

# PRELIMINARY NOTES

on

# AORTIC ANEURYSM

*Nutritional support for the elastic fibers of blood vessels, pertaining to:*

*Aortic Aneurysm  
Brain Aneurysm  
Hemorrhoids  
Varicose Veins  
...and more!*

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### **Introduction:**

Whatever helps the synthesis of elastic fibers in the body (i.e. collagen and elastin) helps all connective tissue in the body, and therefore helps to prevent aneurysms. It seems reasonable that some patients could expect better repair to happen to any existing aneurysms through proper nutritional support of collagen synthesis. As the reader will see, there have been reports of aneurysms healing completely with proper medical nutrition (which is not by any means standard MD training!). Whatever would hinder collagen synthesis (deficiencies or offending influences) or destroy connective tissue of any kind in the body could be reasonably expected to increase the risk of aneurysms. The same nutrients which prevent aneurysms of the brain and aorta can also prevent some other health problems.

### **Dr. Joel Wallach on copper supplementation:**

Legendary veterinarian and naturopath Joel Wallach DVM ND has been warning Americans for decades that aortic aneurysms, brain aneurysms and other 'bleeds' in the body have been a simple deficiency of the 90 essential nutrients (copper especially). He also says the same for: hemorrhoids, varicose veins, wrinkles, crow's feet, "things that sag" and white, gray or silver hair. Dr. Wallach says that Einstein, for example, died of an aneurysm because of a copper deficiency, and that we can all observe that the early warning sign—gray hair—was evident for a long time before he died.

Copper is necessary as a mineral cofactor for the formation of the elastic fibers which make blood vessels strong. According to Dr. Wallach:

...1957 we learned that aneurysms were caused by a copper deficiency. We had a pilot project—250,000 turkeys—and we made complete food pellets where you put all 90 nutrients in there, and in the first 13 weeks, fully half of those turkeys died. 125,000 died. Farmers were out

there every morning picking them up by the bushel basket. They took them to the state diagnostic labs for an autopsy, and they found out that they all had died of a ruptured aortic aneurysm. So they doubled the amount of copper in there, and the next year they tried to raise 500,000 turkeys, and they didn't lose a single turkey from a ruptured aortic aneurysm. And they ran that experiment in mice, and rats and rabbits and dogs and cats and calves and sheep and pigs, and guess what? They found out that there is a whole series of diseases that are caused by copper deficiency. Gray hair is the first sign. We start getting gray hair, regardless of age, you have a copper deficiency. You get skin wrinkles, because the elastic fibers in your skin are going...those little crow's feet around your eyes, facial and body skin wrinkles. You look like you're a little prune, drying up... [1]

—Joel Wallach DVM ND, *Dead Doctors Don't Lie*

### Dr. Wallach's recommendations for aneurysm:

Reader: Please use this archived DDDL show: [https://www.youtube.com/watch?v=RIMovvc1Z\\_M](https://www.youtube.com/watch?v=RIMovvc1Z_M)

### Scientific literature on copper/aorta:

The upsetting thing is that, in the scientific literature, studies on copper deficiency or repletion and its effect on collagen synthesis in the aorta are not hard to find! It's not as if Dr. Wallach's claims are unsubstantiated; just the opposite. Reading through the relevant literature on PubMed.gov feels like investigating the scene of a crime, since this information is so easily obtained and so old as to lead one to conclude only that it has been buried in favor of marketing patentable pharmaceutical drugs.

A key here seems to be the copper-dependent enzyme lysyl oxidase. In the abstract of a study from 1980, we read (my emphasis in bold):

Copper's role in connective tissue is linked to the enzyme lysyl oxidase. From a biochemical perspective, **copper is a cofactor for the enzyme and a determinant of its activity in connective tissues...**

Less well understood is how copper controls the steady-state activity of lysyl oxidase; **the enzyme fails in copper deficiency. Giving copper to a deprived animal increases lysyl oxidase activity in aortic tissue...**

These studies clearly show that **the synthesis of mature elastin and collagen can be controlled by the availability of copper.** They further suggest that transport of copper to aortic tissue and its engagement to lysyl oxidase are linked to the synthesis or lysyl oxidase, an extracellular carrier, or both. [2]

In a 1976 study by the same author from the *Proceedings of the National Academy of Sciences USA* journal we can read about this corroborating result:

Raising day-old chicks on diets lacking copper severely depressed the activity of lysyl oxidase, a copper metalloenzyme in connective tissue. Administration of  $\text{CuSO}_4$  either through the diet

or through intraperitoneal injections restored the lysyl oxidase activity in aortic tissue...

The data suggest that copper is a key regulator of lysyl oxidase activity in aorta and may in fact be a major determinant of the steady-state levels of the enzyme in that tissue. [3]

### **How to supplement with copper:**

For now I can recommend chelated forms of copper supplements—that is, copper bound to amino acids for greater absorption than inorganic forms of copper.

It is important, however, that the patient should be aware that copper and zinc are two minerals which have been known to compete with each other: taking one in the absence of the other could cause problems. Wild ocean fish will definitely contain zinc. This is a good source if you don't want to rely on a supplement for this mineral and are eating this food every day. Then again, many copper supplements contain zinc already because it is well-known that copper and zinc have, to an extent, antagonized each other.

That's just what we have known about—we don't know about the stuff that we don't know about! In other words, it is important to know that copper is only one of the minerals which are required for optimal health of people *or* animals. For instance, Dr. Wallach never recommends that any of his patients or radio listeners should merely take one mineral or one nutrient. He recommends the 90 essential nutrients (60 of which are minerals) plus extra copper for people with aneurysms, or extra chromium and vanadium for people with type II diabetes, etc. etc. There is a tremendous deal of merit to this approach, because none of the essential nutrients are optional.

Copper dosage: Assuming the patient is consuming adequate zinc, I believe 5 mg of copper gluconate or copper amino acid chelate should be a good therapeutic daily dose for the aneurysm patient, in divided doses. This balance of zinc to copper is achieved, to my knowledge, by the supplements which are available on the market today because the antagonism of copper and zinc is very well-known. Check the label to verify that both are present. Avoid the filler ingredient magnesium stearate because this might potentially cause formation of a biofilm that could reduce absorption.

[Epigenetics says CuGluconate is a metallic mineral. Check to see if there are chelated forms that are much better (and would probably be taken in smaller amounts)]

Other considerations: I personally believe that one of the significant parts of Alzheimer's disease has been a state of simultaneous copper toxicity and copper deficiency, since there are different forms of copper and some have been toxic (i.e. metallic copper leaching from older plumbing which was made of copper). I also offer the following study for consideration by the reader; I think it shows how 'thirsty' for copper many people have been:

This manuscript reviews clinical studies that show that the use of textile consumer and medical device products, embedded with microscopic copper oxide particles, improve the well-being of the skin. These include studies showing a) cure of athlete's foot infections and improvement in skin elasticity, especially important for individuals suffering from diabetes; b) reduction of facial fine line and wrinkles; and c) enhancement of wound healing; by copper oxide embedded socks, pillowcases and wound dressings, respectively. The manuscript also reviews and discusses the mechanisms by which the presence of copper in these products improves skin

[well-being. [4]

If even a poorly-absorbed form of copper would produce such results with reducing wrinkles and healing wounds, then surely the absorbable forms (i.e. amino acid chelated forms) of copper would produce better results. I assume that the copper oxide used in the study is somewhat toxic, and I disagree with the study authors who claimed that the medical use of copper in amalgams and other devices shows its safety! Amalgams, for instance, have been one of the most unsafe types of surgical implants in the totality of the history of all medicine!

### **'Vitamin C'—more than just ascorbate:**

Vitamin C is essential for the formation of collagen. Collagen is the material which gives elasticity to those blood vessels! While a dog can make all of its own vitamin C, human beings (and a few animals) appear to have lost this ability.

Now if the reader might be at all skeptical that vitamin C has anything to do with connective tissue, consider that the mainstream resource called the University of Maryland Medical Center says:

“Vitamin C is needed for the growth and repair of tissues in all parts of your body. It is used to:  
Form an important protein used to make skin, tendons, ligaments, and blood vessels...”

[5]

Vitamin C is not merely ascorbate (ascorbic acid)! Vitamin C is a complex of nutrients which works together as a whole. Early 20<sup>th</sup> Century researcher Royal Lee DDS is known for his investigation of this vitamin as a whole complex rather than as a single, isolated molecule. One part of the vitamin C complex which he studied in some detail is a bioflavonoid called rutin. For some time, these bioflavonoids were referred to collectively as “vitamin P,” and it is very plain and obvious that they are part of the vitamin C complex. Rutin is found in asparagus and a few other foods. Rutin is well-known for preventing breakage of small blood vessels. [NT citation] [check to see where rutin is derived from in supplements] Since some flavonoids are reduced by heating/cooking food and others increased, I think it is important to eat cooked, lactofermented and raw plant foods to obtain enough of them to work with ascorbate, the compound which has been said to be “vitamin C” (though again I repeat, it is only part of the whole vitamin C complex).

Ascorbic acid itself is well-known to be destroyed by heating. One of the very best sources a patient may acquire is real unPasteur-ized sauerkraut or kimchi. Vitamin C is plentiful in cabbage, but it has been relatively difficult to absorb. Again, ascorbic acid is destroyed by cooking. So one great answer is to make real sauerkraut or kimchi (made from Asian Napa cabbage and some other tasty ingredients). Now the best resource in this area which I know of is FermentingSeminar.org—I really recommend their seminar to everyone who may be interested in making their own lactofermented vegetables. There have been a lot of recipes and articles circulating which have recommended improper methods, and FermentingSeminar.org shows how to do real Old-World fermentation with an airlock system which should consistently yield delicious food. Their product website for the Probiotic Jar includes free instructions in the Quick Start Guide and Expanded Guide for those who may not wish to pay for the seminar (whether in person or video format). I can also recommend that the aneurysm patient should immediately buy some sauerkraut or kimchi at a grocery store. Health food stores have had a tendency to stock a wide variety of these delicious fermented vegetable foods. I am not referring to canned sauerkraut—what you're looking for is a live food which will invariably be found in the

refrigerated section.

Preserving bioflavonoids in cooked food: According to clay cookpot manufacturer Miriam's Earthen Cookware:

A good way to tell if your food is losing nutrients is by its color; if its normally vivid colors start to fade while being boiled or cooked, your food is losing its phytonutrients.

The best way to cook food without losing flavonoids is to cook without losing these vibrant colors. Cooking in a pure-clay pot does just that! See below a picture of steamed vegetables, they hardly look like they are cooked, but when you “fork” them they are fully done.

...pure clay cooks with a very different, gentle, far infrared heat that preserves delicate and essential nutrients like flavonoids. With other cookware these nutrients get destroyed because of the harsh heat radiating from the walls of the pot. [6]

For folks looking to improve their vitamin C levels for medical nutrition purposes, this sort of cooking (in a clay pot) would seem to be ideal for the preservation of flavonoids in cooked foods.

I don't think rutin is the only bioflavonoid in the vitamin C complex, and I don't know if human beings will ever be able to identify everything in the vitamin C complex. That's one reason why it is so important to get it from food sources/food-based supplements.

It appears that asparagus really is a good source of rutin: a 2009 study in the *International Journal of Food Science & Technology* found that rutin content of asparagus was increased by 32% during the cooking process. [7]

So while we know that ascorbate is destroyed by heat, we also know that rutin appears to be increased. I suspect the above IFST study is showing that certain nutrients were liberated by cooking and not that they were actually created during the cooking process! What if there are some flavonoids, known or unknown, which are part of the complete vitamin C complex but can be destroyed by heat (as ascorbate can be destroyed by heat)? The only solution seems to be to eat a combination of raw, cooked and fermented vegetable foods.

I think Amla Plus is a good choice for a low-potency vitamin C derived from Indian gooseberry (a bitter fruit which is also known as Amla). It is used daily by WAPF President Sally Fallon Morell to support her health in the face of allergies that plagued her earlier in life.

High-potency food-derived vitamin C supplements have included camu camu berry and acerola cherry. Ramiel Nagel, in his landmark book *Cure Tooth Decay*, writes:

...Aboriginal peoples also had access to the highest vitamin C rich fruit on the planet, the kakadu plum. [8]

I have found that there are kakadu plum supplements available. I would hope that the reader would use only those that are free of all agrochemicals and aren't fertilized with biosolids because of the mercury and other concentrated poison that is in biosolids. I would also encourage the reader to use plenty of foods that are rich in rutin and other bioflavonoids if they're taking a concentrated whole-food vitamin C powder such as that made from kakadu plums.

Before his early death, the brilliant author Ramiel Nagel (whose written work has so greatly helped my own teeth in terms of remineralizing cavities) created a company called Traditional Foods Market. It's got a product called Organic Whole Food True Vitamin C Powder, which is made from

acerola cherries and has no fillers (i.e. no GMO corn—an ingredient which causes sterility and enormous tumors in laboratory rodents). My recommendation for vitamin C supplementation is that people should go ahead and take any of these carefully dried and powdered plants that are used for whole-food vitamin C supplementation.

Review: Vitamin C is not only ascorbate! The whole vitamin C complex includes some other nutrients which previously were described as “vitamin P” and are known today as a variety of different flavonoids. Rutin is one very important flavonoid which prevents breakage of small blood vessels, and its availability has been known to increase through cooking. Because some parts of the vitamin C complex are destroyed by cooking and others are made more absorbable—and because we may never know the entirety of the composition of the whole vitamin C complex—I recommend a variety of fermented, raw and cooked plant foods for the patient seeking to improve vitamin C levels for purposes of medical nutrition. Lactofermented cabbage (sauerkraut, kimchi) and lactofermented asparagus may especially be of particular value. Supplements including camu camu, acerola and amla (Indian gooseberry) have been explored.

### **Copper: can it help now?**

Copper prevents aneurysms, but for the patient who may be wondering if copper can help after he or she has already had an aortic aneurysm, I say that it is much more than worth a try! In fact, it would be irresponsible not to use copper supplementation for such a patient—whether or not he or she would be planning on doing surgery for the problem.

If the patient is not doing surgery: In this case, copper would certainly have a good chance to strengthen the existing vascular structure. It would be a responsible choice for any patient to go forward with this supplementation in order to have the best chance of preventing further problems in the future. How long do we all need copper? For life. It's an essential nutrient.

If the patient is doing surgery: If the patient is doing surgery, then taking copper surely will give them a better chance for swift healing. Being deficient in an essential nutrient like copper could slow healing down greatly and could make the healing incomplete, thereby rendering the surgery less effective or making the results temporary.

Why did this happen? Why did the patient get an aneurysm? It's because there was a breakdown in the maintenance and repair systems in the body. The patient did not suffer these consequences because of a deficiency of pharmaceutical products or surgery or technological interventions! He or she came down with the problem because of improper nutrition.

Can the existing aneurysm heal? Dr. Wallach thinks so, and I certainly agree. He writes in *Dead Doctors Don't Lie*:

All of the copper deficiency diseases have been eliminated in the animal industry with commercially prepared pellets. In humans these copper deficiencies are treated symptomatically at great expense, unnecessary misery, and even death. When humans supplement with plant derived colloidal copper, their original hair color can come back, spider veins, varicose veins, and hemorrhoids can go away and some aneurysms can heal. [9]

Dr. Wallach and his coauthors Dr. Ma Lan and Dr. Gerhard Schrauzer even write in *Epigenetics: The Death of the Genetic Theory of Disease Transmission*:

...Later in 2009 Wallach was giving lectures in Cook County Illinois near the town of Naperville when he received a call from a man who identified himself as Joey Levy. He said he and his brother Steve wanted to take him out to lunch because the information on Wallach's *Dead Doctors Don't Lie* audio cassette had helped his brother reverse “an inoperable and terminal seven centimeter aortic aneurysm with the 90 essential nutrients” and they wanted to take Wallach out to lunch to thank him.

Joey sent a limo to pick up Wallach and his four-member staff and related the story. After the dinner, Joey's brother asked what he could do for Wallach in return for saving his life, to which Wallach replied, “Fire your doctor.” Steve called his secretary Christina and instructed her to fire his doctor of 20 years, upon which Wallach said, “We are now even.” ... [10]

Therefore it makes sense that every aneurysm patient should choose to employ nutritional intervention; it's better to have an excellent dietary protocol fail at healing an existing aneurysm (and surely succeed at preventing a new one) than to go forward with some kind of surgery without having tried a less-invasive option first! Also, people who are not aneurysm patients and don't want to become aneurysm patients in the future should do the same. I do agree with Dr. Wallach that it's insane that farm animals have been routinely supplemented because it's cheaper than getting health insurance for the farm animals but human beings have not.

### **Amino acids which support collagen synthesis:**

Glycine, proline and lysine are important for collagen synthesis, and therefore are very important for the health of connective tissue, including and especially the elastic fibers which give strength to all blood vessels. Glycine and proline are easily obtained from gelatinous broth—all the more reason to eat a Weston A. Price Foundation diet. Fish, meat, eggs and dairy should provide enough lysine.

### **Other nutrients important for collagen:**

While it is true that adding copper and food-form vitamin C have a great potential on their own to save a lot of lives, it is also true that many other nutrients are important for the nutritional support of collagen formation in the body. Coenzyme Q10 (CoQ10) is very important for collagen formation. PQQ recycles CoQ10 and is available in raw grass-fed milk, celery and kiwis. Other trace minerals are also important for collagen formation including [insert from track in Ca Metab. report]

Manganese: Though I disagree with the general nutritional guidelines given by the Linus Pauling Institute of Oregon State University, I will say that I found the following quotation from their manganese article to be useful and relevant to the topic of aneurysms:

Wound healing is a complex process that requires increased production of collagen. Manganese is required for the activation of prolylase, an enzyme that functions to provide the amino acid,

proline, for collagen formation in human skin cells.<sup>8</sup> ...

...Glycosaminoglycan synthesis, which requires manganese-activated glycosyltransferases, may also play an important role in wound healing.<sup>9</sup> [11]

This information is certainly useful for people who have recently had surgery of any kind. However, I think it is obviously useful for people who are looking to strengthen their blood vessels or merely to keep them strong as a means of preventing aneurysms and other health problems.

Stephanie Seneff PhD is probably a very good source of more information about manganese, for those folks who might be interested in learning more about this mineral.

What about carotenoids? Some have pointed out that the journal *Nutrients* found in 2017 that cheeks and forearms improved for folks on a diet higher in carotenoid-containing foods. [12] The researchers found an increased amount of carotenoids in the skin of volunteers and an improved “collagen I/elastic aging index of dermis 5 and 10 months after the beginning of the study.” This begs the question of whether or not true vitamin A—the animal form of vitamin A, which is retinol—is good for collagen and elastin. So this may potentially be yet another good reason to eat a Weston A. Price Foundation diet, which includes plenty of retinol in the form of liver, cod liver oil, pastured whole raw dairy and egg yolks, etc., but also does not neglect the plant foods which are known to be rich in vitamin A precursors beta carotene and other carotenoids.

### **Dr. Wallach isn't the only man extolling the benefits of copper:**

Ramiel Nagel writes in *Cure Tooth Decay*:

[Copper is the glue that holds tooth and bone together.<sup>182</sup> [13]

Why would copper be considered the “glue”? Because this glue is collagen. If you want strong elastic fibers to keep your blood vessels—whether large or small—from breaking, the answers are to be found in proper nutrition.

Reference number 182 in *Cure Tooth Decay* (from the above quotation) is the article “Vitamin A On Trial: Does Vitamin A Cause Osteoporosis?” by Chris Masterjohn PhD. Dr. Masterjohn writes:

[Likewise, Robert Becker described his own experiments in [chapter 8 of] *The Body Electric* that suggested that copper is the glue holding the hydroxyapatite crystals – calcium and phosphorus salts – to the collagen matrix of bone.<sup>71</sup> [14]

So whether copper is merely important for formation of the elastic fibers themselves (collagen) or also for adhering the minerals calcium and phosphorus to the collagen framework in bones and teeth, we can conclude that it is a very critically important mineral.

### **Fluoride:**

Fluoride has been known to destroy connective tissue. One of the worst examples of this has been the tendon rupture events caused by the antibiotic ciprofloxacin. This is yet another reason for the

aneurysm patient to avoid it whether it might take the form of fluoridated water, food grown (plants) or raised (animals) with fluoridated water, the pesticide cryolite which has been used on a lot of grapes, and some other sources, including and especially the fluoroquinolone antibiotic class (i.e. ciprofloxacin/cipro) and many many other pharmaceutical drugs which have been fluorinated. For starters, I recommend the article “This antibiotic will ruin you” by Mountains and Mustard Seeds. [15] If you need information about how to remove fluoride burden from the body, please ask. Antibiotics destroy mitochondrial DNA, as I learned from studies cited by Wayne Feister DO in his mitochondria article from Fall 2019 of the WAPF journal *Wise Traditions*.

### **Blood sugar control:**

It seems that blood sugar control may also be very important for keeping blood vessels healthy. The abstract for a 2010 study in *Clinics in Dermatology* journal says (my emphasis in bold):

The effect of sugars on aging skin is governed by the simple act of covalently cross-linking two collagen fibers, which renders both of them incapable of easy repair. Glucose and fructose link the amino acids present in the collagen and elastin that support the dermis, producing advanced glycation end products or "AGEs." **This process is accelerated in all body tissues when sugar is elevated** and is further stimulated by ultraviolet light in the skin. **The effect on vascular, renal, retinal, coronary, and cutaneous tissues is being defined, as are methods of reducing the glycation load through careful diet and use of supplements.** [16]

For the aneurysm patient, then, my diabetes report may be specifically useful.

### **Action summary:**

*A quick summary of what the aneurysm patient should do to get started*

- Eat a Weston A. Price Foundation diet. Their dietary guidelines, which have remained consistent since the Foundation was started about 20 years ago, are available at the following URL: <https://www.westonaprice.org/health-topics/abcs-of-nutrition/dietary-guidelines/>
- Get all 60 minerals and supplement heavily with copper (i.e. Plant-Derived Minerals + Ultimate Selenium)
- Supplement with food-form vitamin C and rutin
- Add gelatinous broth to your diet to supply glycine and proline (This is part of eating a WAPF diet)
- If all of these early steps have been incorporated—or if there are any questions—then please ask me for more information and we can further refine the protocol. This is only a bare-bones rough draft!

## Updates to be made (delete this section after completing updates):

- Nourishing Traditions quote on rutin/small blood vessels
- vit. C supplement specific recommendations
- Cu supplement specific recommendations
- WAPF aneurysm information
- incl. diabetes report, incl. HBP article
- Update Action Summary to include diabetes report, HBP report, specific vit. C + copper supplement recommendations
- Two useful articles about copper by Stephan Guyenet:  
<http://wholehealthsource.blogspot.com/2010/04/copper-and-cardiovascular-disease.html>,  
<https://wholehealthsource.blogspot.com/2010/04/copper-in-food.html>

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- [9] *Dead Doctors Don't Lie*, Page 34.
- [10] *Epigenetics: The Death of the Genetic Theory of Disease Transmission* by Joel D. Wallach DVM, ND, Ma Lan MD, Gerhard Schrauzer PhD. Page 337.
- [11] “Manganese” article by Linus Pauling Institute, Oregon State University. <<https://lpi.oregonstate.edu/mic/minerals/manganese>>
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