



## **GULF WAR ILLNESS MEMOS 1 and 2**

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### **MEMO -1**

I am sending out whatever I can to potentially help gulf war veterans. Dr Pall's book is a good one and has a full chapter on gulf war illness. These are things to consider as you try to help yourself.

I also encourage sharing these items with your doctors... help ideas for gulf war veterans.

Always anxious to hear from other gulf war veterans.

Or from Doctors, researchers, with ideas and help for gulf war veterans. Veterans what are you doing re medical care? What is helping? Have you found a good doctor? Or you using alternative health care providers? What is your current medical status? How is VA treating you?

These are not something to read but something I want feedback on!

Denise

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Allergy Research Group Products May

Help Down-Regulate the NO/ONOO- Cycle

Martin L. Pall

Let me remind the reader that I am a PhD, not an MD and nothing I say or write should be viewed as medical advice. The over-the-counter supplements described here are not sold to treat or cure any disease. The statements here are not approved of by the FDA.

I designed a set of nutritional supplements with the Allergy Research Group designed to down-regulate the NO/ONOO- cycle biochemistry. Three of these products were designed explicitly for this purpose and four were already being produced by the Allergy Research Group but fit well within the over goals of the protocol. We are calling this that Allergy Research Group nutritional support protocol. My recent suggestions for dosage regimen is as follows:

1. #75930 CoQ-Gamma E with Tocotrienols & Carotenoids: one capsule per day in the morning. Those with body weights over 100 lbs should add a second capsule at mid-day.
2. #75780 FlaviNox: one capsule, four times per day, three preferably with or

after meals. Those with body weights over 120 lbs, should add a second capsule with each of three meals.

3. #75940 MVM-A Antioxidant Protocol, multivitamin mineral supplement with added N-acetyl carnitine: one capsule, four times per day, three preferably with or after meals. Those with body weights over 120 lbs, should add a second capsule, with breakfast and with dinner.

4. #75960 NAC Enhanced Antioxidant Formula: one each twice per day, with or after breakfast and supper.

5. #71250 & #73870 Super EPA (fish oil): one per day in the morning after breakfast. Those with body weights over 100 lbs, should add a second capsule at mid-day, taken with or after lunch.

6. #75910 FibroBoost (Ecklonia cava extract): one each twice per day, with or after breakfast and supper.

7. #70010 Buffered Vitamin C: one capsule, four times per day, preferably three with or after meals.

I am suggesting that the three products that are to be taken four times per day, be taken at the same times, with three being taken with or after the three meals of the day and the fourth taken at bedtime.

I suggest that for those intending to try all seven, that you start with the first, trying it alone for three days to see if it is well tolerated, adding

second for three days, and so forth. By doing this you should find if there are any products that are not well tolerated, such that they can be eliminated for the time being and perhaps be tested later with either the same or possibly lower dosage. It will take 21 days, in this way, to get to the end of the initial period, into a period where all tolerated products are being taken.

You can get much more information about these products from the Allergy Research

Group web site:

[www.allergyresearchgroup.com/](http://www.allergyresearchgroup.com/)

There are 23 distinct agents/classes of agents found in these products that are predicted to down-regulate the NO/ONOO- cycle biochemistry. Most of these predictions are discussed and documented in Chapter 15 of my book “Explaining ‘Unexplained Illnesses’”. All 23 of these are described in the following Table

1:

Table 1

Agent or class Mechanism Comments

Vitamin C

(ascorbic acid)\* Chain breaking antioxidant; lowers NF-kappa B activity; reported to scavenge peroxynitrite and also help restore tetrahydrobiopterin (BH4) levels May require high doses to be effective with the latter two mechanisms; this may be the basis of so called “megadose therapy” for vitamin C

Vitamin E including tocopherols and tocotrienols Lipid soluble antioxidant; gamma-tocopherol may be particularly useful in scavenging breakdown products of peroxynitrite; tocotrienols may be particularly important in protecting from excitotoxicity and protecting mitochondria; lowers NF-kappa B activity High dose alpha-tocopherol, the most commonly used form of vitamin E induces an enzyme that degrades other forms of vitamin E; thus high dose alpha-tocopherol should be avoided, in my view

Magnesium\* Lowers NMDA activity and may be useful in improving energy metabolism and ATP utilization Magnesium is the agent that is most widely studied and found to be useful in the treatment of the multisystem illnesses

N-acetyl cysteine (NAC) Precursor in the synthesis of reduced glutathione. Some people with multisystem illnesses appear to be sensitive to this, possibly because of excitotoxicity of the cysteine produced from it; we use a relatively

modest dose here and suggest always taking it with meals

Fish oil (long chain omega-3 fatty acids)\* Lowers iNOS induction; important for brain function; also lowers production of inflammatory prostaglandins Highly susceptible to lipid peroxidation and may, therefore be depleted

Flavonoids\* Chain breaking antioxidants; some scavenge peroxynitrite, some scavenge superoxide; some reported to induce SOD; All three types are found in FlaviNox; some flavonoids may also act to help restore BH4 levels; lower NF-kappa B activity Flavonoids go up rapidly in the blood after consumption but also drop rapidly; taking them four times a day is an attempt to maintain higher blood levels over much of the day

Carotenoids, including beta-carotene, lycopene, lutein These are all reported to scavenge peroxynitrite in lipids, such as biological membranes Only natural forms are used here; the natural form of beta-carotene has substantial amounts of cis double bonds, whereas synthetic beta-carotene is predominantly all trans and largely inactive as a scavenger; the other carotenoids are very active, particularly in certain regions of the body and may be more active than even natural beta-carotene

Selenium in the form of seleno-methionine Serves as a precursor for

selenoproteins including three forms of the antioxidant enzyme glutathione peroxidase and a selenoprotein reported to be a peroxynitrite scavenger

Peroxyntirite reacts with many selenium compounds; if this generates products that are not retained in the body this will lead to lowered selenium levels which have been found in the multisystem illnesses

Acetyl L-carnitine\* Helps transport fatty acids into mitochondria; may be important here not only directly for energy metabolism but also to restore the oxidized fatty acid residues that may be produced by superoxide in the cardiolipin of the inner membrane May also help lower reductive stress

Ecklonia cava extract\* Polyphenolic chain breaking antioxidant; reported to help scavenge both peroxynitrite and superoxide; based on its reported properties, it may also help restore BH4 levels Appears to stay in the body much longer than do the flavonoids, a useful property; reported to be helpful in a clinical trial study of fibromyalgia

Vitamin B6 including pyridoxal phosphate Multiple functions; is present here primarily because of its activity in the enzyme glutamate decarboxylase (it can be rate-limiting) May help restore balance between glutamate and GABA; lower excitotoxicity and excessive NMDA activity

Hydroxocobalamin form of vitamin B-12\* Potent nitric oxide scavenger, lowers nitric oxide levels Taking this orally four times per day is an attempt to saturate the intrinsic factor mediated uptake over much of the day and thus get maximum oral uptake; still higher levels can be obtained by injection, inhalation or nasal spray

Folic acid\* Relatively high doses will lower the partial uncoupling of the nitric oxide synthases by helping to restore tetrahydrobiopterin Reacts with oxidants and therefore may be depleted due to the NO/ONOO<sup>-</sup> cycle

Niacin Helps restore NAD/NADH pools that can be depleted by peroxynitrite mediated poly ADP-ribosylation This may be important, in turn for lowering mitochondrial/energy metabolism dysfunction

Riboflavin including 5'-phosphate Multifunctional; main rationale for including it here is to stimulate glutathione reductase, a key enzyme for maintaining levels of reduced glutathione One of four agents here that are important for maintaining reduced glutathione; reacts with oxidants and therefore may be depleted due to the NO/ONOO<sup>-</sup> cycle

Thiamine (vitamin B1) Important in energy metabolism, including two steps in

pentose phosphate shunt which generates NADPH Critical for NADPH which can act

to regenerate reduced glutathione; reacts with oxidants and therefore may be depleted due to the NO/ONOO- cycle

R-Alpha-lipoic acid Important antioxidant; helps restore reduced glutathione levels; lowers NF-kappa B activity Rapidly converted in the body to reduced lipoic acid and lipoamide, the most active forms; possibly one of the most important agents but not tested in clinical trials for multisystem illnesses

Other B vitamins Biotin reported to be depleted with alpha-lipoic acid supplementation; pantothenic acid important for energy metabolism Coenzyme A (produced from pantothenic acid) is a thiol compound which may be depleted under conditions of oxidative stress; this may be still another mechanism producing energy metabolism dysfunction

Trimethyl glycine (betaine) Lowers reductive stress; also helps with the generation of S-adenosyl methionine (SAM) While the main rationale for including this here is from the reductive stress concern, SAM generation may also be of concern; the enzyme methionine synthase is inhibited by nitric oxide and inactivated under conditions of oxidative stress, thus leading to lowered SAM and lowered methylation

Coenzyme Q10 (ubiquinone) Important in mitochondrial function; important antioxidant; reported to scavenge peroxynitrite Optimal dosage may vary considerably among different individuals; suggest taking in the morning as some report it can keep them up at night

Zinc, copper and manganese These minerals are all precursors of the antioxidant enzyme superoxide dismutase (SOD) and can be rate limiting for its synthesis under some circumstances Dosage here is important as too high doses can all cause problems

RNA (another member of this group has been tested in a clinical trial) Two important functions: Provides adenosine for restoring adenine nucleotide pools after energy metabolism dysfunction; when catabolized, the purine bases generate uric acid, a peroxynitrite scavenger

Two other agents can act similarly:

D-ribose and inosine. Each of the three have their disadvantages, however.

D-ribose is a potent glycosylating agent. Inosine acts to stimulate mast cells.

And the commercial source of RNA is yeast and this may be a problem in those who

have a yeast allergy.

Taurine Lowers excitotoxicity including NMDA activity; helps restore balance between glutamate and GABA activity Reported to be depleted in multisystem illnesses

It can be seen from the above-described combination of Allergy Research Group nutritional supplements supply nutrients that help down-regulate various aspects of the NO/ONOO<sup>-</sup> cycle. Many act as antioxidants, lowering oxidative stress, blocking oxidative chain reactions, and in some cases scavenging such oxidants as peroxynitrite and superoxide or acting to increase superoxide dismutase activity. Some agents act to help restore tetrahydrobiopterin (BH<sub>4</sub>) levels and thus lower partial uncoupling of the nitric oxide synthases. Some agents lower nitric oxide levels. Some agents act in various ways to restore energy metabolism. Some act to lower excitotoxicity including excessive NMDA activity. Some act to lower certain inflammatory aspects including lowering NF-kappa B activity or lowering inflammatory prostaglandin synthesis. Thus all of the various aspects of the NO/ONOO<sup>-</sup> cycle mechanism as I have proposed it should be lowered to at least a certain extent.



## MEMO - 2

### *Gulf War Veterans Listen up!*

ALL I have two or three more obits I am working on again early age group! Just in a couple of days time period. Again 39 years old sudden death! Please all I do not have many details just the obits but something is happening. These are our youngest 39-18 = 21 yrs old in the gulf war. If these are heart attacks or strokes based on hypercoagulation problems please do not ignore any symptoms you have!

Immediately get medical attention! Go to a civilian ER if that is the closest to you! Also please avoid further exposures to pesticides or other materials ie paints, crop dusting, chemicals that may compound your exposure! Also if you are feeling no one cares you are wrong! There are alot still pushing to get us cared for appropriately. UTSWMedical ie Dr Hailey was under attack but the university responded in full force and countered the attack successfully! So do not give up if you need someone to talk to that understand I and others are here on computer and phone lines! If you call the 1-800 number and still feel desperate reach out to us by email and we will get on phone with you! DSNurse1@yahoo.com. WE are a chain of survivors do not let them win this battle!

Also get busy on facebook you can set up a unit specific page re Desert Storm/Gulf War/your unit. That way we can reconstitute units virtually. Let us know when you set up these pages and we will publish a list and circulate. This way we can have roll call and triage! And help compile our own data. If the VA

and DOD can't do it we must because it is our lives and we can control a bit of this!

I am also open to take your stories what happened in theater and once you came home and trying to get help. Pictures etc. check out [www.veteranstoday.com](http://www.veteranstoday.com) You may not be able to get to testify and be heard but this is one way. The other way is to write your congressman and senators and VA House and Senate VA, going quiet is not an option!

Your elected Reps are at home in their office the next week for their at home work week, go see them!

Support each other! Do not give up!

Roll Call! Salute Guns Taps

31. DE HOOG, MR. EDWARD J. "BEAR" Muskegon, OK Mr. Edward J. "Bear" DeHoog, age 39, US Army, sudden death

Edward J. DeHoog "Bear"

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DE HOOG, MR. EDWARD J. "BEAR" Muskegon Mr. Edward J. "Bear" DeHoog, age 39, passed away unexpectedly Monday, May 18, 2009. He was born April 26, 1970 in Muskegon to Samuel and Carol (Parker) DeHoog. Bear was a U.S. Army Veteran of Operation Desert Storm/Shield. He is survived by 5 children, Edward J. DeHoog, II, Raiven Skye Newville, Destiny Marie DeHoog, Kyle Reek, Peyton Edward DeHoog; the father that raised him, Harold Heikkinen; uncle Robert (Deb) Parker;

brother, Leon (Amanda) Parker; sister, Inez Young; special niece and nephew, Jasmine and Nick Young; and many others that were very important to him. He was preceded in death by his brother, Robert Young in 1998, his aunt, Jackie in 2000, mother, Carol Strohm in 2003, and his father, Sam DeHoog in 2007.

VISITATION with the family will be from 1:00 PM to 2:00 PM Friday afternoon at: The Walburn Chapel Sytsema Funeral Homes, Inc. 1547 W. Sherman Blvd. (231) 759-8565 with a GRAVESIDE SERVICE immediately following at 3:00 PM at the Oakland Cemetery on Russell Rd., just North of Riley Thompson, with the Rev. Thomas Siefert officiating. In lieu of flowers, the family requests donations to the family to help defer funeral expenses. Share memories with the family at their On-line Guest Book at [www.sytsemafh.com](http://www.sytsemafh.com)

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