothelium and yes, you then have "sticky" endothelial cells, because you've lost the vitamin that keeps intracellular barriers tight in the epithelium, and thus you've given access to the virus into the inner layers of the vascular system.

Thus lungs and other organs are destroyed because their blood supply is quickly cut off. Read a very thorough article on how SARS-CoV-2 takes apart your vascular system: www.townsendletter.com/article/online-covid-19-ards-cell-free-hemoglob.. Also, here's a study on why vitamin C is always critical to the health of your vascular system: www.ncbi.nlm.nih.gov/.../PMC3869438 and it mentions that when SARS-CoV-2 is coursing through your veins, destroying RBC's, the demand for vitamin C to stop this is great enough that vitamin C literally pours out through the epithelium to come to the rescue: "It was concluded that short-term ascorbate transfer occurs on gaps between the cells or even across one or more cellular junctional connections...."

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Guillermou
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Interesting. stoneharbor. Supplementation with vitamin E also reduced vWf levels, which is probably the most accurate in vivo marker of endothelial cell activation and damage. The expression of VCAM-1 and the reduced availability of NO represent the first steps in atherogenesis. High vitamin E intake has been reported to be associated with a low risk of coronary heart disease in patients free of diagnosed cardiovascular disease. academic.oup.com/.../2847528 (2002) The present study described that the serum level of vitamin E was positively associated with a lower number of arteriosclerotic risks, and its role in the prevention of non-communicable diseases was suggested. www.jstage.jst.go.jp/article/jnsv/66/3/66_213/_article/-char/ja/ (2020)

VitC supplementation may play an important role in lowering blood pressure in patients with essential hypertension. www.ncbi.nlm.nih.gov/.../PMC7034722 (2020) Vitamin D exerts a sexual dimorphic effect on serum proteins associated with those in the blood coagulation pathway and with cardiovascular risk among overweight adults. Von Willebrand factor, fibrinogen gamma chain, and multimerin-1 proteins, relevant to blood coagulation, were differentially affected between the sexes after correction of vitamin D status.

This study found that the lowest levels of 25 (OH) D played a more pronounced role in conditioning the severity of coronary artery disease in women compared to men. pubmed.ncbi.nlm.nih.gov/27727459 (2016) This meta-analysis demonstrated that vitamin D supplementation to patients with metabolic syndrome and related disorders resulted in an improvement in vWF. link.springer.com/.../s12986-018-0320-9 (2018) This review studies vitamin C in the treatment of cancers, diabetes,

Alzheimer's disease, and sepsis. www.akademisains.gov.my/asmsj/wp-content/uploads/sites/6/mdocs/1%20vit.. (2019)

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In this review, the following pathological metabolic pathways, derived from the denaturation of hemoglobin and the dysregulation of iron metabolism, are highlighted: 1) decrease in the contribution of functional hemoglobin; 2) iron overload in cells / tissues (hyperferritinemia); 3) release of free toxic circulating heme; 4) hypoxemia and systemic hypoxia; 5) nitric oxide reduction; vi) activation of coagulation; 6) ferroptosis with oxidative stress and lipoperoxidation; viii) mitochondrial degeneration and apoptosis.

Glutathione (GSH) has a protective effect against oxidative stress and viral infections. GSH improves oxidative stress induced by ferroptosis. Zinc thanks to its beneficial activity also on the affinity of hemoglobin. Vitamin D can also activate some hepcidin antagonist pathways, regulating the hepcidin-ferroportin axis. Intubated patients who received 100,000 IU / day of cholecalciferol for 5 days showed higher and lower levels of hemoglobin and hepcidin, respectively. Melatonin exhibits a proven protective role against hypoxia, ferroptosis, and denaturation of hemoglobin. Curcuminoids, anthocyanins (mainly delphinidins) and catechins have been shown to be beneficial for the following biochemical processes that take place in COVID-19:

1) oxidation, ferroptosis and lipoperoxidation of hemoglobin; 2) alteration of the function / biogenesis of mitochondria, with altered mitophagy; 3) activation of the inflammasome and interleukin storm; 4) SARS-CoV-2 protease activity; v) SARS-CoV-2 attack on the bone marrow; 5) positive regulation of hepcidin and blockade of ferroportin. The overrepresented ferritin deposition in the lungs under viral infection, together with the consequent fibrin / coagulation disorder, fully justify anticoagulation with multifunctional heparin. Heparin may have a prophylactic and therapeutic role in COVID-19 patients, possibly improving their prognosis www.ncbi.nlm.nih.gov/.../PMC7267810 (2020)

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The elderly, metabolic pathologies such as diabetes and cardiovascular diseases increase the risk of anemia, which aggravates hypoxia in COVID-19 patients. Hypoxia causes glucose intolerance. One of the factors mediating this effect could be an elevated release of epinephrine. www.atsjournals.org/.../rccm.200308-1200OC (2003) Hypoxia also stimulates the inflammatory response of macrophages and inhibits the differentiation of adipocytes from preadipocytes.

Hypoxia has a generalized effect on the metabolism of adipocytes and on the general function of adipose tissue, which underpins the inflammatory response in the tissue in obesity and the subsequent development of obesity-associated diseases, in particular type 2 diabetes and metabolic syndrome. www.cambridge.org/core/journals/british-journal-of-nutrition/article/h.. obesity / 8857B6A0EAEFDE55A41153AF0D0658AF (2009) Type 2 diabetes at least doubles the risk of anemia. Anaemia in patients with diabetes, both type 1 and type 2, is a frequent clinical finding.

The mechanisms of anaemia are multifactorial and often not very well understood. Iatrogenic causes, including oral antidiabetic drugs, ACE inhibitors and ARBs, and renal insufficiency are the major causes of anemia in patients with type 2 diabetes. In patients with type 1, the cause is often an associated autoimmune disease, and screening for autoimmune gastritis, pernicious anaemia, Hashimoto's thyroiditis, coeliac disease and Addison's disease is recommended. In addition, anemia was associated with a higher rate of development of type 2 diabetes. www.sciencedirect.com/science/article/abs/pii/S1056872716311035

(2017) papers.ssrn.com/.../papers.cfm (2019)

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Blood platelets also show greater activity in people with obesity, diabetes and insulin resistance, with higher plasma levels of Von Willebrand factor (VWF), with an increase in platelet aggregation, which increases cardiovascular risk that also It may influence the fact that blood clots often form in the lungs with respiratory failure in severe manifestations of COVID-19. onlinelibrary.wiley.com/.../dmrr.3193 (2020) journals.sagepub.com/.../1591019919896940 (2020)

Very small clots called microthrombi can also occur in the blood vessels of the lungs. These small clots prevent blood from reaching the air spaces in the lungs, where blood is normally oxygenated. It is convenient to have fluid blood with a good diet, which will be the best way to avoid blood clotting. Some foods and other substances that can act as natural blood thinners and help reduce the risk of clots include the following link: www.medicalnewstoday.com/.../322384 Dietary supplements can change hemostasis by various mechanisms, ie, inhibit activation of blood platelets, especially platelet aggregation, reduce arachidonic acid metabolism, and affect coagulation.

Supplementation with commercial products made from aronia berries (Aronox) has cardioprotective properties with antiplatelet activity, as well as anti-inflammatory and antioxidant properties. www.ncbi.nlm.nih.gov/.../24452534 (2015) www.ncbi.nlm.nih.gov/.../PMC3281331 (2010) www.ncbi.nlm.nih.gov/.../24012283 (2014) The polyphenol-rich extracts from black chokeberry and grape seeds impair changes in the platelet adhesion and aggregation induced by a model of hyperhomocysteinemia. www.ncbi.nlm.nih.gov/.../22810463 (2013) Grape seed extract, supplied, has antiplatelet and antioxidant properties. www.ncbi.nlm.nih.gov/.../18231940 (2008)

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The richest known natural source of delphinidins is the maqui berry. they decrease platelet activity and may contribute to the prevention of thrombosis. Delphinidins contribute to improved endothelial function with elevated endothelial NO generation, decreased platelet aggregation, and vascular anti-inflammatory effects www.ncbi.nlm.nih.gov/.../25892567 (2015) Another interesting product with antiplatelet and antioxidant properties is the Yucca bark extract, which contains various phenolic compounds. www.ncbi.nlm.nih.gov/.../15723749 (2005)

Of the main plants discussed in this review, which have antiplatelet activity, some include saffron, garlic, green tea, St. John's wort, ginger, ginkgo biloba, ginseng, and guavirova. These medicinal herbs have phytochemical components, which are directly related to the antiplatelet activity of the plant, such as flavonoids, curcumin, catechins, terpenoids, polyphenols and saponins www.researchgate.net/profile/Brenda_Silva4/publication/310824770_Natur.. (2017) europepmc.org/.../6333939 (2018)

This review assesses the current literature on the relationship between onion, garlic, tomato and beet consumption and platelet activation in the blood, which may have important implications for the prophylaxis and treatment of cardiovascular diseases. academic.oup.com/.../5316731 (2019) A mixture of black elderberry, tricolor violet and calendula relieves atherogenic activities. EPA and DHA, acts on risk factors for cardiovascular disorders, for example, oxidative modification of LDL, high concentrations of lipids in plasma and aggregation of platelets in the blood. www.ncbi.nlm.nih.gov/.../25832443 (2015)

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Guillermou

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Natural products most commonly used in blood platelet and clotting functions include garlic, echinacea, ginger, green tea, and ginkgo, as well fish oil, coenzyme Q10, glucosamine. and chondroitin sulfate, gingko, and green tea. Table 1 lists dietary supplements with antiplatelet properties. Figure 2 presents the effects of various components of the diet, i and dietary supplements in the treatment of cardiovascular diseases. www.ncbi.nlm.nih.gov/.../27388464 (2017) The antithrombotic activity of garlic was revealed through the suppression of cyclooxygenase, the decreased production of thromboxane and vasoconstrictors such as prostaglandin and leukotriene by platelets.

The most important plants with antithrombotic and anti-inflammatory activity are turmeric, Chinese sage or danshen, flowering plants of the barberry family. Berberine exhibits a cytoprotective effect on endothelial cells and increases plaque stability. Pomegranate ellagic acid, peel polyphenols, and punicalagin decrease the activation of pro-inflammatory cytokines. www.ncbi.nlm.nih.gov/.../27766480 (2017) www.ncbi.nlm.nih.gov/.../PMC7156611 (2020) Vitamin D exerts a sexual dimorphic effect on serum proteins associated with those in the blood coagulation pathway and with cardiovascular risk among overweight adults. Von Willebrand factor, fibrinogen gamma chain, and multimerin-1 proteins, relevant to blood coagulation, were differentially affected between the sexes after correction of vitamin D status.

This study found that the lowest levels of 25 (OH) D played a more pronounced role in conditioning the severity of coronary artery disease in women compared to men. pubmed.ncbi.nlm.nih.gov/27727459 (2016) This meta-analysis demonstrated that vitamin D supplementation to patients with metabolic syndrome and related disorders resulted in an improvement in vWF. link.springer.com/.../s12986-018-0320-9 (2018)

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Maritt

Joined On 12/14/2010 8:19:52 AM

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Due to lockdown I am unable to see the dentist; I have now used high dose Serrapeptase for 7 months for both an abscess and implantitis (titanium screw). The abscess is nearly gone, hopefully the infection around the implant has reduced.

Reply | Mark as Spam | Posted On 11/30/2020 6:59:15 AM

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Guillermou

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Thanks Maritt. In this study Serrapeptase was administered to 100 patients with inflammation caused by acute periodontal abscess, periodontitis, root cysts, and peri-coronitis, and with post-operative inflammation after tooth extraction and gingival flap operation. Clinical studies were conducted that Serapiase is particularly effective for inflammation with swelling, and other infected wounds with discharge and necrotic tissues with an efficacy rate of 88.7%. www.jstage.jst.go.jp/.../_article

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dude01

Joined On 8/10/2007 1:20:04 PM

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Have you tried a mercury free dentist? I have one and was just there. The doctors and staff appear to have not consumed the Kool Aid. While there, my doctor said their business was not effected by the lockdowns, Covid, etc.

Mark as Spam | Posted On 2/10/2023 1:28:31 AM

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salviachela

Joined On 12/24/2021 11:55:10 AM

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How many mg do you use? I'm having a similar problem minus the implant or screws.I have serrapeptase left over from treating thick fibrous scars on a palm that had been injured decades ago (it removed them!). Thank you for posting!

Mark as Spam | Posted On 2/10/2023 8:11:31 AM

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grulla

Joined On 1/17/2012 8:03:55 AM

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Hi "Maritt", I realize your post is over 2 years old and hope all went well, but I want to reply anyway, repeating my post from a few weeks ago, that back in 12/22, I had a similar abscess over my #4 tooth, with swelling spreading towards my right eye. So after a futile attempt inoculating H2O2 with my Monoject 412 dental syringe, and before trying to use my more powerful Waterpik, I decided in the early morning to first try taking a half tspn of Vit C., sodium ascorbate powder every two hours, and lo 'n behold, by the end of the day, I noticed a slight retreating of the abscess swelling. And in 2-3 days, the swelling was over 90% gone, but with a bit of residual stiffness.

Early this week, I visited my dentist for my periodic 6 month dental inspection, with annual high speed still (not orbital scan, another story) X-rays (plus cleaning), and was shown a slightly dark spot over tooth #4, and was told that I only eradicated the symptom (?), and that #4 tooth needed to be removed in favor of a (dangerous near my right eye) root canal, or my preferred implant procedure. I'm a bit disappointed in that response, and will wait a while to make my decision, and in the meanwhile will inoculate more H2O2 over #4 tooth to see if all that tooth removal is actually necessary???

Mark as Spam | Posted On 2/10/2023 8:25:39 AM

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Maritt

Joined On 12/14/2010 8:19:52 AM

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Hi salviachela, I used very high dose Serrapeptase for about 10 months - initially I took 5 of 250,000IU tablets twice a day, then reduced that to 2 tablets twice a day. I now take 1/2 of the 250,000IU tablet twice per day. Always on an empty stomach, works well when taking it when I get up in the morning and then when going to bed at night.

Mark as Spam | Posted On 2/10/2023 8:59:32 AM

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Maritt

Joined On 12/14/2010 8:19:52 AM

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Hi grulla, thanks for your post. I will now add regular vitamin C. Interestingly Lecithin (sunflower) is also helping to keep the swelling down - think there is a link with improving fat metabolism (good fats in diet) and reducing lymph stagnation. Serrapeptase helped a lot but is not able to remove all the infection. If I remember correctly it was Dr Andrew Levy that said such root canals should be removed, as there is no blood flow to those pockets of closed infection. No blood flow, no full removal of infection. ***** Hi dude01 I am only able to go my holistic / mercury free dentist later this year. Now to keep infection and inflammation to a minimum until I can get treatment.

Mark as Spam | Posted On 2/10/2023 9:13:05 AM

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1Peace

Joined On 10/29/2011 12:19:42 PM

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Part 3. I believe effort needs to be put into 5G and what they are hiding, finding patterns.They have been silently installing it in schools across America as this 'virus' has been taking place. Is that why they know when a new deadlier wave is coming?? There is already of large body of scientists and doctors signed on together telling the harm to all organic life that 5G will harm. I am interested in finding patterns with people symptoms. I was one who had the massive headaches.

I just happen to have several metal plates in my jaw. Coincidence? Metals in vaccines, what are they causing with a 5G detox.? The different types of toxin overloads and symptoms expressed should be analyzed and compared. These ' virus 'symptoms and the roll out of 5G at approximately the same time, coincidence? I think not. Interesting note from the book. When the Spanish flu 'hit' and killed millions in 1918, they never figured out how , at that time, it could have traveled that fast worldwide. (It started in a military base in America.) just happens that it was the first time the world had been completely wrapped in radio waves, again not healthy to humans own frequency. Again, Coincidence?

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Almond

Joined On 2/26/2008 4:23:33 PM

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A doctor once told me this. He said one look at a patient is worth more than all the lab tests, esp. as they age. He said his first impression is of their skin. If skin is firm and glowing, he can assume they are healthy and getting adequate nutrients. Nutritional status will predict many things, like immunity, too. He said that, when an older patients visits and he notices good skin, dark hair, etc., he has learned over the years that it is very unlikely there will be something seriously wrong with the individual.

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ms.libby

Joined On 8/17/2010 9:58:15 AM

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My Dad was a Doctor of Internal Medicine, having graduated from Case Western Medical School in 1935. The stories he told of his years in medical school were amazing - from being assigned cadavers with 3 other students for dissection, to the house calls that doctors used to routinely do in those days where people would ask him "Where is the doctor, son?" because he always looked so young. He said he was trained to start the observational diagnosis of a patient from the moment he encountered a person, skin tone, skin temperature (by touch just not via a thermometer), appearance of the eyes, color/shape of nailbeds, looking at their mouth/tongue, reflexes, the smell of their breath and skin, hair quality.

Doctors got close then. He said he could reliably diagnose a hypothyroid person within a few minutes. In those days tests for thyroid disease didn't really exist, so the only way to diagnose it was to know what to look for, such as a scalloped enlarged tongue. One thing he said that stuck with me is that people who stutter/stammer tend to have a zinc deficiency. His appearance remained young until the end, his hair never really turned gray - it was always darker overall, his skin smooth and pink and he had good teeth He ate very well, as we did growing up, and never allowed my mother to use a microwave (said it "killed" the food) nor did we eat anything "white" - no white sugar, no white bread, little to zero milk (butter ok) and our consumption of sodas was ZERO.

Junk food was scarce in my younger years and since we lived in rural area, we did have a garden & an orchard. He started us on foods such as sardines and sauerkraut from an early age, which I eat weekly still. So the adage of "you are what you eat" is so simple and true - but most doctors have little interest, or knowledge, in helping their patients nutritionally. And so it goes.....we all have to make our own good food choices to live a healthy life.

Mark as Spam | Posted On 2/10/2023 3:21:28 AM

Like Dislike

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grulla

Joined On 1/17/2012 8:03:55 AM

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Hi "Almond", "He said his first impression is of their skin." I remember Dr. M. saying that a few years ago, and to this very day, I'm always in the habit of sizing up one's health by their skin condition, among others, just like I have gotten in the habit of judging others' heath at the supermarket by their shopping cart contents. :-)

Mark as Spam | Posted On 2/10/2023 9:14:40 AM

Like Dislike

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njlady

Joined On 11/21/2006 8:03:31 PM

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So wondering if nattokinase can be used instead of blood thinners to prevent clots. Since pharma blood thinners are so dangerous, why isn't the natural alternatives being used?

Reply | Mark as Spam | Posted On 11/30/2020 2:46:48 PM

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Maritt

Joined On 12/14/2010 8:19:52 AM

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Yes, high dose. In addition fish oil and vitamin C also thins blood naturally (it builds up over time) and improves health.

Mark as Spam | Posted On 2/10/2023 2:40:07 AM

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allunoisrong

Joined On 6/19/2006 10:22:31 AM

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I quit taking Eliquis a while back and use Nattokinase instead. I haven't informed the doctor :) They are Big Pharma drug salesmen and will only poo poo natural supplements.

Mark as Spam | Posted On 2/10/2023 5:47:51 AM

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grulla

Joined On 1/17/2012 8:03:55 AM

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"...why isn't the natural alternatives being used?" I'm not going to try answering that, as I realize it's a rhetorical question, and we Mercola forum members all know the answer. :-) And donating blood as a thick blood viscosity PREVENTATIVE is yet another option. nutritionandhealing.com/.../blood-viscosity

Mark as Spam | Posted On 2/10/2023 8:43:57 AM

Like Dislike

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forbiddenhealing

Joined On 2/21/2011 9:51:43 AM

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Lumbrokinase is a spooky enzyme...I took it for 2 weeks straight..then my forearms and lower legs erupted in crazy itching! Every inflammatory insult results in fibrin formation, and I thought of all the stings, scratches, bites, plant saps, broken capillaries accumulated over a lifetime. 6 weeks on, the itching is subsiding/skin texture renewed as all the dissolved scar tissue rose to the surface and flaked off. My only relief was red palm oil and very hot showers or a hair dryer so I could sleep....300Xs stronger! I guess so.

Reply | Mark as Spam | Posted On 2/10/2023 8:26:21 AM

Like Dislike

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chongduc

Joined On 7/10/2010 8:17:38 PM

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Japan has a very low death rate for this virus and generally live a longer healthy life then the US. Their diet and eating fermented food like Natto is a big part of it Food is medicine ! But unfortunately here in the US Food and medicine are produced for profit not health. I have not heard much about Japan and countries with low death rates from Covid 19 I guess finding solutions that do not promote vaccine propaganda do not make $$$$ and are not worth promoting.

Reply | Mark as Spam | Posted On 11/30/2020 5:49:14 AM

Like Dislike

Guillermou

Joined On 4/7/2015 8:47:48 AM

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Yes, the Japanese take fermented soybeans and very little unfermented soybeans. One study showed that a Japanese man generally eats around 8 g, which is negligible than a vegetarian who consumes tofu and soy milk. The Japanese lead a healthier lifestyle: they eat less processed meat, more fish and vegetables, and fewer canned or processed foods than on a Western diet.

Soy milk for babies is especially harmful. The isoflavone levels of these babies were found to be 13,000 to 22,000 times higher than in the non-soy-fed babies. This overload of phytoestrogens, caused in babies, a double risk of developing thyroid abnormalities, including goiter and autoimmune thyroiditis, delayed physical maturation. Girls are at risk of early puberty

abnormalities, including goiter and autoimmune thyroiditis, delayed physical maturation. Girls are at risk of early puberty. Researchers have also suggested increased risk of diabetes, nervous system disorders, asthma, immune system disorders, and pituitary insufficiency, and irritable bowel syndrome, may be caused by high intake of phytoestrogens in early life.

In a major ongoing study involving 3,734 elderly Japanese American men, those who ate the most tofu during middle age had up to 2.4 times the risk of later developing Alzheimer's disease. Soybeans act as powerful enzyme inhibitors. These "antinutrients" block the action of trypsin and other enzymes necessary for the digestion of proteins. Consumption of soy can cause chronic deficiencies in the absorption of amino acids and can have consequences on the optimal function, structure and plasticity of the hippocampus. www.theguardian.com/theobserver/2000/aug/27/life1.lifemagazine6 nexusmagazine.com rense.com/.../soy.htm

Mark as Spam | Posted On 11/30/2020 8:00:32 AM

Like Dislike

Russ G.

Joined On 1/5/2007 11:20:48 PM

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Chongduc, I just got an email today linking to an article that said Japan's suicide rate for October alone has exceeded the death count from the ENTIRE covid "pandemic". If you have seen any believable suicide stats for the US, I'd love to see them. Because, chances are, they too have been coded as covid cases, so the CARES money can flow to the ones doing the erroneous (lying) coding...

Mark as Spam | Posted On 11/30/2020 1:56:06 PM

Like Dislike

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radarphos

Joined On 5/17/2013 10:25:27 AM

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In April 2022 I had a tightening in a right calf muscle that I thought was a clot. I was unjabbed, but at the time my wife had been recently jabbed twice without informing me (until about 6 months later). The clot feeling was the size of a half-dollar-coin, always in the same spot, never moving, and no felt clumpiness or lump. It felt like a stiffness-pain that might cramp up, but I had no swelling in the calf, which led me again to think "clot". I got it the day of my first lawn-mow, 2022, then afterward walking up the stairs. I'm old enough and had been sedentary all winter.

At least four times it showed up when I had completed a physical exertion. I had read about Lumbrokinase, so ordered it, and Serrapeptase (thinking that the two enzymes may work in different ways and in different tissues (though that was never said). I mowed again a few days later with no clot feeling; and have never had that feeling since then. I was what I call "less than well" in my home about the time my wife got jabbed twice without me knowing. It persisted at least six months before it began to wane.

When it waned I began realizing that it happened when she worked three straight days a week; and when it seemed to come back was when she was home for four days. It took me a long time to see that pattern because I wasn't looking for it. So much for long-term Shedding. I take Lumbrokinase and Serrapeptase now permanently after learning that all my marital family has been jabbed at least 3x, and a grandchild at least twice. I figure between Jab shedding and Winter sedentary lifestyle I will benefit from the protection. So far, so good!

Reply | Mark as Spam | Posted On 2/10/2023 7:38:13 AM

Like Dislike

Doc4docs

Joined On 12/1/2020 12:09:36 AM

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It's good to see that proteolytic enzymes are finally getting the attention they deserve in the US medical world. But they still have a good bit to learn, for example enzymes do their thing because of the substrate (material type) they lyse (eat). Limbo kinase from earth worms is listed in the Handbook Of Proteolytic Enzymes as being more powerful than either serrapeptase or nattokinase, at present the two strongest proteolytic (protein eating) enzymes. But lumbokinase from earthworms is made for the worm to eat through the dirt and make its tunnels. A very powerful enzyme indeed, but there is NOTHING in the human or mammalian body that resembles that substrate so it has nothing it can eat in humans and so has little ro no physiologic effect. Where as all the other proteolytic enzymes can lyse pro inflammatory cytokines, fibrin and fibrinogen creating an entire realm of physiologic action and applications!

Reply | Mark as Spam | Posted On 12/1/2020 12:09:58 AM

Like Dislike

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grulla

Joined On 1/17/2012 8:03:55 AM

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Any links, "Doc4docs", it seems your pseudonym speaks volumes, hmmm???

Mark as Spam | Posted On 2/10/2023 8:58:32 AM

Like Dislike

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jdarnall64

Joined On 12/24/2009 9:45:21 AM

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Like many diseases or viruses we see that the inability of traditional drugs to work in treating any situations including covid. Sadly in America it's more important to protec big pharma than save lives, including in this pandemic. In reality if people would educate themselves they cold protect themselves from this or most any other virus. The immune system is our best weapon against this virus yet doctors don't have the guns to teach people how to do that. It takes more than just traditional vitamins though there are several that are important. Until the day comes that the traditional medical world can add and prescribe alternative natural supplements we will continue to lose lives unnecessarily.

Reply | Mark as Spam | Posted On 11/30/2020 8:41:48 AM

Like Dislike

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mjnelson999

Joined On 11/8/2019 4:52:36 PM

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You can thank the FDA varmints for not allowing that food nutrients are healing and only approved drugs can do that?

Mark as Spam | Posted On 11/30/2020 1:27:27 PM

Like Dislike

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epi-cure

Joined On 5/12/2012 7:02:04 PM

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Enzymes wasn't in the running that day but otherwise the field was full of the usual suspects: www.youtube.com/watch Also there was a rumor going around that day that Dr. Fauci might have been running under another name at different track: Horses A$$.

Reply | Mark as Spam | Posted On 11/30/2020 6:51:11 AM

Like Dislike

Robin_Whittle

Joined On 8/21/2020 11:49:38 PM

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Vitamin C, zinc and numerous other things are important, but none are as important at raising circulating 25-hydroxyvitaminD3 AKA 25OHD. This needs to be at least 40ng/ml (as measured in vitamin D blood tests) for the autocrine (internal) signaling systems of many types of cell to function properly. This includes especially immune cells, including Th1 lymphocytes which should respond to their circumstances and turn off the production of pro-inflammatory cytokines and turn on the production of anti-inflammatory cytokines. Th1 lymphocytes from the lungs of people with severe COVID-19 fail to do this, because they lack sufficient 25OHD. McGregor et al. www.biorxiv.org/.../2020.07.18.210161v1 . This lack is actually the reason why some people get severe symptoms. The failure of the autocrine signaling systems means some immune cells can't attack pathogens, others can't kill infected cells and others, such as these Th1 lymphocytes can't stop this indiscriminate inflammatory killing of healthy cells. Links to and discussion of the pertinent research: http://VitaminDStopsCOVID.info .

Reply | Mark as Spam | Posted On 11/30/2020 6:13:28 AM

Like Dislike

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bul51293

Joined On 8/26/2013 10:32:46 PM

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For the EXPERT in this subject, MORE than ANYONE I have heard speak - this doctor blows the competition out of the water - and has figured out MORE than anyone what is really in the mRNA shots. This guy is genius. Check out Dr. Ardis his website: https://thedrardisshow.com .....he also is on Telegram (Dr. Bryan Ardis). MIND BLOWING....it is stuff that no one else has mentioned yet, but makes perfect sense. Surprised Dr. Mercola hasn't discussed it yet....

Reply | Mark as Spam | Posted On 2/10/2023 10:29:12 AM

Like Dislike

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bonbon1472003

Joined On 10/21/2009 6:54:03 PM

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As always very interesting articles and points of view. As an unvaxxed senior I finally caught Covid. I have been following FLCCC protocols and had my vitamin D levels checked. 84 Nmol/s and thats taking 5-6k mg a day for the last 3 years. Covid knocked me down for about 36 hours with a fever. I recovered quickly and know that my immune system will be that much stronger for it. I have followed Dr Mercola since his early days in Chicago. I can't find the information that if you have had Covid as an unvaxxed person are the after effects the same as a vaxxed person? I'm thinking its not as to me personally the Mrna vaxx is a problem with the after effects. For unfounded reason the Enzymes mentioned in this article scare me. Lol I'm sure unfounded. So in my head my thoughts are to be supplementing with the enzymes, regardless of having gotten Covid or not. I'm open to any thoughts on this.

Reply | Mark as Spam | Posted On 2/10/2023 8:05:14 AM

Like Dislike

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bul51293

Joined On 8/26/2013 10:32:46 PM

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GO HERE AND READ UP on Dr. Bryan Ardis, he has all the protocols and answers (smartest dr. on the planet) https://thedrardisshow.com

Mark as Spam | Posted On 2/10/2023 10:31:14 AM

Like Dislike

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nre8035

Joined On 11/30/2017 2:49:18 PM

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Mitolife sells a great systemic enzyme supplement and lifeblud sells a better vitamin E supplement. They also sell the blue stuff ;)

Reply | Mark as Spam | Posted On 2/10/2023 7:07:41 AM

Like Dislike

1Peace

Joined On 10/29/2011 12:19:42 PM

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Part. 2 . We know the test kits are a scam. Look what happened to Elon Musk when he publicly questioned what was going on. He had 4 tests in one day, same nurse. Two were positive and two were negative! The media shut him down immediately and mocked him. Every time a researcher or doctor puts out a video talking about 5G and a possible virus connection it is taken down immediately. When you start looking at where major illness occurred at the beginning and the roll out of 5G, what countries didn't lock down and didn't roll out 5G, you will start to see a pattern. Remember the very early deaths that occurred in a nursing home in Kirkland , Wa? 5G cell tower was recently put up a block away! They know where outbreaks will occur. There was a large group of families who got together for a wedding out here at a grange hall. These are pretty darn healthy farmers.

Again, larger group together for extended time in an enclosed building, over 60 developed 'symptoms', different and varied. What do you think they all had on them? Phone on them emitting and receiving. The towers and receivers are appearing regularly all over , even in rural areas now, while people are focused on 'the killer virus' wearing a mask they believe is protecting them. We know the recent big study out of Denmark shows the masks are doing nothing. Dentist worldwide are noticing that there is massive gum recession going on from mask use, low oxygen. Hundreds of thousand of birds fell out of the sky at once dead in a swath, over three states, several months ago.They want us to believe they died of starvation! That is illogical, you don't drop dead instantly . But what was found was clotting!

Reply | Mark as Spam | Posted On 11/30/2020 3:07:42 PM

Like Dislike

Gwyncann

Joined On 7/20/2012 8:36:35 AM

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Cytokine release syndrome after radiation therapy jitc.bmj.com/.../1.full.pdf "Cytokine release syndrome....CRS after radiation therapy (RT) for cancer has not been reported before.....blood cytokine measurements were performed 1 h after the second and third dose of RT and demonstrated tumor necrosis factor alpha (TNF-α) and interleukin-6 (IL-6) levels approximately ten-fold higher than normal. Conclusions: RT....appeared to be the putative mediator of an immune process which yielded significant increases in pro-inflammatory cytokines.....This case demonstrates the capability of RT to elicit immune-related adverse events." pubmed.ncbi.nlm.nih.gov/32896310 The role of IL-6 and other mediators in the cytokine storm associated with SARS-CoV-2 infection

"Abstract The coronavirus disease 2019 pandemic caused by severe acute respiratory syndrome coronavirus 2 presents with a spectrum of clinical manifestations from asymptomatic or mild, self-limited constitutional symptoms to a hyperinflammatory state ("cytokine storm") followed by acute respiratory distress syndrome and death. A hyperinflammatory state referred to as cytokine storm in its severest form has been marked by elevation of IL-6, IL-10, TNF-α, and other cytokines and severe CD4+ and CD8+ T-cell lymphopenia and coagulopathy. meridian.allenpress.com/radiation-research/article-abstract/161/3/290/..

Decreases in Percentages of Naïve CD4 and CD8 T Cells and Increases in Percentages of Memory CD8 T-Cell Subsets in the Peripheral Blood Lymphocyte Populations of A-Bomb Survivors reader.elsevier.com/reader/sd/pii/S2405630820300458?token=E0842A7FA33E.. The effect of pelvic radiation alone on lymphocyte subgroups "Lymphocytes are considered the mainstay of anticancer immunity. Lymphocytes are considered one

Reply | Mark as Spam | Posted On 11/30/2020 8:10:13 AM

Like Dislike

Clh8735

Joined On 4/14/2017 9:50:40 PM

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I find those regularly commenting here to be impressively knowledgeable! I see the big picture...The Great Reset...looming over the blind masses. I am alone in this plandemic understanding and wish to share those facts, but family/friends call it a conspiracy and push me away. Yet their fear of this virus is confirmed by close family or a friend/coworker dying from COVID19. So my spouse is now even more fearful as his best friend died in less than two weeks after being infected of this virus! Blood clots were the cause. His wife also has the virus, both sharing a hospital room!!

She has improved and gone home, but not our friend. He was 83 yo, doctors stating after exams he had a body of a much younger man(don't recall the age he stated). He was outside daily, hunted, went fishing, drove his 4-wheeler, took his skiff up the marsh every week! He was a slender man, never complained or seemed to slow down. Where his spouse he felt was over weight and of no exercise. My spouse enjoyed his friendship and like being his handyman as this 83yo was not a fixer! He was s joy to have in our life! So now to have him pass as he and his wife lived their lives normally, very little compliance to the COVID rules! Another reason my spouse is convinced of the masks, distancing!

This 83yo felt no concern to the virus, but my spouse would religiously try to tell him the rules! Yet they shopped, partied, celebrated , volunteered as usual! So his sudden illness(he never seemed to get sick of all the years we knew him) and death has shook my spouse and myself! I understand that the elderly or those of poor health are vulnerable! My aunt died years ago from the flu. My daughter now has it and her spouse and believes science and would NOT agree to any like, Dr. Mercola's protocols! All this fuels my spouse's beliefs, fears of this pandemic and their hope for the vaccine! I pray each day that there will be no forced vaccines! I petition my local reps! Masses believe!!

Reply | Mark as Spam | Posted On 11/30/2020 11:34:20 AM

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Maritt

Joined On 12/14/2010 8:19:52 AM

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Criminal. The fear was intentionally created. This video (bit long) has more on it
www.reddit.com/r/Coronavirus_Ireland/comments/xr0s74/safe_and_effectiv..

Mark as Spam | Posted On 2/10/2023 9:23:36 AM

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