

Are Fibrinolytics Key to Preventing Clogged Arteries?

Analysis by [Dr. Joseph Mercola](#)

✓ Fact Checked

April 15, 2023

STORY AT-A-GLANCE

- › Lumbrokinase, serrapeptase and nattokinase are proteolytic enzymes that act as natural anticoagulants by breaking down fibrin that forms blood clots
- › Fibrinolytic enzymes are antihypertensive, anti-atherosclerotic, lipid-lowering and anti-platelet agents, which also have neuroprotective effects
- › Nattokinase at a dose of 10,800 fibrinolytic units (FU) a day for 12 months “effectively managed the progression of atherosclerosis and hyperlipidemia” in one study
- › Just one 2,000 FU dose of nattokinase enhanced fibrinolysis and anti-coagulation, activating multiple fibrinolytic and anti-thrombotic pathways simultaneously
- › Lumbrokinase is nearly 30 times stronger than nattokinase and 300 times stronger than serrapeptase; if you are using a fibrinolytic enzyme, my strong personal preference and recommendation is to use lumbrokinase

Fibrinolytic agents, sometimes referred to as thrombolytic agents, are capable of dissolving blood clots that may block your veins or arteries. In general, cleaner arteries are a benefit to your cardiovascular health, which is one reason why fibrinolytic enzymes like lumbrokinase, nattokinase and serrapeptase should be on your radar.

In your body, enzymes regulate the rate of numerous biological reactions, speeding

them up so necessary functions like digestion, muscle contractions and other aspects of cellular metabolism can occur.¹

Lumbrokinase, serrapeptase and nattokinase are proteolytic enzymes that act as natural anticoagulants by breaking down fibrin that forms blood clots. Fibrin, a clotting material that restricts blood flow, is 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 containing protein. Otherwise, these enzymes will be wasted in the digestion of the protein in your food and won't serve their fibrinolytic purpose.

Fibrinolytic Enzymes Help Manage Heart Disease

Fibrinolytic enzymes are antihypertensive, anti-atherosclerotic, lipid-lowering and anti-platelet agents, which also have neuroprotective effects.² Much research into fibrinolytic enzymes has focused on nattokinase (NK), an active ingredient in natto, or fermented soybeans. It's likely due to its high nattokinase content that natto consumption is linked to a decreased risk of heart disease mortality and increased longevity in the Japanese population.³

Nattokinase, produced by the bacteria *Bacillus subtilis* during fermentation of soybeans to produce natto,⁴ is a strong thrombolytic,⁵ comparable to aspirin⁶ but without the potential side effects. It is important to note, however, that lumbrokinase is nearly 30 times more potent than nattokinase — and 300 times more potent than serrapeptase.^{7,8,9}

So, while all of the fibrinolytic enzymes are effective and beneficial, you'll need much higher doses of nattokinase and, especially, serrapeptase, than lumbrokinase to achieve similar effects. If you are using a fibrinolytic enzyme, my strong personal

preference and recommendation is to use lumbrokinase.

That said, you can get an idea of these enzymes' health potential via studies done on any of the types. One such study involved 1,062 people with mild hyperlipidemia and/or mild atherosclerosis. They took nattokinase at a dose of 10,800 fibrinolytic units (FU) a day for 12 months, which “effectively managed the progression of atherosclerosis and hyperlipidemia with a significant improvement in the lipid profile.”¹⁰

Significant reduction in carotid artery intima-media thickness, a measure of the extent of atherosclerotic vascular disease, was noted, with improvement rates ranging from 66.5% to 95.4%. Those who smoked, drank alcohol or had a higher BMI experienced the greatest lipid-lowering effects. No adverse effects were noted from the nattokinase.

It's also interesting to note that regular exercise further improved nattokinase's beneficial effects, and it also worked synergistically with consumption of vitamin K2 and aspirin. At a lower dose of 3,600 FU per day, nattokinase was ineffective at lowering lipids or suppressing the progression of atherosclerosis, highlighting the importance of proper dosing and “challenging the recommended dose of 2,000 FU per day,” the researchers explained. Further:¹¹

“The available data suggest that the antiatherosclerotic effects of NK are due to the collective effects of the combination of the antithrombotic, anticoagulant, antioxidant and lipid lowering properties of NK or the natto extract containing NK ... A possible mechanism [for NK's lipid-lowering effects] is through NK proteolytic activity on certain protein targets involved in lipid metabolism, resulting in changes in lipid metabolism.”

A Single Dose of Fibrinolytics Has Anticoagulant Benefits

A study involving 12 men revealed that just one 2,000 FU dose of nattokinase

enhanced fibrinolysis and anticoagulation.¹² It activated multiple fibrinolytic and antithrombotic pathways simultaneously, the researchers explained.¹³ At six and eight hours after the nattokinase was taken, D-dimer concentrations were significantly elevated.

D-dimer is a protein fragment produced by the body when a blood clot dissolves. It's typically undetectable or present only at very low levels, but its level may significantly rise when the body is forming and breaking down blood clots,¹⁴ as occurred after one dose of nattokinase in this study. The researchers added:¹⁵

“Based on NK’s unique, comparatively strong fibrinolytic/anticoagulant activity, stability in the gastrointestinal tract and long bioavailability in vivo, NK would appear to offer potential advantages over other currently used agents for treatment and/or prevention of selected diseases processes ...

NK might have an impact on not only fibrinolytic/anticoagulant pathways but also other risk factors for thrombosis, which imply as a NK’s possibility for prevention and/or treatment of the diseases.”

As mentioned, fibrinolytic enzymes inhibit platelet aggregation and the formation of blood clots similarly to aspirin. In an animal study, a 500 mg/kg dose of nattokinase fully prevented a blocked artery, as did aspirin at a dose of 30 mg/kg, demonstrating its effectiveness at improving blood flow:¹⁶

“The results indicate that nattokinase extracted from fermented soybean inhibit platelet aggregation by blocking thromboxane [a vasoconstrictor] formation, and thereby delay thrombosis following oxidative arterial wall injury. Therefore, it is suggested that nattokinase could be a good candidate without adverse effects for the improvement of blood flow.”

Brain benefits are also apparent from fibrinolytic enzymes, including nattokinase and serrapeptase (SP). In a study on rats, administering either enzyme for 45 days

successfully modulated several markers of Alzheimer's disease.¹⁷ A significant increase in brain derived neurotropic factor (BDNF) was also noted. BDNF is a member of brain growth factors that contributes to neuroplasticity, which greatly enhances cognitive performance.^{18,19}

Fibrinolytic Enzymes for COVID-19

Another candidate for application of fibrinolytic therapy is COVID-19, as coagulopathy appears to play a role in severe COVID-19. Researchers wrote in the Journal of Thrombosis and Haemostasis:²⁰

“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 [disseminated intravascular coagulation] 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.²¹

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%.²² 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.²³

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,”²⁴ 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.”²⁵

Dissolving scar tissue is another area in which enzymes, particularly proteolytic enzymes, may be useful.

The potential for blood clots is one reason why board-certified internist and cardiologist Dr. Peter McCullough uses full-dose aspirin — 325 milligrams a day — in almost everyone with long COVID syndrome who doesn't have a major blood clot, in addition to other medications.²⁶

However, a safer and likely equally effective alternative to aspirin is lumbrokinase and serrapeptase. You can alternate between the two enzymes — one day take lumbrokinase and the next take serrapeptase — because you'll need to be on it for about three months and you can develop a sensitivity to them over time if you use them daily without interruption.

A Breakdown of the Top Three Fibrinolytics

Fibrinolytic enzymes are ideal for targeted usage; as mentioned, if you intend to use them daily, be sure to alternate through the following types so you don't develop a sensitivity or allergy to them. Also, remember that they need to be taken on an empty stomach, at least one hour before or two hours after meals containing protein.

- 1. Lumbrokinase** — As I said earlier, this enzyme is about 300 times stronger than

serrapeptase and nearly 30 times stronger than nattokinase,²⁷ making it my top recommendation if you are using a fibrinolytic enzyme. Extracted from earthworms, lumbrokinase is a highly effective antithrombotic agent that reduces blood viscosity and platelet aggregation²⁸ while also degrading fibrin, which is a key factor in clot formation.

I recommend that everyone keep some high-quality lumbrokinase in your emergency kit. I recently had a significant bruise from a weight training injury. I took a high dose of lumbrokinase for a week and it cleared right up.

I also took lumbrokinase recently after being stung by three wasps on my forehead just before bed, which swelled to nearly the size of half a tennis ball. It occurred to me since wasp venom contains proteins that fibrinolytic enzymes can break down so I took half a dozen and went to sleep.

I was beyond surprised to see nearly all the swelling decrease. If you are going to try this the sooner you take it to the time you are bitten, the better it will likely work as it denatures the venom proteins before they do their damage to your body.

- 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.²⁹ Serrapeptase also breaks down fibrin and helps dissolve dead or damaged tissue without harming healthy tissue.³⁰
- 3. Nattokinase** — Nattokinase has been shown to break down blood clots and reduce the risk of serious clotting³¹ by dissolving excess fibrin in your blood vessels,³² 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 identical³³ — TPA, remember, is the enzyme that led to

improvement in the three COVID-19 case studies.³⁴

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Guillermou

The report by Dr. Mercola is very relevant. According to Dr. Nieper, serrapeptase was especially effective in removing debris that forms plaque in the carotid arteries. The carotid arteries run along both sides of the neck and carry blood and oxygen from the heart to the brain. In his biography, *The Curious Man*, Dr. Nieper pointed out the difficulties involved in treating carotid arteries that narrow due to plaque buildup. "Very often," he explained, surgeons are either unwilling or unable to open partially closed carotid arteries... They fear that the resulting debris [caused by the surgery] could be pushed further into the smaller connecting arteries and cause a stroke cerebral and possibly death." Dr. Nieper discovered that serrapeptase offered a safe and effective alternative to such risky surgical procedures.

"In cases of severe arterial narrowing," he reported, "I have used serrapeptase with excellent, even life-saving, results. Just three tablets a day for a period of twelve to eighteen months is enough to produce results. Many of my patients have shown significantly improved blood flow through their previously constricted arteries, as confirmed by ultrasound examination." Based on such results, Dr. Nieper also stated that serrapeptase worked more quickly to remove arterial plaque than EDTA chelation therapy, a procedure commonly used by many alternative practitioners to remove plaque and restore overall cardiovascular function.

Napier also discovered that serrapeptase can dissolve dangerous blood clots and restore the overall health of the body's arteries and veins. He even reported that it could help reduce varicose veins.

www.dna-biopharm-sa.com/serrapeptase-research .-----

Posted On 04/15/2023

Diabetes Mellitus (DM) is currently developing in an epidemic and Diabetic kidney disease is one of the main complications that affects a third of patients with DM. Lumbrokinase is an extract of a worm belonging to the class *Lumbricus rubellus*, which contains bioactive proteolytic enzymes, which is considered as an alternative therapy to reduce proteinuria. The patients were administered Lumbrokinase 250mg at a dose of 3x2 capsules daily for 12 weeks. Proteinuria improved, characterized by a decreased urinary albumin creatinine ratio (UACR) level after lumbrokinase administration. www.tmjournal.org/.../140-1531899677.pdf (2020) .----- A recent preprint study from King's College London explains that the Spike protein exerts a marked effect on the procoagulant phenotype of platelets, by enhancing calcium flux, phosphatidylserine externalization, and thrombin generation.

Eventually, this resulted in a striking increase in thrombin-induced clot formation and retraction." Case studies, which are published by doctors, show that Covid vaccines that deliver the spike protein are also linked to clotting cases. Examples include cases of pulmonary embolism, deep vein thrombosis, myocardial infarction, cerebral venous sinus thrombosis, and stroke.

In addition, data analysis by WHO shows an increased risk of clots (ischemic stroke, CVST) after mRNA spike protein vaccines that is significantly higher compared to influenza vaccine. Nattokinase is a natural fibrinolytic that breaks down fibrin in clots. It is approximately four times more potent than plasmin as a fibrinolytic, which is produced by the body to break down fibrin. After nattokinase is absorbed from the intestines, it retains its protease (protein breakdown) activity. It works to break down clots and slow clotting through a couple of different mechanisms.

Guillermou

The mechanisms of action of nattokinase include: 1) Dissolves or cleaves fibrin in blood clots. 2) Increases tPA (tissue plasminogen activator), which is an endogenous protein that breaks down fibrin. (see image above) 3) Increases urokinase levels. Urokinase produces more plasmin, another endogenous protein involved in fibrinolysis. 4) It inactivates PIA-1, which is a plasmin inhibitor. 5) It works by inhibiting platelet aggregation by blocking the formation of thromboxane. A clinical trial of healthy volunteers and patients with cardiovascular disease investigated the effect of nattokinase on cardiovascular endpoints. Participants took two nattokinase capsules (2,000 fibrinolysis units per capsule) daily for two months.

There was a statistically significant decrease in fibrinogen, factor VII, and factor VIII (coagulation factors) in healthy and cardiovascular disease participants. No adverse events were observed. In an animal model of Alzheimer's disease, the researchers used a combination of nattokinase with serrapeptase (another serine protease) to see if it would help remove beta-amyloid. The study showed that the proteases increased the levels of certain genes in brain tissue related to suppressing the production of beta amyloid.

www.geneticlifehacks.com/nattokinase-and-lumbrokinase (2022)

Posted On 04/15/2023

juststeve

Geez Gui, throw away the Statins, also possible High Blood Pressure Med's and use these products based on Real and Deeper Science actually looking for prevention and healing and not on old science from a time when these kinds of things weren't even known. Possibly a cyclical regime of one followed by the another. Of course part of the Great Bull Spit, Reset, is full frontal attacks on wholistic Healings and Supplements. Especially if no prescription is needed. Like the sinister Vit C or the free Vit D3 your own body makes in the range needed all on its own.

Posted On 04/15/2023

rrealrose

Thanks Gui for the serrapeptase link. Had some in the cabinet, not yet taking it...

Posted On 04/15/2023

grulla

Hi "gui", I/we would be interested to hear more on your and Dr. M's take on similar functioning EDTA. sciencing.com/what-is-edta-5002665.html

Posted On 04/15/2023

Guillermou

Just, you are the king of sarcasm. The deep state is not content with attacking and firing doctors and scientists who fight for true health medicine, it is not content with discrediting preventive and early treatments, it is not content with turning humanity into a biological weapons factory , now wants people to turn stronger towards Rockefeller allopathic medicine, set limitations on supplements after taking over the supplement companies and establish governance of WHO and FDA. VIDEO: ON DESTROYING OUR HEALTH SYSTEM AND BIG PHARMA CAPTURE www.globalresearch.ca/video-on-destroying-our-health-system-big-pharma.. (12/12/2022).

-----SOME SUPPLEMENTS OR FOODS RECOMMENDED FOR ARTERIOSCLEROSIS AND CARDIOVASCULAR HEALTH. 1) Marine omega-3 supplementation reduces the risk of myocardial infarction, death from CHD, total CHD, death from CVD, and total CVD. Higher concentrations of marine-derived omega-3 polyunsaturated fatty acid biomarkers were associated with significantly lower risk of total CVD, CHD, and total mortality. ALA levels were inversely associated with a lower risk of T2D.

These data support dietary recommendations that support the role of omega-3 polyunsaturated fatty acids in maintaining a lower overall risk of developing cardiovascular disease and premature death. r.jordan.im/.../hu2019.pdf (2019).----

www.sciencedirect.com/science/article/abs/pii/S026156142200228X (2022).---- 2) Treatment with CoQ10 and berberine improved vascular endothelial function in patients with atherosclerosis or significant risk factors for atherosclerosis.

www.sciencedirect.com/science/article/abs/pii/S113835932200106X (2022).----

Posted On 04/15/2023

3) Studies showed that the use of garlic can reduce blood pressure, waist circumference, body mass index, LDL-c, non-HDL-c, total cholesterol, triglycerides, and inflammatory markers. It can also increase HDL-c levels and can improve cardiovascular parameters such as coronary artery calcium, microcirculation, epicardial and periaortic adipose tissue, post-occlusive reactive hyperemia, low-attenuation plaque, carotid intima-media thickness; and carotid intima-media thickness. For these reasons, garlic can be considered in the prevention and treatment of CVD risk factors. www.tandfonline.com/doi/abs/10.1080/10408398.2022.2043821<https://www.tandfonline.com/doi/abs/10.1080/10408398.2022.2043821> (2022).--- onlinelibrary.wiley.com/doi/10.1111/j.1365-3113.2022.100000017.art00017 (2022).---- 4) Lipoic acid.

Lipoic acid is an antioxidant that acts as a coenzyme in the energy metabolism of fats, carbohydrates, and proteins. Improved endothelial function in patients with metabolic syndrome. onlinelibrary.wiley.com/doi/10.1111/j.1365-3113.2022.100000015.art00015 (2022).---- 5) Experimental studies including in vitro methods and in vivo animal models mainly describe the following effects of quercetin: (1) antihypertensive, (2) hypolipidemic, (3) hypoglycemic, (4) antiatherosclerotic, and (5) cardioprotective (cardiotoxicity).

suppressed).. Quercetin may exert beneficial effects on arrhythmias by affecting cardiac ion channels, calcium homeostasis, gap junction, and mitochondrial channels to inhibit mitochondrial oxidative stress and by suppressing cardiac fibrosis, inflammation, modulating the autophagy and apoptosis, improving ischemia/reperfusion injury and intestinal microbiota.

www.mdpi.com/1099-4981/10/10/1019 (2022).---

www.ingentaconnect.com/content/ben/ctmc/2015/00000015/00000017/art00017 (2015).----

www.sciencedirect.com/science/article/S0753332222008368 (2022).-----

www.nature.com/articles/s41598-022-13911-w (2022).-----

Guillermou

6) Probiotics in general and *Lactobacillus reuteri* 30242 promote cardiovascular health. The synbiotics used and a nutritious diet are associated with positive changes in the number of selected genera in intestinal bacteria that make up the intestinal microbiota, and also with a favorable effect on cardiometabolic risk factors (overweight and obesity, lipid profile, inflammation, glucose level, blood pressure. Administration of *Lactobacillus reuteri* V3401 to obese adults 18 to 65 years of age who had been experiencing metabolic syndrome for 12 weeks was associated with lower levels of inflammatory biomarkers, including TNF-, IL-6, IL-8, and soluble intercellular adhesion. . molecule-1, which reduces the risk of cardiovascular disease www.mdpi.com/.../6292 (2023).- 7) Reduce homocysteine with B6, folate and B12 and betaine. 8) Other natural interventions that may help prevent atherosclerosis and cardiovascular disease include propionyl L-carnitine, garlic, ginkgo biloba, resveratrol, vitamins C, K, and E, hesperidin, and others. www.wnyurology.com/content.aspx

Posted On 04/15/2023

juststeve

Thanks Gui, you all ways manage to add meat and muscle to the bones of a comment!!!

Posted On 04/15/2023

Guillermou

Hi Grulla, from Dr. Mercola's reports: Some of the metals that are particularly detrimental to mitochondrial function are aluminum, arsenic, cesium, tin, and thallium. Other toxic metals that many people have in their bodies are cadmium, mercury, and lead. When you have heavy metal toxicity, your body tends to attract electromagnetic fields. These in turn affect your metabolism and ability to effectively eliminate toxins and heavy metals. Some strategies that are great for detoxifying you are a low-EMF, full-spectrum infrared sauna along with R-lipoic acid. Minerals like magnesium, zinc, selenium, potassium, and iodine are also important for detoxification. Myers also has an online program called "Myers Detox Protocol Course" which focuses on replenishing minerals lost during the detoxification process like Magnesium and Zinc.

Zinc helps flush out cadmium, a metal that causes more cancers than all other metals combined. Selenium also prevents viral replication and helps remove arsenic, beryllium, cadmium, mercury, and silver. Potassium helps expel thallium. Iodine to displace fluorine. Also consider getting a high-quality, low-EMF infrared sauna. Use regularly in combination with binders and any minerals you may need. Remember that we live in a highly toxic world. Even if you think you're doing pretty much everything right, you've probably built up heavy metals in your body, which can prevent you from experiencing peak health.

Posted On 04/15/2023

Also from Dr. Mercola and Dr. Klinghardt The three pillars of detoxification in general and metal detoxification in particular are: 1. Cleanse and clear your GI tract of metals and toxins, with thiol-functionalized silica (Intestinal Metal Detox or IMD) from a doctor, or with chlorella, plus charcoal and clay, both of which bind all other toxins. Herbs like dandelion and goldenrod are good for extra liver and kidney support. Burdock root and dandelion help cleanse the blood. Be sure to drink plenty of water to flush out the toxins. Remember, if you are detoxifying and you feel really bad; you will need to remove more toxins from your GI tract and blood.

When you do that, drop your Nrf2 regulators and instead take more binding substances for the GI tract and more herbs that support the liver and kidneys. Drink a lot of water. When you feel clear again, start over with the Nrf2 regulators. 2. Optimize glutathione. Boost your glutathione levels, either with precursors (such as N-acetylcysteine [NAC] or whey protein) or a liposomal glutathione formula. Glutathione is the dominant substance that binds to mercury and helps remove it from your tissues, along with other heavy metals.

3. Regulate Nrf2 in cells with R-lipoic acid, polyphenols and sulfur-based compounds, from cruciferous vegetables and allium. The Ayurvedic herb haritaki is beneficial, as are sulforaphane (broccoli seed extract) and allicin and diallyl disulfide (garlic). All of these regulate Nrf2 and aid in detoxification. [articulos.mercola.com/sitios/articulos/archivo/2022/03/03/desintoxicac..](https://www.articulos.mercola.com/sitios/articulos/archivo/2022/03/03/desintoxicac..) (2022)
..... [articulos.mercola.com/sitios/articulos/archivo/2016/06/19/desintoxicac..](https://www.articulos.mercola.com/sitios/articulos/archivo/2016/06/19/desintoxicac..) (2015)

Guillermou

DR. KLINGHARDT: 2016 CONFERENCE NOTES. -Some studies have shown that melatonin can help to detoxify the brain as well as to help with parasites, viruses, etc. in the brain. Dr. Klinghardt finds that only liposomal melatonin gets into the brain. -Cannabis has been shown to increase levels of melatonin in the body. -All along people have focused on detoxifying with glutathione, but melatonin is even better. -EMFs keep metals from being properly detoxified in the body.

www.betterhealthguy.com/klinghardt-2016.----- DR. MED. DIETRICH KLINGHARDT M.D., PH.D., ON EFFECTIVE HOLISTIC HEAVY METAL DETOXIFICATION (CHELATION)

docshare04.docshare.tips/.../175192800.pdf .-----HOW TO DETOX HEAVY METALS

thewholejourney.com/detox-heavy-metals BENEFITS OF USING A SAUNA

artofsauna.ca/7-sauna-health-benefits

Posted On 04/15/2023

otis101

Gui I am looking for any contraindications. In 2007 I had quadruple by-pass. Veins from my legs replaced plugged arteries. Some time later I was taking glycine and proline. Then I read to not take proline if veins now used as arteries. I don't recall the contraindication now but stopped the proline. I took serrapeptase for more than 18 months but veins & arteries continued to get plaque. Allergic to soy so did not take nattokinase. Plan on taking lumbrokinase for a short period. BUT I have noticed contraindications mentioned in the past but nothing in this article about certain prescription meds and supplements.

I take 4 prescription meds for BP, Afib, and a mild stroke. I have had BP problems for 60 plus years and tried lots of meds and alternatives. I am OK now with my health as I feel like it is good so no plans to drop prescription meds covered by the VA. My latest problem 2 years ago was a blocked artery in the leg which required a stent. So walking has been greatly improved but still some lingering pain so going to try lumbrokinase. Back to my question. Any contraindications?

Posted On 04/15/2023

Guillermou

Hi OTIS. I have responded to "TotalMayhem" about the safety of NATTOKINASE: in prevention of cardiovascular diseases. Even if you are allergic to soy, you may not be allergic to nattokinase due to the enzymatic transformation and the amount to be taken. As Dr. Mercola has reported, lumbrokinase promotes clot and thrombus breakdown, and is reported in the medical literature to be nearly 300 times more potent than Serrapeptase and nearly 30 times more potent than Nattokinase, which are the other alternatives. of oral fibrinolytic enzymes. We reaffirm the importance of the use of fibrinolytics in acute COVID.

www.researchgate.net/publication/351132468_INCLUSION_OF_FIBRINOLYTICS_.. (2021).--- This article is interesting: NATTOKINASE AND LUMBROKINASE: NATURAL SUPPLEMENTS FOR CLOTS LUMBROKINASE SAFETY: A clinical trial using 490mg/day to determine the half-life of lumbrokinase noted no serious adverse events due to lumbrokinase. Another small study of Lumbrokinase DLBS1033 also showed that it was "safe and tolerable in healthy adults." The study looked at liver and kidney function, lipid profile, hemorrhagic symptoms, and allergic reactions. www.geneticlife hacks.com/nattokinase-and-lumbrokinase (2023)

Posted On 04/15/2023

In this clinical study with 1,062 participants, it was to examine the efficacy of NATTOKINASE (NK) in atherosclerosis and hyperlipidemia and the safety at the dose of 10,800 FU/day after 12 months of oral administration. Various factors including lower doses influencing the pharmacological actions of NK were also investigated. We found that NK at a dose of 10,800 FU/day effectively managed the progression of atherosclerosis and hyperlipidemia with a significant improvement in the lipid profile. A significant reduction in the thickness of the carotid artery intima-media and the size of the carotid plaque was observed.

Improvement rates ranged from 66.5 to 95.4%. NK was found to be ineffective in lowering lipids and suppressing the progression of atherosclerosis at a dose of 3600 FU/day. The lipid-lowering effect of NK was more prominent in subjects who smoked, drank alcohol, and subjects with a higher BMI. Regular exercise further enhanced the effects of NK. Coadministration of vitamin K2 and aspirin with NK produced a synergistic effect. No notable adverse effects associated with the use of NK were recorded.

In conclusion, our data demonstrate that the progression of atherosclerosis and hyperlipidemia can be effectively controlled with NK at a dose of 10,800 FU/day. The lowest dose of 3600 FU per day is ineffective. The dose of 10,800 FU/day is safe and well tolerated. Some lifestyle factors and the co-administration of vitamin K2 and aspirin lead to better results in the use of NK.

www.researchgate.net/profile/Yiguang-Lin/publication/362469939_Effecti.. (2022)

otis101

Thanks Gui. No contraindications in 2023 but some cautions. From your link [geneticlife hacks](#). "Talk with your doctor about nattokinase if you are on blood thinners, heart-related medications, or if you have any questions on whether nattokinase is right for you." And this from the link. "My two-cents: There really isn't a lot of research on lumbrokinase yet. While it seems likely safe for most healthy people, personally, I would like to see more clinical trials or even animal trials on it before taking it as a supplement."

Posted On 04/15/2023

Guillermou

Breast cancer continues to be one of the main health problems in women. Nattokinase, produced by *Bacillus subtilis*, has therapeutic effects in various diseases, including hypertension, vitreoretinal disorders, and Alzheimer's disease. One we investigated its inhibitory effect in a murine breast carcinoma. We isolated the cultured supernatant, the bacterial suspension, and the bacterial pellet from *Bacillus subtilis*. The supernatant and the suspension had higher nattokinase activity than the pellet. Tumor growth was measured by tumor volume and weight.

We found that the cultured supernatant and the bacterial suspension could inhibit the growth of breast cancer. Blood vessels in the tumor were distributed with treatment with supernatant and bacterial suspension by contrast-enhanced ultrasound. The supernatant and the suspension also reduced the expressions of FOXM1 and MMP2 in the tumor tissue. This study revealed a potential new role for nattokinase in the therapy against breast cancer and extended the application of nattokinase- e-century.us/.../ijcem0096299.pdf (2019)

Posted On 04/15/2023

In this study, we assessed the effects of NK on the development of hepatocellular carcinoma (HCC), a principal malignancy of the liver that causes morbidity and mortality worldwide. Crude extracts of NK (NCE) were isolated from fermentation medium by centrifugation and separated into three fractions (<10 K, 100~30 K and >30K). Orthotopic HCC mouse models were established and NCE was administered by oral gavage. H&E staining was performed to examine the pathology of HCC livers. Immunohistochemistry and immunofluorescence were used to evaluate FOXM1, CD31, CD44 and vimentin expression in the liver.

Compared to PBS groups, NCE increased the survival rates of HCC-bearing mice to 31% and decreased ascites. Low-intensity ultrasound imaging showed that the hypoechoic mass area was lower in NCE-treated mice and that tumor growth significantly decreased. IHC staining showed that the expression of FOXM1 was inhibited by NCE treatment. Immunofluorescence results revealed lower levels of CD31, CD44 and vimentin in the NCE groups. Taken together, these data demonstrate that NCE from *Bacillus subtilis natto* improves survival and inhibits tumor growth in HCC mice. www.jmb.or.kr/journal/view.html?volume=29&number=8&spage=1281 (2019)

Posted On 04/15/2023

Natto has anti-cancer properties. A good example is miso soup, a well-known traditional Japanese dish made with soybeans as the main ingredient. This soup is basically made of soybean paste that has been cooked with mold, yeast, and bacteria before being mixed with water and salt. To prepare 200 ml of miso soup, commercially available natto was added in an amount of about 50 g and cooked for 1 minute. All the volunteers ate miso soup every day at lunchtime. Human gastric adenocarcinoma cells were used to study the anticancer properties of chungkukjang (a short-term fermented Korean soybean paste) and *Bacillus* strains of chungkukjang were isolated and identified.

K-Chungkukjang (87%) demonstrated the highest growth inhibitory effect at a concentration of 1 mg/ml, followed by H-chungkukjang (85%) and MC-chungkukjang (69%). According to epidemiological studies, high levels of isoflavonoids are particularly linked to a lower risk of colon cancer, while miso soup intake is linked to a lower risk of stomach cancer. Beans have been reported to contain large amounts of cancer preventative agents. NUTRITIONAL HEALTH PERSPECTIVE OF NATTO: A CRITICAL REVIEW www.hindawi.com/.../5863887 (2022)

Posted On 04/15/2023

jan64524

Hi Guillermou. My husband has seizures due to a 7cm brain bleed into the cranium in April of 2021. He fell on the cement due to a myocardial infarction. The CT scan at the ER did not show any bleeding into the cranial cavity, so he was put on Heparin. It was Easter Sunday so staff was short and his stent surgery was not until the next day at 2:30pm (long story...). He was on Heparin all this time. The stent was placed and he returned to his room at 6:30pm. He went to sleep, woke up at 12:30am, pulling out his femoral tube, etc. He began bleeding out, but it was stemmed.

I woke up at 2:30pm, realized he had not spoken since he returned to the room, and ran out to tell the nurses. They did another CAT scan, discovered the bleed, stopped the Heparin, put him on platelets, and sent him to a hospital that dealt with this issue. He is much better now, but has dementia. He had it a little before but it's not getting any better, if you know what I mean. He is not on any blood thinners for his heart issues due to his brain bleed. He is on seizure meds, Keppra, and will have a seizure if his levels drop too low or he is overstimulated for some reason.

My quandry is: Will the fibrinolytics help him dissolve the scar tissue in his brain, relieving him of seizures, as well as helping him with his heart issues? He takes one baby aspirin/day. Or, is it still too dangerous for him to have them? His neurologist has no idea about this part of care (fibrinolytics) and just says to stay on the aspirin (and shut up about it.) Thank you. I hope you can answer this as I would love him to not have any more seizures. He did not get any of the shots.
irisht96@protonmail.com

Posted On 04/15/2023

Guillermou

Dear Jan, very sad what has happened to your dear husband. I am not a doctor, I have no knowledge or experience to respond to the problem of her husband. This article may be of interest to her. www.drlamcoaching.com/.../new-research-on-nattokinase

Posted On 04/16/2023

RMackayss

what is a reliable source for purchasing lumbrokinase?

Posted On 04/15/2023

grulla

www.mercolamarket.com/search?filter=&search=Lumbrokinase%20Enzymes..

Posted On 04/15/2023

forbiddenhealing

We always kept Adolf's meat tenderizer (bromelain from pineapple) in the boat/beach bag for jellyfish stings to dissolve the toxic proteins...like 50yrs ago.....I used papain from green papaya sap miraculously on toxic plant rashes...both are available in tablet form, but internal use was little known. About 30 yrs ago a Life Extension article spoke of using serrapeptase and lumbrokinase to dissolve "fibrin films." Still the applications left question marks? Since the inflammatory reaction includes the generation of fibrin scar tissue, dissolving those scars had wide implications for recovery.

Last Dec. I decided to experiment w lumbrokinase, taken for three weeks daily on empty stomach, some days adding serrapeptase....and then started having a crazy itch on forearms and legs that lasted for 3 months! I applied red palm oil and Vit C pastes, but the only relief came from the heat of a hair dryer....Skin broke out in little pustules slowly working to the surface, and then the itching stopped/skin having a renewed texture. I can only guess at the internal results, though overall felt more energetic.

The use of proteolytics provides some serious benefits, long overdue for more research and applications and dosages. Every scar from inflammatory injury to skin/joints/blood vessels/lung tissue and tumor film could be scrubbed out of existence with proper use allowing oxygen, renewal and regeneration. Intuitively I knew proteolytics held great value from the gardens of really ancient people..filled with papaya and pineapple plus all the great anti-inflammatory Vit C sources of citrus, mango, Barbados&Surinam Cherry, etc.etc.

Posted On 04/15/2023

Also. While plaque is made up of a variety of substances: fibrinogen / fibrin; lipoproteins; cholesterol and other fatty particles, as mentioned, the main glue-like substance that initially binds to the arterial walls is lipoprotein (a), abbreviated Lp (a). Heart disease begins with an injury, crack, or stress fracture, in the arterial wall. Work that led to the 1987 Nobel Prize in Medicine discovered that lysine (and proline) binding sites cause the formation of atherosclerotic plaques. Lp (a) was the genetic difference between beings that suffer from cardiovascular diseases and those that do not.

Lp (a) had evolved only in species that do not make their own vitamin C such as humans and guinea pigs. Pauling and Rath realized that the species suffering from chronic scurvy, Lp (a) had evolved to patch cracked blood vessels. As chronic scurvy progresses, the liver produces more Lp (a) molecules. As the number of Lp (a) molecules increases, formations tend to settle on the existing plate. When the healing process is overrun, the arteries narrow and blood flow is reduced. This problem has a solution. The Lp (a) molecule has a finite number of lysine binding sites - lysine attachment sites.

The cure for heart disease is to increase the serum concentration of the amino acid lysine enough to bind Lp (a) Lp (a) binding inhibitors are converted to Pauling Therapy for heart disease only in high doses, between vitamin 3 to 18 g of ascorbic acid and 3 to 6 g of lysine. In his video, Pauling recounts the first cases where his high vitamin C and lysine therapy quickly resolved advanced cardiovascular disease in humans. THE CURE FOR HEART DISEASE: CONDENSED cardiacos.net/wp-content/uploads/ArticulosMedicos/20170813/2004---Hear.. .----- LINUS PAULING PROTOCOL asociacionaibb.com/linus-pauling-protocol

Posted On 04/15/2023

Segstar

FH you probably went at it too aggressively..Next experiment start with a much lower dose and see how it goes..Do em "one at time" for a certain period of time and progress as you see fit.. Not everything works the same for everyone, so for me always best to be our own Guinea pig.. By the way that itching you were getting reminded me of the crazy itching I would get when I got ultra low carb.. I would get it for like 3 months before it subsides.. And i have to keep my "claws" very short else I'd have deep scratch marks all over my body.. Suspect gut bacteria is calling for goodies they are no longer gittin..

Posted On 04/15/2023

forbiddenhealing

Gui...Yes, I agree. The Lysine/proline/collagen and Mega C treatment works...as preventive and therapeutic. The problem starts with systemic inflammation and proteolytics can definitely aid in reversal. Segster...I never had results with Vitamin C caps..until I went to megadosing liquid C/baking soda (sodium ascorbate) for instant absorption and blood level spikes. Many decades of ant/insect/dog bites, cuts/scratches, plant rashes on arms/legs from living in nature meant thousands of subdermal scars to explain their eruption and crazy itching...So I pushed the envelope and found out. The question of dosages and internal results remain...likely individual depending on history of inflammations and scarring/fibrin films. Implications are broad, correct applications potentially very valuable...stay tuned!

Posted On 04/15/2023

jan64524

That's so cool. Makes you wonder...

Posted On 04/15/2023

ColdTurkey

For whatever it is worth, I have been taking Serrapeptase for the past several years, 120,000 Units daily. Haven't kept count but that should translate to a least a 1,000 capsules. However, over the last several months I have taken Dr. Mercola's advice to alternate in taking Lumbrokinase and Serrapeptase, taking Lumbrokinase one day and then Serrapeptase the next. I take this combination for a month and then lay off both for a week before starting again. Not aware of any side effects. I am 86 and have no known health problems. Knock on wood. I might mention that back in the 1990s, I had 59 intravenous EDTA chelation treatments for prevention purposes only.)

Posted On 04/15/2023

TotalMayhem

Thank you for this information. It's very useful indeed.

Posted On 04/15/2023

phoenix999

Nattokinase is produced by *Bacillus Subtilis*, a spore-based bacteria that is found in an increasing number of probiotic formulations, including Arthur Andrew's 'Syntol' and others (I don't work for them!). One physician who has successfully used *Bacillus subtilis* with his patients since 1976 is Dr. Deitrich Klinghardt, MD PhD. There is one YT video of Dr. Mercola interviewing him, but it is abruptly cut off. In the original 1+ hour video, which I can't find, Dr. K explains in detail the many benefits of B.

subtilis. He states that *Bacillus subtilis* lives in our gut much longer-term than other probiotics and provides many benefits to the host. These include eradicating pathogenic microbes and acting as an anti-inflammatory agent and immunomodulator. It increases our immune tolerance (meaning, it helps our immune system to not over-react to foods and other things). So I believe it's worth adding these bacteria into our gut ecosystem as little "nattokinase-producing factories".

Posted On 04/15/2023

Guillermou

Interesting references. One hundred subjects 60 to 74 years of age were included in this randomized, double-blind, placebo-controlled study. Subjects consumed either the placebo or the probiotic (2.10^9 B. subtilis CU1 spores per day) in periodic short courses of 10 days intermittently, alternating with a rest course of 18 days. This scheme was repeated 4 times during the study. In the subset of forty-four randomized subjects who provided biological samples, we demonstrated that consumption of B. subtilis CU1 significantly increased fecal and salivary secretory IgA concentrations compared with placebo.

A post hoc analysis of this subset showed a lower frequency of respiratory infections in the probiotic group compared to the placebo group. Conclusion: Taken together, our study provides evidence that supplementation with B. subtilis CU1 during the winter period may be a safe and effective way to stimulate immune responses in elderly subjects.

immunityageing.biomedcentral.com/articles/10.1186/s12979-015-0051-y (2015)

Posted On 04/15/2023

Segstar

Phoenix and this is why I find eating Natto is superior to just taking the supplement. Besides you get a nice dose of K2, but folks shy away because it takes some getting used to the smell of the Natto.. The other drawback to taking the supplement is that many of them are pure worthless .. The enzyme potency can be greatly diminished by the time you get it, plus some can be made from GMO soy beans... As with most things, especially in nature, consume the whole food, the synergy is greatly amplified..

Posted On 04/15/2023

wendyb.

Segstar, it's easy to make your own natto. Can use organic soybeans too. I use my Instant Pot pressure cooker for the whole process. I've also learned recently that natto can be made from chickpeas and I want to find out if it's equally effective with K vitamins as well.

Posted On 04/15/2023

jkwaso

Dainton, it's my understanding that NOW supplements, Whole Foods, Braggs, and many other once trusted quality brands have sold. Quality with these brands and others constantly change. Consumers are not always aware of corporate changes that may also affect formulations.

Posted On 04/15/2023

way3658

Gui et al, thank for so much for all of this information! I have leaned more about healthcare on this site from Dr. Mercola and all of you over the past few years than I have over five decades of Pharma-focused sick care! It feels like I'm taking a course in preventive healthcare, and I'm going to start my own personal textbook to organize and document all of the advice and linked research that I find here. Today's subject is particularly relevant to me as I meet with a cardio doc who has been trying without success for several years to get me on statins.

Posted On 04/15/2023

Hi Prof Gui, Your knowledge needed please. Is it ok to take proteolytic enzymes daily, without pausing occasionally? Until I read Dr M's article today, I hadn't considered this. Certainly, the product packaging on my supplements doesn't stipulate this. Some clarity would be greatly appreciated.

Posted On 04/15/2023

Guillermou

This study is very complete: **NATTOKINASE: AN ORAL ANTITHROMBOTIC AGENT FOR THE PREVENTION OF CARDIOVASCULAR DISEASE** In point 3: Natto, a soybean product fermented by the bacterium *Bacillus subtilis* (natto), has been consumed as a traditional food in Japan for over a thousand years. Reports have suggested that natto contributes significantly to the longevity of the Japanese. The accumulation of lipofuscin (age pigment) is considered a hallmark of aging. In this regard, natto extract was reported to delay lipofuscin accumulation in the nematode *Caenorhabditis elegans*.

Comprehensive safety data, compiled from Good Laboratory Practice (GLP) compliant studies and reported in 2016, indicated that no clastogenic or mutagenic activity was observed in vitro after **NATTOKINASE (NK)** treatment. *B. subtilis*, the bacterium responsible for natto production and NK synthesis, is not a pathogenic bacterium. In human clinical studies, a no adverse effect level was found when healthy human volunteers consumed NK orally (10 mg/kg) daily for 28 days.

Study participants did not exhibit significant changes in urine, blood pressure, or pulse. The collective data found in the toxicity studies have provided a robust safety assessment for the use of NK for both regulatory agencies and pharmaceutical companies. Currently, the recommended use of NK is two capsules (100 mg/capsule) per day. This NK dosage has raised very low toxicological concerns based on previously published safety studies. www.mdpi.com/.../523 (2017)

Posted On 04/15/2023

Guillermou

DATA RECORDED IN REAL LIFE SUPPORT THE SAFETY OF NATTOKINASE IN PATIENTS WITH VASCULAR DISEASES In conclusion, the available evidence suggests that NK is a unique natural compound and represents an effective and safe treatment for patients with vascular diseases with medical or surgical indications. www.mdpi.com/.../2031 (2022).----- NUTRITIONAL HEALTH PERSPECTIVE OF NATTO: A CRITICAL REVIEW Natto possesses several therapeutic potentials and contains a range of essential nutrients and bioactive compounds, ie nattokinase, soy isoflavone, -polyglutamic acid, vitamin K2 and biogenic amines. Bacterial species, processing conditions, and soybean cultivars determine the quality characteristics of natto. Natto food is higher in menaquinone-7 and contains 100 times more menaquinone-7 than most cheeses. The present review highlights the production technology, microbiology, nutritional composition, and therapeutic potentials of natto. www.hindawi.com/.../5863887 (2022)

Posted On 04/15/2023

TotalMayhem

Thank you Gui. This is excellent information. Clearly nattokinase has vast therapeutic activity and a superb safety profile. It won't be long before it gets the same treatment as HCQ and IVM.

Posted On 04/15/2023

Hotsocks

Excellent life saving supplement to all postvax.

Posted On 04/15/2023

grilly111

This information is INVALUABLE ! Thank you so much dear Dr Mercola . . :) All three are now on order for holding when BP meds are inevitably withheld for all those outside of the 'system' . .

Posted On 04/15/2023

Bumble01

I first heard about proteolytic enzymes from the Mercola website/newsletter a year or two ago and filed it away as 'interesting to remember, not needed now but the supplements may be useful someday'. At the time I didn't have the symptoms that the enzymes are used to treat. I haven't been injected with any of the Covid shots but, about 8 or 9 months ago approximately I started experiencing a pounding, thumping heartbeat, especially at night and upon waking. It has actually been terrifying and the pounding is so intense I can sort of feel it's vibration throughout my body and legs.

It's been getting worse over the past months and often prevents sleep as it is so uncomfortable and distracting. Or, it wakes me up in the early hours. An ECG came back normal but then again the ECG wasn't conducted at night when this symptom worsens. Anyway, a week ago I started the nattokinase (one capsule twice a day) and since then the symptoms have been about about 50% improved. Still problems trying to ignore the pounding in order to get to sleep but even so, the results have been hugely encouraging.

I'm thinking of increasing the dose to 3 x 2000fu capsules a day in the hope of further improvement. It's strange but the time this started was when the doctor tried me on a new anti-depressant which I've since read can cause heart damage. The pounding heart is something I'd never experienced before that drug and only managed to take it for a few days before realising I needed to stop taking it.

Despite assurances it was only a temporary side-effect that would resolve on it's own if I just kept taking it. So that could be the culprit. Also, it's led me to wonder more about the possible vax or graphene shedding which I don't fully understand the mechanism or likelihood of but who knows what the implications to the wider public are of so many people receiving the experimental injection. Regardless, very grateful to this wonderful site for providing info on these important enzymes!

Posted On 04/15/2023

pranah

What might these enzymes do to surgical scars?? I have a cholecystectomy scar that I would hate to make weaker and risk a herniation.

Posted On 04/15/2023

Guillermou

"Research shows serrapeptase possesses significant anti-inflammatory, proteolytic (protein dissolving) and fibrinolytic (fibrin dissolving) properties. It reduces scar tissue, improves tissue healing and supports a healthy respiratory system. Nattokinase has powerful anti-inflammatory and fibrin-degrading activity. It prevents and dissolves blood clots, promotes healthy circulation, and supports normal blood pressure. It also helps maintain healthy C-reactive protein levels (CRP). CRP is an inflammation marker and a serious risk factor for heart disease."

pulmonaryfibrosisnow.org/2019/10/04/serrapeptase-nattokinase-what-you-.. .----- Dr. Timothy Young, A Board Certified Foot Surgeon, Discusses Postsurgical Scar Formation And Supplements www.bestfootdoc.com/physician-s-corner/dr-timothy-young-a-board-certif..

Posted On 04/15/2023

OnederWoman

Thank you so much for sharing your knowledge and experience. *UPDATE* I have Nattokinase. I just got on Amazon and ordered lumbrokinase and serrapeptase. I always try to order Mercola products when available. Mercola lumbrokinase was available but I had to order the other from another supplier. Didn't see a Mercola serrapeptase. I do not know how Amazon can do same day delivery? But Amazon says I will have tonight. Thank you again! I always try to buy Dr. Mercola's products and books ~ though I do not do paid Substack yet.

Posted On 04/15/2023

dahinton

Careful with buying supplements from Amazon. NOW did a study and found that often the products contained very little of the active ingredients.

www.nowfoods.com/healthy-living/articles/now-uncovers-quality-issues-s..

Posted On 04/15/2023

jan64524

Bezos is the devil, that's how.

Posted On 04/15/2023

jkwaso

Lesleybethune, arrhythmias can be caused by many things including hormones. I began having arrhythmia episodes in my early to mid 40's. After much frustration, a cardiologist diagnosed a slight malfunction of heart valve - not reopening timely. Nothing to worry about I was told. Some years later, I was treated for hormonal issues with bio identical hormones. A delightful additional benefit in better bodily function was no more arrhythmias. Coincidence? Maybe, but something to consider depending on your age.

Posted On 04/15/2023

lesleybethune

With thanks for that, jkwaso, but mine started about Day 5 or 6 of Covid, even though I had never been very sick (only one day of sleeping). Absolutely pounding heart and, in the middle of the night one night, an odd, short-lived pain right deep in the middle of my heart, where I've never felt anything before or since - felt like someone was sticking a pen in it. Anyway, since then I've often had pounding heart for no apparent reason, not nearly so much now, and I've been scrupulous about taking lumbrokinase, NAC, ubiquinol and other stuff (as advised by Dr M). I'm sure Covid's damaged my heart (I'm not vaxxed so can't blame that) - for months it hurt to lie on my LHS after only 30 secs, and even now I seldom lie on that side.

Posted On 04/15/2023

DebbyW

lesleybethune, I wonder if the serrapeptase would help with healing since it should help with scarring.

Posted On 04/15/2023

Guillermou

Plasma Cortisol and Risk of Atrial Fibrillation: A Mendelian Randomization Study academic.oup.com/.../6211330 (2021).-- Type 2 diabetes was also associated with a significantly increased risk of arrhythmias and sudden death. Hyperglycemia plays an important role in arrhythmia through various mechanisms. In this review, we describe the correlation and mechanism by which arrhythmias may occur in hyperglycemic conditions www.ijrp.org/.../2904 (2022)

Posted On 04/15/2023

imagicman51

and what would be the recommended dosages for these? that seems to always best left out of articles and it seems at least as important as the supplement itself as too little is just wasting money and too much could be harmful.

Posted On 04/15/2023

blt61

I am looking for some advice and this article is interesting to me and might send me in the direction of helping. I have had 8 strokes in the last 5 years and wonder if the supplements mentioned might help. I am really tired of the strokes. I am also on high blood pressure meds and antidepressant meds. I also have fibromyalgia and high cholesterol but cannot take statins. I solved my severe pain issues with CBD oil. I was taking a lot of different supplements but had to go off them for a couple of weeks, then when I started them again, I was having problems with random vomiting so I had to stop the supplements again.

Now I'm slowly re-introducing them carefully - so far I've added back the multivitamin and a gut renew supplement besides the vit D. Do any of you think that the lumbrokinase or the other 2 would help keep me from having more strokes - none of the strokes have been super serious but enough to put me in the hospital for 4-5 days and since they have all been on my right side, I can't drive for 3-4 months. I want my life back or what's left of it. I'm 75.

Posted On 04/16/2023

brianallen1

Bkt61 unfortunately you asked this question far too late as most everyone was finished with the article and comments. If you can repost this early in the morning you should get responses.

Posted On 04/16/2023

rin1948

jewel62 have you ever heard of IQoro? It is a mouthpiece device scientifically proven to strengthen 148 various muscles in digestion.. from the mouth to the gut in order to eliminate hiatus hernia's it is manufactured in Sweden and I cannot purchase it here in the US .. for now it is only available in the EU I guess?

Posted On 04/15/2023

Beentheredonethat2

You can get it in the US through Amazon...\$485.00.

Posted On 04/15/2023

lesleybethune

This is the first time I can recall seeing anything about not taking lumbrokinase daily for any great length of time, which I have been doing ever since I contracted Covid almost 12 months ago - I had periods of arrhythmia and still do, on occasion. Also, the possibility of developing an allergy or sensitivity to it isn't mentioned on the advertising page for this product - can you please provide more information?

Posted On 04/15/2023

GoldenOldieUK

Have you tried vagus nerve stimulation for the arrhythmia?

Posted On 04/15/2023

Arrhythmias may also respond to taurine because it dampens sympathetic nervous system activity and dampens the release of epinephrine. L-arginine may have antiarrhythmic properties as a result of its role as a precursor for nitric oxide (NO) and its ability to restore sinus rhythm spontaneously. Endogenous production of taurine and L-arginine can decline with aging and disturb heart rhythm, and these "conditional" essential nutrients become "essential" and require supplementation to prevent morbidity and mortality. L-arginine is supposed to prevent cardiac arrhythmias by stabilizing sinus node NO. Cardiac arrhythmias with no known cause in healthy people are presumed to be symptoms of taurine and arginine deficiencies.

www.sciencedirect.com/science/article/abs/pii/S0306987706003288 (2016).----- Gut dysbiosis has been associated with a wide range of diseases. There are multiple lines of evidence suggesting that changes in the gut microbiota may be an important predisposing factor for the development of atrial fibrillation (AF). Intestinal dysbiosis is a potentially objective factor that could provide new treatment avenues for the prevention of AF. Well-designed mechanistic research and prospective intervention studies targeting gut dysbiosis are crucial to determine the nature and mechanisms of the gut dysbiosis-FA relationship and reveal the plausibility of targeting gut microbiota for primary and secondary prevention of gut dysbiosis. FA.

academic.oup.com/circres/article/118/11/2415/6373888?login=false (2021)

People with atrial fibrillation (irregular heartbeats) may benefit from practicing yoga. Three months of regular yoga sessions resulted in a 50 percent reduction in reported cases of heart palpitations. Average heart rate also dropped from 67 beats per minute to 61-62 beats per minute after doing yoga. Participants also reported less anxiety and depression. A study published last year found that yoga has a beneficial effect on leptin, a hormone that plays a key role in regulating consumption as well as energy expenditure.

espanol.mercola.com/boletin-de-salud/los-beneficios-del-yoga.aspx .----- At 62 years old, and diagnosed with atrial fibrillation, George Newman is an inspiring example of how applying a few simple lifestyle strategies could change his health.

He keeps his AFib in check with a combination of ketogenic adaptation, fasting, and magnesium supplementation. Magnesium deficiency and exposure to electromagnetic fields increase this risk. On the other hand, the toxicity produced by EMFs is mitigated through voltage-gated calcium channels. Since magnesium is a natural calcium channel blocker, it helps block the adverse effects of electromagnetic fields.

Water fasting provides many benefits, from saving money and increased alertness, to radically improving the body's ability to digest damaged cells (autophagy) and increasing the number of healing stem cells. By fasting 5 days out of 14, George went beyond what most would attempt, and his lab tests show that it doesn't harm health—rather it improves it. After 13 cycles of 5-day fasting, every two weeks, he has lost no muscle mass, and his bone density is that of someone half his age. articulos.mercola.com/sitios/articulos/archivo/2017/11/26/ayuno-podero..

Posted On 04/15/2023

NATURAL INTERVENTIONS AGAINST ARRHYTHMIAS: 1)Omega-3 fatty acids. Higher levels of omega-3 fatty acids are associated with lower risk of certain arrhythmias. They offer other cardioprotective benefits as well. .-----2)Magnesium. Magnesium is essential for proper heart function. Symptoms of different arrhythmias can be improved with oral magnesium administration..----- 3)Potassium. Alterations in serum potassium levels can contribute to the development of arrhythmias. Treatment with intravenous magnesium and potassium may restore normal heart rhythm..----- 4)Hawthorn. Hawthorn may play a supportive role in cardiovascular health due to several mechanisms, including modulating ion channels.

A clinical trial demonstrated hawthorn's ability to improve heart function and reduce related symptoms. .-----5)N-acetylcysteine. N-acetylcysteine is an antioxidant that may reduce the incidence of post-operative atrial fibrillation (a type of arrhythmia)..----- 6)Coenzyme Q10 (CoQ10). CoQ10 has been shown to exert therapeutic effects in various cardiac conditions. In patients who had heart attacks, CoQ10 supplementation lowered the occurrence of arrhythmias and improved antioxidant levels..----- 7) Other natural interventions include vitamins C and E, rhodiola, and resveratrol. www.lifeextension.com/.../arrhythmias

Posted On 04/15/2023

Guillermou

Experimental studies including in vitro methods and in vivo animal models mainly describe the following effects of quercetin: (1) antihypertensive, (2) hypolipidemic, (3) hypoglycemic, (4) antiatherosclerotic, and (5) cardioprotective (suppressed cardiotoxicity). .. Quercetin may exert beneficial effects on arrhythmias by affecting cardiac ion channels, calcium homeostasis, gap junction, and mitochondrial channels to inhibit mitochondrial oxidative stress and by suppressing cardiac fibrosis, inflammation, modulating autophagy, and apoptosis, improving ischemia/reperfusion injury and intestinal microbiota.

Pharmacological studies also showed that quercetin exhibited biopharmacological activities such as antioxidant, antiplatelet aggregation, anti-osteoporosis, anti-aging, and cell proliferation inhibition, which can be used in the treatment of lymphoma, autoimmune diseases, neurological diseases, cancer, etc. www.sciencedirect.com/.../S0753332222008368 (2022).-----
www.nature.com/.../s41598-022-13911-w (2022).----

Posted On 04/15/2023

otis101

lesley you mentioned above about sleeping on your left side. Some time ago Dr. Mercola recommended not sleeping on your left side as it puts more weight on the heart from other organs. I would think this is different for everyone. As to the pin prick you had one time I occasionally get this but reluctant to mention to cardiologist as I can just see him ordering a bunch of tests while typing a new prescription for me on his computer. No thanks Doc, 4 prescriptions are enough. Have you been taking the lumbrokinase for a lengthy time?

Posted On 04/15/2023

imagicman51

do you know what the recommended dosage is? as usual, mercola's articles fail to include this info. if you would, please reply to bikersheart51@gmail.com. thank you very much.

Posted On 04/15/2023

Segstar

Otis Dr Robert Rowen had advised against sleeping on your right side as it can cause heart attacks.. It is harder for the heart to pump blood..Can't find that article right now but this here says the same and better half swears by sleeping on her left side to avoid indigestion and heartburn..
sleepation.com/sleeping-on-your-right-side-the-pros-and-cons

Posted On 04/15/2023

GoldenOldieUK

Serrapeptase has just been banned in Europe and the UK! No longer classed as a food supplement - they want trials done on it before they will approve it but not as a food supplement. Big pharma wanting to get in on the act! I have taken it for years and my dogs get it as well (not banned for dogs yet) it's brilliant for scar tissue.

Posted On 04/15/2023

jewel62

We can still buy it here in Sweden.

Posted On 04/15/2023

The limitation and prohibition of natural supplements serves BogPharma and Allopathic Medicine in their purposes of power and money. Everything has an end: to discredit Natural Medicine at the same time that chronic patients are created with Allopathic Medicine and mRNA biological weapons are injected. The deep state is not satisfied with attacking and dismissing the doctors and scientists who fight for a true health medicine, they are not satisfied with discrediting preventive and early treatments, they are not satisfied with turning humanity into a factory of biological weapons He now wants people to turn more strongly to Rockefeller's Allopathic medicine, setting limitations on supplements after taking over the supplement companies, and establishing governance of the WHO and FDA.

It is the Great Reset of the New Medicine based on chronic diseases. VIDEO: ON DESTROYING OUR HEALTH SYSTEM AND BIG PHARMA CAPTURE

www.globalresearch.ca/video-on-destroying-our-health-system-big-pharma.. (12/12/2022) We come across cheat supplements, GMO supplements, and preservative ingredients.

Ending a deliberate fear campaign to terrorize the world's population into complying with the wishes of the deep state, a corrupt science that plays a role in favor of the profits and influence of global pharmaceutical corporations, the deliberate smear of scientists and anyone else expressing a point of view contrary to the dominant narrative of COVID, the marginalization of the unvaccinated with passports, and ultimately a Great Reset period of targeted depopulation.

Posted On 04/15/2023

Guillermou

The large agri-food and pharmaceutical corporations create a breeding ground for the disease and the FDA and CDC are easy prey for Big Capital. The endless chain of Big Pharma lawsuits revealing fraud, deception and cover-ups. Big Pharma spreads fear and increases people's insecurity of pandemics, to feed the thirst for profit, it has bought doctors, academics, magazines, professional and patient organizations, university departments, journalists, regulators and politicians. These are the methods of the mafia. To truly understand the power of Big Pharma, we can understand how the American Legislative Exchange Council (ALEC) works. ALEC, which was founded in 1973 by conservative activists working on Ronald Reagan's campaign, is a top-secret pay-for-share operation in which corporate lobbyists, including the pharmaceutical industry, hold confidential meetings on "model" bills.

A large portion of these bills eventually pass and become law. Over the years, ALEC has promoted many other pro-pharmaceutical bills that would weaken FDA oversight of new drugs and therapies, limit FDA authority over drug advertising, and oppose regulations on financial incentives for doctors to prescribe specific drugs.

childrenshealthdefense.org/defender/system-rigged-big-pharma-political.. (04/12/2022)

Posted On 04/15/2023

grulla

"Serrapeptase has just been banned in Europe and the UK!" Just curious, can you at least get EDTA? en.wikipedia.org/.../Ethylenediaminetetraacetic_acid ~~~
arizonanatural.com/products/copy-of-edta-calcium-disodium-600mg-100-ca..

Posted On 04/15/2023

Maritt

Thanks for highlighting this. It has to do with new EU regulations regarding novel foods. Received this note from the supplier on 31 March 2023 " We regret to inform you, due to changes in EU regulations pertaining to novel foods, we can no longer sell serrapeptase in the UK or EU, until further notice. This means that we cannot sell the SerraEnzyme products, Serraplus+ Serranol or Blockbuster All Clear. We are still able to sell SerraPet for animal use. We appreciate this announcement may come as a disappointment to those of you who have used these products for many years.

However, we do offer many other fantastic formulations which you may want to consider to support your health.". Sadly by that stage they have already removed Serrapeptase from their website. I read somewhere that manufacturers could apply for a licence for these novel food type products but if they are lucky and after having spent huge amounts of money and effort that the process will take 17 months. -- Nattokinase is still available.

Posted On 04/15/2023

meo7624

I was just going to ask if anyone had info on using serrapeptase for scar tissue, specifically “severe abdominal adhesion disorder”. Manual techniques are ineffective since the pressure necessary to reach the adhesions is impossible, as well as manual pressure can even cause further adhesion production. Several years ago I read an article on serrapeptase for this issue, and tried it for maybe a month, with no detectable improvement. At that time the literature I read stated the 30 day trial was sufficient to determine whether a person would benefit from further usage.

Posted On 04/15/2023

cakesjean

I can still find serrapeptase on ebay.de and on other online sites in Germany, the Netherlands and the UK.

Posted On 04/15/2023

Segstar

Anyone and anything that threatens the gravy train will taken out by any means..

Posted On 04/15/2023

TotalMayhem

I'm disgusted by this; I'm sure that you are too. They'll be banning nattokinase and lumbrokinase too, I reckon. I'm sure NAC will be banned as well, perhaps bromelain, quercetin..... I could go on. In fact if it works, it's in the cross hairs. These people are evil.

Posted On 04/15/2023

Heimdall1

As clogged arteries come from artificial vegetable oils as we are no herbivores and the body temperature is too low to deal with it, also a hot bath at between 102-105 F for at least an hour at that temp. helps as well. Needed is 2-3 cups of raw milk, 3 tblsp. raw apple cider vinegar and I think a tblsp of sea salt/epsom salt. One should drink also raw milk before during and after the bath to not dehydrate, but it creates a fever like condition which detoxes. Might be an alternative.

Posted On 04/15/2023

Atherosclerosis is once identified as an inflammatory disease with storage of lipids and calcium salts. A subacute inflammatory condition of the vessel wall, characterized by the infiltration of macrophages and T cells, which interact with each other and with the cells of the arterial wall. The pathological mechanisms of obesity recapitulate many features of the inflammatory processes involved in atherosclerosis. There is evidence supporting the hypothesis that omega-6 PUFAs have inflammatory, proadipogenic, and prolipogenic properties, and exposure to a diet rich in omega-6 PUFAs during the first years of life has been shown to be sufficient to program an increase in body fat mass in offspring.

journals.lww.com/co-endocrinology/Fulltext/2013/02000/Omega_6_polyunsa.. (2013)

www.nature.com/.../nrcardio.2009.55 (2009)

journals.sagepub.com/doi/abs/10.1177/00033197221089375?journalCode=ang.. (2023)

link.springer.com/.../s11892-021-01446-9 (2022) www.degruyter.com/.../html (2023).

Plasma levels of four omega-6 oxylipins were positively correlated with adiposity, metabolic syndrome prevalence, fatty liver index, and homeostatic model assessment of insulin resistance index and lipid parameters.

In contrast, plasma levels of three omega-3 oxylipins were negatively correlated with adiposity, metabolic syndrome prevalence, fatty liver index, and homeostatic model assessment. of the insulin resistance index and lipid parameters. The seven oxylipin panel predicted adiposity better than traditional inflammatory markers such as interferon gamma or tumor necrosis factor alpha. Pathway analyzes revealed that people with obesity had higher plasma levels of omega-6 and lower plasma levels of omega-3 oxylipins than people of normal weight.

onlinelibrary.wiley.com/.../oby.23282

Heimdall1

And do you think just because it's written there it's true and I shall believe it?. I couldn't say that I would be that religious. If you turn mainstream and that shall also be valid for mainstream science 180 degrees then usually you get to the truth just like with history. Is it wholistic or is it holistic what they test? Like in a petri dish a cell with chemicals and then coming to conclusions that a virus kills a cell and not the chemicals? Funny thing such science nowadays. Could be true or not especially if you see who the scientists, but like with everything else one is not allowed to speak about certain people. Was it Richard Wagner the composer who said don't believe anything better check everything. All those magazines are run by the same group of people and I am wondering for a while if you're controlled opposition to be honest, because too perfect.

Posted On 04/15/2023

jab2121

Question: Lumbrokinase should be taken seasonally or regularly, and in what dosage?

Posted On 04/15/2023

Liz5063

Does body build up tolerance to Nattokinase if taken daily? Must it too be alternated with another Fibrinolytic enzyme?

Posted On 04/15/2023

Segstar

Yes while Lumbrokinase has shown to be the most powerful of the three , it is best to alternate between them as they each have their own "special" forte.. And also to give yourself a break from all of them as your body will become dependent on them and stop making it's own...Focus more on preventative strategies..

Posted On 04/15/2023

TruthST8up

How many fibrinolytic units are in serrapeptase units to know the comparable volume since Lumbrokinase is 300x more powerful than serrapeptase? since for some reason the nutritional value label on serrapeptase says nothing about fibrinolytic units.

Posted On 04/15/2023

Guillermou

Doses typically used in studies range from 10 mg to 60 mg daily. Serrapeptase enzyme activity is measured in 10 mg units equivalent to 20,000 enzyme activity units.

Posted On 04/15/2023

TruthST8up

Thanks, but the actual information I am asking is how many fibrinolytic units are in each serrapeptase unit? If the serrapeptase capsule has 40,000 or 120,000 serrapeptase units, how many FIBRINOLYTIC units are there in those dosages? Mg. is basically meaningless, thanks.

Posted On 04/15/2023

Guillermou

The activity of an enzyme is estimated by measuring its active units (U). For serrapeptase units, we speak of US. It is the only valid measure for enzymes in general and serrapeptase in particular. In fact, the measurement in IU (International Units) is a standard applied to vitamins and minerals, and defines the amount of substance that produces a specific biological effect. The fibrinolytic activity of this most widely used serrapeptase is 120,000 SPU

Posted On 04/15/2023

TruthST8up

Thanks, so 120,000 SPU is equivalent to how many FU of nattokinase or Lumbrokinase? since Lumbrokinase is 30 times stronger than nattokinase, and 300 times stronger than serrapeptase (which means nattokinase is 10x stronger than serrapeptase)...?

Posted On 04/15/2023

DiaTrig

But will they break down the white fibrous synthetic biology that is now being injected into our meat and food supply, the self assembling sheets being now found throughout unvaccinated blood?

Posted On 04/15/2023

MoMac46

Full marks to Dr. Mercola for all the information and sound advice we are privy to, helping us "take control of our health". These WEF puppets are so obsessive if they don't get us one way they will try another. Injecting food and domestic animals, raining down pollutants from chemtrails into the water soil and air. EMF's, 5G, fake viruses, and introducing 15 minute towns and cities, censorship, changing laws. False fact checkers, gender confusion, words changing their meaning. Diversity and division. The list goes on and on, the whole world is completely upside down. In the meantime we can only keep doing our best to stay well and hopeful.

Posted On 04/15/2023

jpi108

I saw 2 teasers in my daily Mercola email today: "Support Blood Vessel Health Through the Stages of Aging" and "Way Better Than Aspirin for Blood Clots, Zero Side Effects." I thought they were both about Earthing! There's nothing better or more natural for the health of the circulatory system. Just google "earthing for blood vessels." Also, watch this 3.5 minute excerpt from the Earthing Movie:
www.youtube.com/watch

Posted On 04/15/2023

lindalonia

Nowadays we are avoiding going barefoot in the grass because of the chemtrails, the spraying of heavy metals and and other substances harmful to human health falling to the ground.

Posted On 04/15/2023

jpi108

Hi Linda, You can ground yourself without going barefoot. Just connect a wire to your plumbing or to a ground rod outside. Feed the wire through a window and connect to your body. There are lots of DIY grounding videos on youtube.

Posted On 04/16/2023

lindalonia

Dr. Mercola is it safe to take Lumbrokinase or Nattokinase with NAC?

Posted On 04/15/2023

SpenceLi

I enjoy and appreciate the information here. However, I am a bit overwhelmed by the number of supplements recommended by Dr. Mercola. How many supplements on average do most of you take? Plus, are concerned with the supplements' affecting your kidneys and liver and stomach? One more question...Dr. M's supplements are expensive for a monthly supply of one type..how does anyone afford all these???

Posted On 04/15/2023

otis101

SpenceLi, I take 14 supplements, some are Dr. M's. Monthly cost is about \$300. They keep me healthy, at least I think so. I monitor any bad side affects with lab work. My serious issues are arteriosclerosis and cardiovascular. Some I blame on historical life patterns and some genetic. I take 4 prescription meds provided by the VA. Shop only at local health food store or CoOp, all organic and not cheap. I don't recall when last I was sick with anything outside of heart and artery issues. So all in all it is money well spent but not leaving much \$\$ for other things. At 81 I have lived a very full fun life and very satisfied with my life as it is. Hope this info helps a bit.

Posted On 04/16/2023
