The proven cancer revelation pushed aside for profits!

In 1984, a senior staff scientist for the National Cancer Institute (NCI) and a personal friend of mine was on the verge of a medical epiphany. She had gathered towering piles of PROVEN research regarding a downright *ordinary* substance. Vitamin C.

She was a part of the "crash program" to uncover as much as we could on the relationship between diet, nutrients, and cancer. And had taken it upon herself to gather and review a decade's worth of small, very sound studies on vitamin *C*. And what she found was staggering.

In fact, this tireless researcher reviewed over 46 separate epidemiological studies. She found that 33 of them revealed vitamin *C* offered **significant protection against cancer...particularly for esophageal, pancreatic, stomach, lung, and breast cancers**.

Thirty-three out of 46. <u>That's a 71% rate of positive</u> results!

And in subsequent studies, vitamin C continues to produce jaw-dropping results...

- One study in mice showed vitamin C could rob a tumor of its power source—literally halting any new growth.
- In the prominent medical journal *Prostate*, it was reported to be a "potent anticancer agent for prostate cancer cells."
- It was shown to be a CRITICAL element in your body's ability to resist neoplasia—the formation of abnormal cells.

Research had even been performed by two-time Nobel laureate, Linus Pauling leading him to controversially proclaim, "This substance can prevent cancer."

Imagine. A real cancer breakthrough sitting right under the nose of the NCI the whole time. And all they had to do was look beyond the cutting, burning, and poisoning. To consider safer, natural approaches. And they didn't even have to look far. This secret weapon was found just starting with the basics! Of all things, vitamin C.

And yet, tragically, chances are you still haven't heard the potential of vitamin C for the prevention and treatment of cancer.

There was one BIG PROBLEM...

When this dedicated researcher finished her work, she went proudly before our political bosses to deliver the revolutionary news. Was she congratulated? Was she asked to present her findings to an expanded panel of her superiors? *Was she even listened to*?

No. The National Institutes of Health (NIH), the guardian of this nation's health and wellbeing, wasn't interested in her findings. They weren't interested in the success rates, shrinking tumors, or how amazingly simple, affordable, and effective her discovery was.

I know it sounds unbelievable. We're talking about a senior scientist, with a stack of credible research in hand. The sheer weight and height of which she actually carried into her superior's office to try to convey the potential in person.

But the sad truth is...the NIH already *had* a "natural cancer plan." And vitamin C didn't fall in line. The "science bureaucrats" ignored a hard-working, dedicated scientist with more-than-promising results in hand. All because they had already invested themselves in a plan that would just be too hard to stop.

What was so good that they could afford to ignore this colleagues' staggering scientific findings?

Beta-carotene. Those two words (and tens of millions of dollars) single-handedly derailed this nation's entire medical establishment—for decades—from finding a PROVEN cure for cancer. Because in 1984, a monumental initiative was mandated. The goal was to make beta-carotene the *cancer treatment darling* for the upcoming century.

One study is all it took to get the NIH frothing at the possibilities. Just one study, compared to the stack of research my colleague uncovered on vitamin C.

You see, beta-carotene is a plant-derived form of vitamin A. And in 1981, an influential English scientist (who had studied in Nazi Germany during their earlier war on cancer) in an influential English scientific journal, simply asked a simple question based on a study showing the higher one's vitamin A levels; the less likely they were to develop lung cancer.

Beta-carotene was of interest because it's a water-soluble, plant form, that can be converted in humans to Vitamin A, which is fat-soluble (and therefore potentially toxic). So, NCI was really looking for Vitamin A activity thru giving "safe' beta-carotene. Of course, we now know that even that thinking was faulty. Many people do not convert beta-carotene to Vitamin A at all, or only a little, or only under certain conditions.

So, beta-carotene can not be considered a reliable source of Vitamin A from plants. So, the NCI immediately jumped to all the wrong conclusions.

And conveniently for the NIH, there was a synthetic form of beta-carotene already on the market. Readily available for testing. So they jumped right in. (Though it's likely that's not the only reason, which I'll explain in just a minute.)

Flash forward two years and the NIH had issued a largescale clinical trial. (The cost of which soared into the tens of millions.) And word had spread to the press that "beta-carotene would save us all from cancer!"

All the while, several colleagues from the USDA Human Nutrition Research Center and I were uncovering evidence of the exact opposite.

We actually looked to the past and reviewed a dozen smaller studies on beta-carotene. And we found no correlation between blood levels of beta-carotene and cancer.

We also looked at over 30 studies following the results of the British Empire Cancer Campaign. We looked at the foods that consistently showed protective effects against cancer. Then we used the latest, state-of-the-art technology to identify the carotenoid content of each of these foods. And they were *not* high in beta-carotene. But they *were* high in vitamin C and other nutrients.

There was essentially no reason for the NCI to "bet" on beta-carotene. No reason to proceed with multi-million dollar, taxpayer-funded clinical trials that gave synthetic beta-carotene to people already at increased risk for cancer.

But it was too late. The NIH had already let word leak out to the media about their new "darling." And seemingly overnight, thousands of everyday citizens were taking beta-carotene for cancer. All before a full-scale clinical trial had even started!

In fact, once the clinical trial got underway, it was hard to organize the control group of patients *because so many people were already taking beta-carotene*. In the medical science world—that's counting your eggs long before you even have the chicken...

But why, oh why was the NIH throwing caution (and a proven cure!) to the wind?

Because the reward was just too great. And unfortunately, I'm not talking about saving lives. When it comes to questionable judgments taking place in our more *"infallible"* institutions—<u>always look at the advisory board</u>.

In this particular case—a member of one of the *National Cancer Institute's* advisory boards happened to be a senior science officer at the manufacturer of a leading synthetic beta-carotene available at the time. And there it is. The shameful dots should be easy enough to connect. If beta-carotene became the "chosen one" amongst the NIH, record profits were guaranteed. Even before results were ever gathered, and regardless of what the results showed.

All the while, sealing the fate of a TRUE CANCER ANSWER to sit on the shelf, collect dust, and be kept from you.

One day I asked another scientist how the NCI could continue to ignore all the evidence about vitamin C. He explained that two-time Nobel Prize winner Linus Pauling had given vitamin C a "bad name." In the government's eyes, he was too vocal about its benefits. And the NCI couldn't afford to be seen as "kooky" or "fringy." Better to be just plain wrong. Meanwhile, Linus Pauling single-handedly held as many Nobel Prizes as the entire scientific bureaucracy of NIH put together. But the NCI prefers to be "often wrong, but never in doubt."

In fact...

We discovered many things when we began to do research with the USDA. First, we found that the nutritional quality of foods had declined drastically each decade during the 20th century right through the 1980's.

Second, almost all the healthy foods that are known to prevent cancer in fact are not high in beta-carotene. But we did find that these foods *are* high in vitamin C and a lot of other carotenoids that no one had heard of before, including **lutein**, **lycopene**, and **beta-cryptoxanthine**. All powerful nutrients that you can easily stock up on through the green, leafy vegetables you get at the grocery store.

And all the NCI managed to prove, tens of millions of dollars later, was that beta-carotene did *not* prevent cancer. And that, in fact, **cancer could actually increase by over 25% in some when using the synthetic, isolated beta-carotene of our friendly drug company**.

And all along, this flawed approach of the NCI using the wrong doses, forms, and isolated synthetic nutrients—led to mixed results. Which of course opened the door to criticism by pharmaceutical-led mainstream medical science and oncology. Who continue to argue that nutrition won't work against cancer.

I even went so far as to formally predict the failure of this flawed approach. I knew it wouldn't work thanks to my work with the USDA, who actually knew something about nutrition. So I wrote up a scientific paper using the flawed and ill-fated example of beta-carotene. But my paper got caught up by my "political" bosses at the NCI...protecting their cancer empire, covering up their ignorance of human nutrition, and their waste of time and tax dollars.

Finally, once I left the NCI to work at Walter Reed Army Medical Center, and away from my "political" bosses...

my paper was published in the *Journal of the National Cancer Institute* itself. Fortunately, the journal is reviewed by non-government scientists independent of the NCI itself. And I was awarded the Young Research Investigator prize for this work at Walter Reed.

It wasn't until 2002 that there was finally general recognition among physicians that using RDA guidelines to treat diseases was not adequate. Thanks to the publication of a pair of papers by Fairfield and Fletcher in the *Journal of the American Medical Association*.

The stage was finally set for accepting that nutrients should be taken in adequate doses and in natural combinations in order to prevent and cure diseases such as cancer. Three-quarters of a century after the British initiated their first efforts in the war on cancer.

Vitamin C breakthrough for cancer targets tumors at the source

Despite the best efforts of the Medical Mandarins at the National Institutes of Health, research on vitamin C and cancer HAS continued...And the results of several new studies have allowed me to bring a lot of thinking and observations from the past 35 years together. Into a rare—but very real—honest-to-goodness cancer breakthrough.

There has been a lot of interest in the ability of vitamins and minerals to lower the risk of cancer for many decades. But the way a lot of the research is done just doesn't get it right. They use the wrong nutrients, the wrong forms of administration, the wrong doses, for the wrong reasons. Then, if they don't find a positive result, the "experts" have been all too quick to say, "See, it doesn't work!"

Vitamin C has endured more than its share of this shoddy research and scientific bias. Especially when it comes to this nutrient's anti-cancer potential.

And thanks in large part to this inept research, many "experts" have been warning cancer patients against vitamin C for years.

When we began offering high-dose, intravenous vitamin C to cancer patients at Thomas Jefferson University Hospital 10 years ago, we first had to prove to a number of hospital review committees that it would be safe. (It was.) And that it wouldn't interfere with other treatments

(chemotherapy and radiation). (It didn't.)

And now, a new toxicology study has been performed on intravenous vitamin *C*. And the results are very revealing. The dose administered was 1 gram (1,000 mg) <u>per minute</u> over 4 consecutive days each week for a total of 4 weeks.

That dose—1,000 mg—is more than the government's recommended <u>daily</u> allowance of vitamin C. And the subjects in this study got 1,000 mg every *minute*.

Researchers then determined how quickly vitamin C is eliminated from the body. They did this by finding the nutrient's "half-life." (Half-life means the time it takes for the concentration in the blood to be reduced by half. The radiation oncologists who burn out cancers are familiar with radioactive half-life.)

The half-life of vitamin C was measured as 2.0 hours (plus or minus, 36 minutes). In this sense you would think of vitamin C as "short-acting" if it were a drug. But the clearance time for all vitamin C to be eliminated from the body was 21 days, plus or minus 5 days.

I think a possible reason for this difference is that the body (particularly the muscles) acts as a reservoir for vitamin C—and can take up and store a large amount .

But it's important to note that <u>none of the study</u> participants suffered any ill effects from this high-dose intravenous administration of vitamin *C*.

This basic toxicology information is very important. (I wish my colleagues and I had been authorized to study vitamin *C* like this back in the 1980s instead of just looking at carotenoids. Although at least we were able to discover the importance of lutein and lycopene at the same time I was exposing the lack of any real evidence for beta-carotene. But I digress...)

The new study also tells us that it is probably impossible to achieve blood levels of vitamin C high enough to treat cancer by taking oral supplements.

IV vitamin C enhances chemo

So that answers the safety question about vitamin C for cancer patients. But what about the concerns regarding

vitamin C's impact on other cancer treatments?

Well, new lab studies show that IV vitamin C actually *enhances* chemotherapy drugs like gemcitabine and erlotinib against pancreatic cancer cells (notoriously difficult to treat). Researchers observed this effect even in cancer cells that are otherwise resistant to gemcitabine treatment.

This means doctors may be able to lower the doses of toxic chemotherapy drugs they give their patients if they also administer them with safe IV vitamin C.

So this new (and long overdue) research finally allows us to set aside old myths and misconceptions about administering vitamin C to cancer patients.

Of course, even after all of this has been settled, there will undoubtedly be the hardened skeptics who will refuse to believe it until someone answers the age-old question "but <u>how</u> does it work?"

Well, new scientific research now has that aspect covered too...

Not just an anti-oxidant

Early theories about the role of vitamin C (ascorbic acid) in preventing cancer focused on its role as an "anti-oxidant."

But oxidation and anti-oxidants are more complicated than it seems. It all goes back to Chemistry 101: Chemically, any oxidant can become an anti-oxidant, and any anti-oxidant can become an oxidizing agent, depending upon the surrounding molecular environment, acid-base balance, and other factors.

And this probably explains why test tube laboratory studies showed that high enough levels of vitamin C actually cause direct cancer cell death. When ascorbic acid gets so high, it may reverse action and become an oxidant, or may simply just act as an acid. Which poisons cells.

However, in lab studies, vitamin C was also effective against experimental tumors even at lower doses that could not kill cancer cells directly.

So, how does it work? Well, it turns out you don't have

to kill cancer cells outright (and risk poisoning yourself).

Starve cancer cells to death

There is a two-stage model of cancer. (This model was key to my own PhD dissertation research, which recognized the importance of early childhood nutrition in the long-term risk of cancer.) The first stage involves some chemical damage that alters the DNA in normal cells, "mutating" them into individual cancer cells. This is called cancer initiation.

Then the cells have to grow into actual tumors. This stage is called cancer promotion. The ability of cancer tumors to grow (promotion) is based upon them hijacking the body's blood supply—which you know now as angiogenesis

And it now appears anti-angiogenesis is an important mechanism by which an agent can prevent cancer <u>without</u> having to actually kill the cells (which is the toxic property of today's cancer drugs). If you can prevent the cancer from getting blood supply, the cells will starve to death, without having to actually poison them.

And a convincing new study shows the anti-angiogenic properties of vitamin C. In fact, three of them.

A triple play against tumor growth

In lab models, researchers used an intravenous vitamin C dose of 25 to 60 grams. (A dose you could safely get in 25 minutes to one hour with the "1-gram-per-minute" approach used in the human toxicity study reported above.)

First, the vitamin C inhibited endothelial (blood vessel) cells from multiplying—without harming normal, healthy endothelial cells. (Remember, chemotherapy drugs prevent cells from multiplying by poisoning normal cellular metabolism.).

Second, the vitamin C also decreased the migration of endothelial cells. This prevented new blood vessel cells from going to the cancer.

And, finally, the vitamin C prevented the endothelial cells from organizing into new blood vessel structures.

That's a <u>triple play</u> against cancer tumor growth.

Oral vitamin C supplements aren't enough to treat cancer

So, vitamin C turns out to be an "anti-angiogenic" powerhouse at doses that are very high, yet well-tolerated by humans. But it has to be administered intravenously to reach the doses that are safe and effective against cancer growth.

Now it's true there is a lot of evidence that lower oral doses of vitamin C (but still higher than the RDA) will *prevent* development of cancer in the first place. But you have to give vitamin C intravenously—directly into the bloodstream—to get high enough levels, long enough, to stop cancer once it is growing in the body. (So any "negative" studies using only oral doses to try to treat cancer don't really mean anything.)

This may sound extreme. But all cancer patients receive various intravenous therapies anyway. In fact, chemotherapy drugs are so toxic they <u>have</u> to be administered intravenously. If you swallowed them, they would poison and destroy the gastro-intestinal tract. Of course IV chemotherapy drugs cause enough physical devastation as it is (nausea, hair loss, fatigue, weakened immunity, another cancer—the list goes on). Intravenous vitamin C can be just as effective against cancer—if not more so. And it doesn't cause ANY of these toxic effects.

So you only have to ask yourself one question: which would you rather get?

Getting an IV vitamin C infusion is similar to having kidney dialysis—but much less invasive. You have to sit for awhile in the doctor's office while the nurse is monitoring and administering the infusion. At Thomas Jefferson University Hospital I set things up so that patients could also listen to mindfulness meditation oral exercises, visualization, and other mind-body approaches to make the time pass more pleasantly and productively.

The Clinical Laboratory Inspection Act governs the laboratories which formulate vitamin *C* intravenous infusions to ensure they are accurate, potent, and fresh. So look for a licensed physician that offers intravenous vitamin *C* infusion with an on-site certified laboratory.

SOURCES:

"Vitamin C and Cancer," in Nutrition and Cancer Prevention: Investigating the Role of Micronutrients. New York: Marcel Dekker, 1989

"How Vitamin C Stops Cancer." ScienceDaily, 9/10/07. (Retrieved 5/29/12, from http://www.sciencedaily.com/ releases/2007/09/070910132848.htm)

"Effect of vitamin C on prostate cancer cells in vitro: Effect on cell number, viability, and DNA synthesis," The Prostate 1997; 32(3): 188-195

Cancer Epidemiol Biomarkers Prev 1992; 1: 119 "Can dietary beta-carotene materially reduce human cancer?" Nature 1981; 290: 201-208

"Carotenoid analyses of foods associated with a lower risk for cancer," Journal of the National Cancer Institute 1990; 82: 285-292. Omenn, G. S. (1998). "Chemoprevention of lung cancer: The rise and demise of beta-carotene," Annual Review of Public Health 1998; 19: 73–99

"Vitamins for Chronic Disease Prevention: Scientific Review and Clinical Applications." Journal of the American Medical Association 2002; 287(23): 3,116-3,12 9.

"Phase I clinical trial to evaluate the safety, tolerability, and pharmacokinetics of high-dose intravenous ascorbic acid in patients with advanced cancer." Cancer Chemother Pharmacol. 2013; 72(1): 139-146

"Phase I Evaluation of Intravenous Ascorbic Acid in Combination with Gemcitabine and Erlotinib in Patients with Metastatic Pancreatic Cancer," PloS One 2012; 7(1): e29794