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#### Meow,

# FREE RADICALS AND INFLAMMATION

Yep, we think inflammation is an important topic. Here's the third in our series on inflammation, this time featuring the role of free radicals and antioxidants in creating and counteracting inflammation.

Most of our fair members know that free radicals can be evil critters, which essentially rust and ruin the body unless they are vanguished.

With their unstable structure -- they have an unpaired number of electrons, leading to "electron-stealing" -- free radicals disturb cell structure, resulting in cellular damage in protein, fat, and DNA molecules.

If you're a newbie and want to learn more about the reactive nature of free radicals and their effects on aging, go to:

#### http://www.accessexcellence.org/LC/ST/bgfreerad.html

Meanwhile, free radicals also increase pro-inflammatory proteins, known as cytokines, in the immune system.

Additionally, free radicals activate "adhesion" molecules in white blood cells.

White blood cells, made by bone marrow to fight infection and disease, are designed to adhere (or "stick") to and digest or destroy infectious microbes and other foreign or damaged cells.

Alas, when the immune system is in overdrive and free radicals are operating unchecked, as in chronic inflammation, warrior white blood cells can start adhering to perfectly normal cells, including those in arteries and joints, thus exacerbating inflammation.

# ANTIOXIDANTS FOIL DESTRUCTIVE FREE RADICALS

Antioxidants are the body's superheroes, willing and able to foil destructive free radicals.

Antioxidants stabilize erratic free radicals, by donating one of their own electrons to the unstable free radical atom(s), thus suppressing the inflammatory response.

# DIETARY REMINDER: FRUITS & VEGGIES AS SOURCES OF ANTIOXIDANTS

Fresh fruits and vegetables provide the most vitamins, minerals *and* antioxidants combined than any other food group.

Fresh produce is literally exploding with antioxidants, such as: vitamin E, vitamin C, carotenoids, flavonoids and proanthocyanidins.

Yep, once again, this kat will remind you to load up on

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Top 10 Latest top sellers!

- 1. <u>Coenzyme Q-10 (Softgels)</u>
- 2. Heart Plus
- 3. <u>B Vitamin Trio (Sublingual)</u>
- 4. Fish Oil (Large Bottle)
- 5. Joint Complex
- 6. Eye Protection
- 7. Multi-Vites
- 8. Sam's Antioxidant (Plus D)
- 9. Fish Oil (Regular Bottle)
- 10. Probiotics 16

### Member Spotlight

Good Morning Guido!

I take <u>Acetyl L-Carnitine</u> and <u>Alpha Lipoic</u> <u>Acid</u> along with a handful of other good Our Health Co-op vitamins to assist in controlling blood sugar. I monitor my blood sugar daily to keep my blood sugar blood 140, which is not low enough. <u>Acetyl L-Carnitine</u> combined with <u>Alpha Lipoic Acid</u> does help maintain lower blood sugar levels.

I have been a member of Our Health Co-op since [the beginning when they] started the concept of high quality micronutrients at a lower cost available to the public. Keep up the good work!

From Member Don W., Mableton, Ga.

**Tell-A-Friend** Please "<u>Tell a Friend</u>"! If your friends and family care about supplement quality *and love* a good deal, they will certainly thank you! ^..^



# Contact Us Phone: 800-667-0781 Mon-Fri 10am-4pm EDT Web: http://www.ourhealthcoop.com

fresh fruits and veggies. Even <u>dried fruit packs</u> a significant antioxidant punch in your diet.

*Fast Factoid:* Some vegetables like potatoes, tomatoes, and eggplant may actually make <u>inflammation worse for</u> <u>arthritis sufferers</u>. These vegetables are part of the nightshade family of plants and contain a chemical alkaloid which is an irritant.

## ANTIOXIDANTS FROM SUPPLEMENTS

I know, I sound like a broken record at times on the topic of antioxidants, but so be it.

If you aren't getting enough fresh fruits and veggies, you should consider supplementing with the following antioxidants:

- Vitamin E
- Vitamin C + bioflavonoids
- Grape seed extract
- Green tea with polyphenols

More than any other nutrient, though, vitamin E is considered to be effective in reducing inflammation, according to Jack Challem, author of <u>The Inflammation</u> <u>Syndrome</u>.

Studies show that Vitamin E helps turn off genes involved in inflammation, as well as some types of adhesion molecules.

#### **ANTI-INFLAMMATORY HERBS**

One of the most studied anti-inflammatory compounds in food is curcumim -- that bright yellow spice found in curry! So load up on Indian curries whenever you can.

Curcumin's mechanism of action is the same as that for Vioxx, which inhibits Cox-2, without all the major side-effects.

*Fast Factoid:* Cox-2 is an enzyme that activates proinflammatory compounds.

Our <u>Arthro-3</u> formula has curcumin, boswellia (another ayurvedic herb that inhibits pro-inflammatory compounds), as well as MSM (effective in soothing muscle and joint pain).

#### SAY "NO" TO REFINED SUGAR

Yep! I know, this is a tough one! It's everywhere: cereals, breads, peanut butter...pretty much in all processed foods.

Refined sugars (a.k.a. simple carbohydrates) are absorbed very quickly by the cells. But the cells really don't need much for fuel and so the excess sugar is released into the bloodstream.

Dr. Nancy Appleton, PhD, author of *Stopping Inflammation*, states that the excess sugar can form AGEs - advanced glycation end products - a primary cause of inflammation.

Glycation is when excess sugar binds non-enzymatically to proteins (or lipids or DNA) - which is not natural. This changes the molecular structure of the protein making it toxic (more free radicals).

Rightly so, the immune system sees this protein as an invader and inflammation is then on the rise. With lots of AGE products swimming around the bloodstream - chronic inflammation is inevitable.

Fast Factoid: AGEs can occur just from ingestion of one soft drink or candy bar! Yikes!

#### THREE TESTS FOR INFLAMMATION MARKERS

It's always handy to have a good integrative physician friend.

While doing my research, I asked <u>Dr. Hugo Rodier</u> about tests that assess markers for chronic inflammation.

Here's what Dr. Rodier suggested:

- C-Reactive Protein (CRP) test -- CRP is a marker of inflammation in the bloodstream.
- Homocysteine test-- high levels indicate that there is a high risk of heart attack or stroke (from inflammation)
- ADMA (dimethylarginine) test -- similar to homocysteine, high levels of dimethylarginine are linked to inflammatory vascular diseases

If you're interested in contacting <u>Dr. Rodier</u> for a consultation, let him know "the kat sent me." ^..^

# INFLAMMATION SUMMARY - CONTROL THROUGH DIET, TEST TO BE SURE!

It's important to remember that you have control over chronic inflammation - through your diet.

- 1. *Eliminate* polyunsaturated vegetable oils, partially hydrogenated oils, margarine, deep-fried foods and any foods that contain trans-fat.
- 2. *Increase* monounsaturated oils, like extra-virgin olive oil, and omega-3 fatty acids found in fish, fish oil, walnuts and flaxseed oil.
- Include plenty of fresh fruits and vegetables, especially those with high antioxidant content like blueberries!
- 4. *Eliminate* refined sugars to stop formation of advanced glycation end products.
- 5. *Include* antioxidants to ensure you're stabilizing those bad boy free radicals.
- 6. *Include* natural anti-inflammatory herbs including ginger, curcumin, and boswellia.

Test for C-Reactive Protein, homocysteine, and ADMA or dimethylarginine to see how you're doing on your antiinflammatory regime!

# HEALTHY RECIPES TO THWART INFLAMMATION

Okay, we promised more recipes to fight inflammation.

We have listed a <u>few more recipes on our website</u> which came (again) from *The Inflammation Syndrome*, by Jack Challem, and *Stop Inflammation Now!* by Dr. Richard Flemming.

Click here to get all the yummy details!

#### Health in the News

- The benefits of eating all schools of fish
- <u>Glycemic index could be the next nutrition tool</u>
- Eat grapes! Heart healthy benefits for women

#### **BEYOND JUST "TELLING A FRIEND"**

You all know the drill. Pick your products online. Fill out the rest of the order form. Wait for the confirmation email to arrive. You're done.

Not so fast for some folks, who think the "Special Shipping Instructions" section is there to send love notes and wild opinions directly to Teri.

Yes, it's true. Teri pays attention to special fields on orders, including the "Where From" field as well.

Next to notes that say "From mom" or "From a coworker" or "From my doctor," Teri likes to scribble a comment, stamp this kat's mugshot, or affix stickers, depending on her fancy for the day. Stephen rolls his eyes, yet seems to secretly approve.

One Monday morning, Teri was in stitches. The prior Sunday, one of our members from Spartanburg, South Carolina had written in the "Where From" field:

"URL written on bathroom stall wall."

Teri's comment? "I love my job!"

And, we can't help but love our members.

A very hearty and warm thanks to all our members who have been <u>"Telling a Friend"</u> about us! ^..^

'Nuf for one day, don't you think? Yep, it's definitely time to scat!

Still purringly yours,

# Guido

Guido Housemouser Chief Kat and Community Manager Our Health Co-op Making Health Affordable Together

Please use the following link to order products: http://store.ourhealthcoop.com

DO NOT write to Guido about orders, as your order inquiry will only be delayed!!! The "kat" is happy to receive and respond to other types of notes though!

For all questions related to orders, or for email orders, PLEASE USE: <u>orders@ourhealthcoop.com</u>

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