MASSIVE ORCHESTRATED EFFORT TO FRIGHTEN AMERICANS AWAY FROM DIETARY SUPPLEMENTS NOW UNDERWAY

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If one reads recent news reports about dietary supplements today they would come to the mistaken conclusion that they are covert weapons of mass destruction. Published tabulations of deaths associated with the use of dietary supplements reveals they are safer than aspirin tablets, vaccines, prescription drugs, even table salt. Yet users of dietary supplements must be mindless fanatics given the frightening news stories about vitamin pills now in circulation. Doctors say, "I told you so," and supplement users are on the defensive, not knowing how to justify their continued daily use of vitamin and herbal pills. Few recognize a concerted effort to foist off pseudoscience upon the American public is underway.

On the same day that an article in the *New England Journal of Medicine* falsely extolled the potential heart-health benefits of a powerful liver-toxic statin drug emanating from its ability to reduce C-reactive protein (CRP), a marker of inflammation, other reports in the *Journal of the American Medical Association* claimed antioxidant Vitamins C and E are worthless in the fight against heart disease, even though they are potent CRP inhibitors themselves!

This is an example of a massive, orchestrated effort to dismiss or even malign dietary supplements by members of the research and medical industry. (*New England Journal Medicine*, 2008 Nov 20; 359(21):2195-2207; *JAMA*, 2008 Nov 12; 300(18):2123-33; *Free Radical Biology Medicine*, 2008 Oct 10; *American Journal Clinical Nutrition*, 2007 Nov; 86(5):1392-8)

If modern medicine is to continue to exist in its present practice of treating every disease as if it were a drug deficiency, it must keep the public from reaching for dietary supplements that mimic the same biological action of most prescription drugs at far less cost and side effects. Otherwise, dietary supplements, at least the high-dose varieties, need to be converted into prescription-only "medicines" as they are in many European countries, or patients will skip doctors' offices and pharmacy visits and acquire their medicines at a health-food store and doctors will lose out on fees added to their exam charges for a drug evaluation.

A review of recent negative reports surrounding vitamin supplements reveals an orchestrated effort to mischaracterize

and demean dietary supplements is underway at all levels

– by government agencies, university research centers,
editors of medical journals, doctors, and news reporters.

Example: Vitamin C and Cancer

The most recent study which claims Vitamin C supplements failed to reduce cancer rates is an example. The study group of male physicians over age 50 took 500 milligrams of Vitamin C daily, 8.3 times more than the recommended daily allowance (60 mg), but not enough to raise blood concentrations for more than 2-4 hours. (American Academy of Cancer Research (AACR) meeting in Washington, D.C., Nov. 2008)

Example of scare tactic news report

The New York Times Nov. 24, 2008

News Keeps Getting Worse for Vitamins, Consumers don't want to give up their vitamins.

News Keeps Getting Worse for Vitamins The best efforts of the scientific community to prove the health benefits of vitamins keep falling short. Recently, doctors at Memorial Sloan-Kettering Cancer Center in New York warned that vitamin C seems to protect not just healthy cells but cancer cells, too.

This week, researchers reported the disappointing results from a large clinical trial of almost 15,000 male doctors taking vitamins E and C for a decade. The study showed no meaningful effect on cancer rates. Another recent study found no benefit of vitamins E and C for heart disease.

In October, a major trial studying whether vitamin E and selenium could lower a mans risk for prostate cancer ended amidst worries that the treatments may do more harm than good...

Wait.. it gets worse!

In October 2004, Copenhagen researchers reviewed seven randomized trials of beta carotene, selenium and vitamins A, C and E (alone or in combination) in colon, esophageal, gastric, pancreatic and liver cancer. The antioxidant users had a 6 percent higher death rate than placebo users.

Researchers found and research has suggested certain vitamin supplements do not extend life and could even lead to a premature death.

While the latest science mistakenly calls for the public to avoid Vitamin C pills, for comparison, most animals continually produce Vitamin C via synthesis in the liver or kidneys, up to 13,000 mgs per day for an animal about the size of a human (a 160-lb goat). That is far greater than humans consume in their diet or supplements combined.

Due to a gene mutation many generations ago, humans no longer synthesize their own Vitamin C and virtually all humans are Vitamin-C deficient compared to animals. A significant percentage of Americans suffer from frank Vitamin-C deficiency, particularly smokers, and exhibit overt signs of scurvy (bleeding gums, skin bruising, anemia, fatigue, cataracts, allergy, muscle and joint aches, small purple blood-blisters on the skin) that are overlooked by most physicians. There is no way to correct this inbred deficiency without dietary supplementation. The American diet only provides around 110 milligrams of daily Vitamin C. Most human clinical trials involve only modest doses of Vitamin C, not even approaching what most animals produce naturally, so it is unlikely that any of these studies would have a positive result.

1528 Human Clinical Trials Underway

Just how is modern medicine going to deal with positive reports that emanate from the 1528 ongoing, federally-sponsored human clinical trials of vitamin and mineral supplements now underway? The science needs to be distorted to keep the public from adopting dietary supplements. A review of many of these published studies shows how modern medicine mischaracterizes positive studies involving dietary supplements.

1. Emphasize in the title of research reports, abstracts and news press releases that a vitamin or nutrient was ineffective in one measurable parameter, and bury the positive findings in the lower paragraphs of the study.

This is how a 2005 study involving Vitamin E was reported by WebMD and the National Institutes of Health (*Journal American Medical Assn*, 2005 Jul 6; 294(1):56-65):

"The study found that 600 IU natural-source Vitamin E taken on alternate days:

- Did not lower women's risk of heart attack or stroke.
- Did not lower women's total cancer risk.
- Cancer death was not different.
- Did not lower women's risk of breast, lung, or colon cancer.
- Had no effect on women's overall risk of death.

 Slightly decreased -- by 24% -- women's risk of dying from heart disease"

If this were a pharmaceutical, that slight 24% difference in risk of dying from heart disease would have made worldwide headlines and been declared a blockbuster drug. But as a dietary supplement, it was declared an insignificant finding.

Mind you, this report showed that in women over age 65, the age group most affected by coronary problems, the death rate from heart disease was cut almost in half if the women took Vitamin E supplements. The reason why there was no overall effect upon risk for death from any causes is because data from healthy younger women were pooled into the study. Only when the data were analyzed among the highest risk group was the benefit for Vitamin E shown. Thousands of women have backed off of taking higher-dose supplemental Vitamin E in recent times due to negative news reports. It is obvious here that the medical industry will let thousands of Americans die needlessly to protect their financial interests.

2. Use meta-analyses (data from combined studies) to falsely allege dietary supplements are ineffective or even harmful. There is too much opportunity to re-arrange analysis of the data to fit a preconceived conclusion.

For instance, weighting the data from one large study may skew the conclusions of the analysis.

As another example, meta-analyses may be redundant. The safety of even mega-dose Vitamin E was not in question till recently. Three meta-analyses (analyses of many studies) appeared to show higher-dose Vitamin E may be harmful, even slightly increasing mortality rates. However, the three meta-analyses published from 2003 to 2005 stack up like an illusion. They used some of the same studies in their cross analyses, so they are not new nor does one meta analysis add much to the understanding of the safety of Vitamin E over another. Yet news report read "Yet another study shows high-dose vitamin E may be harmful." This is further evidence of modern medicine's hidden agenda to slander vitamin supplements.

Furthermore, meta-analyses can remove from review any positive studies. Removal of positive studies from the meta-analyses of Vitamin E can skew statistical data in favor of one large trial that showed no benefit or even slight harm.

Moreover, data from meta-analyses have never led to a major change in clinical practice. Canadian investigators compared the results of 12 meta-analyses and determined, if they were solely used to evaluate the efficacy and safety of treatment, clinicians would have adopted an ineffective treatment in 32% of the cases and rejected a useful treatment in 33% of the cases.

In the meta-analyses of Vitamin E, study data were pooled despite differences in dosage and the form of Vitamin E (natural-source Vitamin E being more potent than synthetic, mixed forms of Vitamin E being more advantageous). Controlled studies also differ in the span of time the studies encompass. It takes 10 years or more to see differences in cancer mortality. Studies that are 3-4 years duration may yield questionable data in terms of treatment guidance.

"Despite good intentions, seemingly small differences drive the discrepancies in results between meta-analyses and the individual studies that comprise them," say critics of meta-analyses. (Critical Reviews in Food Science and Nutrition, 2008; 48:760–774)

It is likely these three meta-analyses of Vitamin E were written for publicity effect and only represent pseudo-science.

- 3. Falsely assert high-dose vitamin or mineral supplementation increases the risk for a certain disease when in fact all that is happening is that patients with more severe disease tend to take higher-dose supplements. (American Journal Clinical Nutrition, 2007 Jan;85(1):277S-279S) There is no causal effect. An example of this is a meta-analysis (pooled analysis of many studies) that claimed higher-dose Vitamin E (more than 400 IU) raises mortality rates for prostate cancer, but lower-doses reduce mortality rates. (Annals Internal Medicine, January 2005; 142 (1)) The positive effect seen among users of lower doses who have less-severe disease may vanish among users who take higher doses because of the severity of their disease.
- 4. Another trick is to measure the effectiveness of a vitamin supplement with a bogus test. For example, one study shows supplemental Vitamin E (400 IU) does not lower PSA (prostate specific antigen) and does not therefore lower risk for prostate cancer. (*Urology*, 2005 Aug; 174(2):519-22) However, PSA is a false measure of the risk for prostate cancer, it is only a marker of prostatic inflammation and prostate size. The PSA test does not give an accurate indication of whether a male has prostate cancer. (*Geriatrics*, 1992 Sep;47(9):26-32) Britain does not even use the PSA test. Another bogus measure is

cholesterol. Various dietary supplements are said to be ineffective because they do not reduce circulating cholesterol numbers. But there is no evidence that cholesterol reduction reduces cardiac mortality. (*Lancet*, 2007; 369:168-169)

- 5. Issue false and alarming warnings that dietary supplements may be unsafe and even go to the extent of asking patients to stop taking Vitamin E supplements when virtually all Americans are deficient in Vitamin E except those who take supplements. A letter sent to patients says: "The data to date suggest, but do not prove, that vitamin E may slightly increase the chance of getting prostate cancer, and that selenium may increase the chance of getting diabetes mellitus. We want to emphasize that these findings are not proven. We will learn more about the effects of the Study Supplements as we continue to monitor your health. Your safety is our priority. Stop taking your supplements." (See the entire letter here: http:// www.cancer.gov/SELECT-participant-letter) This is also an example of researchers stopping a study for no good reason to produce a false conclusion.
- 6. Employ large studies that show little or no difference in hard numbers between an inactive placebo and a nutrient, but by publishing the relative difference between these two numbers, make it falsely appear large percentages of people are at risk for disease.

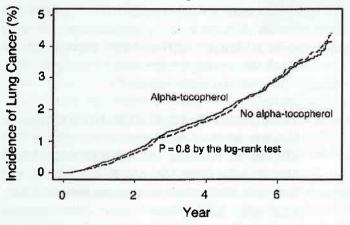
For example, a nutrient that results in heart attacks among one-percent of 10,000 subjects, but compared to placebo at 0.8% risk, the relative difference of 20% is reported. This makes it sound like 2 out of 10 people would be harmed by taking a vitamin pill when, in fact, there was no significant effect. This was done in the now-legendary beta carotene/lung cancer study.

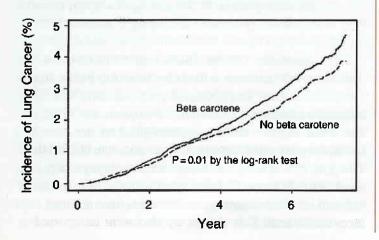
Just prior to passage of the 1994 Dietary Supplement Health and Education Act (DSHEA), a report claiming that beta-carotene supplements increased the risk for lung cancer among smokers was widely disseminated and has been repeatedly cited by critics of dietary supplementation. The study involved a total of 29,133 male smokers 50 to 69 years of age from southwestern Finland. The timing of the release of this study was an obvious attempt to dissuade Congressional representatives from passage of DSHEA. The news media collaborated by never critically examining the data or obtaining contrary opinion. (The fact that fewer cases of prostate cancer were diagnosed among those who received Vitamin E in this study also went unreported or

was buried in the news reports.) (New England Journal Medicine, 1994 Apr 14; 330(15):1029-35)

Below is a chart from the beta-carotene study, for your own analysis. The chart shows a comparison over 7 years of alpha tocopherol (Vitamin E- upper panel) and no vitamin supplementation, and beta carotene and no vitamin supplementation (lower panel). There is a slight gap between the no-beta carotene group and the beta-carotene treated group representing less than a 1% difference in risk for lung cancer. This is the so-called striking 18% difference that made worldwide headlines in 1994. In actual hard numbers, 474 of 14,560 male smokers taking supplemental beta carotene developed lung cancer (3.255%) vs 402 of 14,573 (2.758%) male smokers who did not supplement with beta carotene, for a whopping difference of one-half of 1% (0.497%)!

Every science writer for major news organizations is sent a copy of this study prior to its publication. They can read and interpret the data on their own as most are biology-trained journalists. The study was asking for a trivial amount of beta carotene, the amount provided in a couple of carrots, to overcome the deleterious effects of smoking. Notice, if they had stopped the study at 2.5 years there would have been no difference. Researchers can stop studies when the data fits their pre-conceived outcome.





6. Malign vitamin supplements based on test-tube science. This has been done time and again. The most legendary was the 2001 study published in *Science* magazine by a university-based cancer pharmacology center researcher, funded by a pharmaceutical company, who claimed more than 200 milligrams of Vitamin C could induce gene mutations that could cause cancer. Headlines screamed around the World that high-dose Vitamin C pills could cause cancer! (*Science*, 2001 Jun 15; 292(5524):2083-6)

But this writer wrote a rebuttal, showing that while this bogus claim that Vitamin C is potentially a carcinogen based upon a lab dish study, five human studies had already been conducted using oral doses of Vitamin C up to 10,000 mg without evidence of gene mutation.

Surprisingly, my rebuttal was published months later in *Science*, but there were no news reports issued to correct the public's thinking about this essential nutrient, a nutrient that animals safely produce in the thousands of milligrams daily. (*Science*, 2001 Sep 14; 293(5537):1993-5) A follow-up study conducted by researchers at the Memorial Sloan-Kettering Cancer cleared the air over high-dose Vitamin C causing cancer by induction of gene mutation. This report also did not receive attention by the news media. (*Journal Biological Chemistry*, 2002 May 10; 277(19):16895-9)

The most recent attack against Vitamin C comes from Memorial Sloan-Kettering Cancer Center in New York where researchers claim Vitamin C interferes with cancer drugs and should not be employed by cancer patients undergoing chemotherapy. (*Cancer Research*, Oct 1; 68 (19): 8031-38)

But the logic for this is beyond comprehension. Cancer chemotherapy drugs are indiscriminately toxic, harming healthy and cancerous cells. Cancer chemotherapy drugs are largely ineffective and may lead to the earlier demise of the patient. One study shows chemotherapy contributes to the 5-year survival of cancer patients no more than 2.3% of the time. (Clinical Oncology (Royal College Radiology), 2004; 16(8):549-60) The vast majority of cancer patients, particularly those undergoing chemotherapy, are abjectly Vitamin-C deficient. (British Journal Cancer, 1982 Sep: 46(3):354-67) How can it be said that an essential vitamin interferes with the performance of a toxic, ineffective drug? Vitamin C is attempting to spare the patient of the horrible toxic side effects produced by cancer chemotherapy. And how does Vitamin C interfere with a chemotherapy drug that inevitably the body develops resistance towards regardless of the presence of Vitamin C?

Why Resistance to Vitamin C?

Why should there be such opposition to supplemental Vitamin C?

- For starters, Vitamin C is required for stem cells to properly differentiate into heart, brain, muscle, cells. Cancer cells, or abnormal cells, originate from stem cells. (Medical Hypotheses, 2007; 68(6):1315-7)
- Researchers at Duke University have found the opposite of the Sloan-Kettering researchers. Vitamin C reverses cancer chemotherapy drug-resistance. (*Life Science*, 2003 Jul 11; 73(8):981-91)
- Vitamin C promotes release of iron and prevents anemia that commonly occurs among cancer patients. It is possible that Vitamin C could replace or reduce the need for antianemia drugs (\$10 billion in annual sales, the single largest drug expense in the Medicare program) used in cancer and kidney treatment. (Nephrology Dial Transplantation, 1998; 13 Supplement 2:23-7; Journal Chinese Medical Assoc., 2007 Sep; 70(9):357-60) This is important not solely because of economics, but because anti-anemia drugs actually increase mortality rates among cancer patients. (Nature Medicine, (1 December 2003) 9, 1439)
- Researchers recently found that Vitamin C works better at sending genetic signals to renew damaged blood vessels than physical exercise. (Free Radical Research, 2008 Aug; 42(8):754-62)
- Researchers in India demonstrate that Vitamin C inhibits the inflammation and oxidation of fats by activating genes in a way similar to anti-cholesterol statin drugs. (European Journal Clinical Nutrition, 2005 Aug; 59(8):978-81)
- Individuals with adequate Vitamin-C levels burn up (oxidize) 30% more fat during moderate exercise than individuals with low Vitamin-C levels. (*Journal American College Nutrition*, 2005 June; 24 (3) 158-65)

There you have it, a 10-cent vitamin pill threatens billion-dollar drugs used for the treatment of cancer, obesity, heart disease, and a host of other maladies. Do you wonder why there is such an effort to malign Vitamin C? And do you recall ever hearing about any of the above studies in the news media?

Who Needs to Supplement with Vitamin C?

In a U.S. study population, 3% were Vitamin C deficient and 13% had sub-normal blood concentrations.

In Britain, Vitamin-C deficiency was widespread in a low-income population – 25% of men and 16% of women were deficient. (*Journal Public Health*, 2008 Dec; 30(4):456-460) In a study of hospitalized patients in Canada, 19% were deficient and 60% had subnormal levels. (*Journal American College Nutrition*, 2008 June; 27(3):428-33) No wonder complication and infection rates are so high and wound healing prolonged among hospitalized patients. But no effort is made to pre-screen hospitalized patient upon admission for Vitamin-C levels. Remedying widespread Vitamin-C deficiency would mean less disease for doctors and pharmacists to treat.

The Recommended Daily Allowance for Vitamin C is only 60 milligrams. The typical American diet provides just 110 milligrams. The dietary reference intake suggests only 90 milligrams of Vitamin C for the oldest males, and no more than 200 milligrams for smokers (about 25 mg of Vitamin C is depleted per cigarette).

It is interesting to note that primates are in the same predicament as humans – they cannot synthesize Vitamin C internally as do most other animals. In laboratory experiments, it takes 250 milligrams of Vitamin C to cure scurvy and return blood levels to normal in a 22-lb monkey. This is about 10 milligrams per kilogram of body weight, or the equivalent of 700 milligrams of Vitamin C in a 160-lb human. (*Annals New York Academy Science*, 1975 Sep 30; 258:72-80) It is obvious that health authorities are leaving a significant portion of the population in a Vitamin-C deficient state that can only be remedied with dietary supplements, and ridiculing so-called "fanatics" who take too much Vitamin C.

7. Another scientific sleight of hand is not to measure baseline levels of nutrients or oxidation before subjects in research studies take antioxidants like Vitamin C or Vitamin E. It could be said that antioxidant vitamin supplementation is only marginally helpful based upon some research studies. But without knowing if subjects are deficient prior to the beginning of a study, research reports may come to the wrong conclusions.

For example, Gladys Block and colleagues at the University of California at Berkeley School of Public Health conclusively show that 1000 milligrams of daily Vitamin C reduces a measure of oxidation (F2-isoprostane) by 10.6%, but when subjects are prescreened prior to the start of a study, supplemental Vitamin C can reduce oxidative stress by up to 22% among individuals who had excessively high levels of oxidation (F2-isoprostane). Greater than 4 in 10 subjects in Gladys Block's study were obese and had high isoprostane levels.

A growing percentage of American adults are overweight or obese. These subjects would likely benefit more from Vitamin-C supplementation than healthy, leaner adults. (*Free Radical Biology Medicine*, 2008 August 15; 45(4):377-84) Because such a high percentage of Americans are obese, it would not be unwise to suggest Vitamin-C supplementation across the board for the entire adult population.

Gladys Block and colleagues urge that studies of antioxidants "emphasize the importance of baseline concentrations in studies of antioxidant treatment effects on oxidative stress biomarkers. Common sense indicates that values are only likely to decrease if they are not already low. Studies investigating the effect of antioxidant treatment should focus on groups that are susceptible to having a reduction in the baseline values ... the strong association between oxidative stress and obesity... raises the possibility that recommended dietary allowances for antioxidants may need to be adjusted to reflect increased demand for antioxidant capacity among overweight or obese persons."

8. Simply ignore a positive discovery involving dietary supplements. Initially the news media could not ignore a Nobel Prize-winning scientist who conducted experiments to show that intravenous Vitamin C prolongs the life of end-stage cancer patients. Linus Pauling and Ewan Cameron had trumped modern medicine's attempts to develop a cancer drug with a common vitamin. (*Proceedings National Academy Sciences USA*, 1976 Oct; 73(10):3685-9; *Proceedings National Academy Sciences USA*, 1978 Sep;75(9):4538-42)

But later Mayo Clinic researchers administered oral Vitamin C, which does not increase blood concentrations to levels that are toxic to cancer cells, and falsely claimed Vitamin C to be worthless therapy for cancer. (*New England Journal Medicine*, 1985; 312(3)137-41)

Years later, National Institutes of Health researchers misled Americans, falsely claiming Vitamin C is rapidly excreted and that blood concentrations could not rise significantly when taking oral doses exceeding ~200 milligrams and that megadose oral Vitamin C just produces expensive urine. (*Biofactors*, 2001; 15(2-4):71-4) However, a reexamination revealed that levels of Vitamin C that can kill cancer cells can be achieved through intravenous administration and researchers called for a re-evaluation of its use in 2004 (*Annals Internal Medicine*, 2004 Apr 6; 140(7):533-7), 28 years after Linus Pauling published his first paper on this topic.

This writer personally sent a press kit revealing all this to journalists at the New York Times, Washington Post,

USA Today, and other news outlets. With a history of ridiculing Vitamin C-pill users, the news media could not bring itself to report this changing science. The American public was left in the dark that Linus Pauling's work had been vindicated. The latest science involving Vitamin C and cancer is largely being ignored by the news press and the research community.

Resveratrol Pills: Drug or Supplement?

Another example of the way in which the medicalresearch community acts to ignore dietary supplements while extolling drugs can be found in resveratrol pills.

Resveratrol (rez-vair-ah-trawl) is widely known as a red-wine ingredient. Resveratrol has unusual status. It is offered both as a drug (Sirtris Pharmaceuticals SRT501) and an anti-aging dietary supplement (various brands).

The Wall Street-promoted drug sold for \$720 million to a major pharmaceutical company, but Sirtris' 10-K filing with the Securities & Exchange Commission conceded their resveratrol pill is nothing more than a resveratrol dietary supplement that had been emulsified, micronized, and stabilized.

The Sirtris drug was, and still is, widely promoted for its ability to mimic the biological action of a calorie-restricted diet as measured by activation of the Sirtuin1 gene. The SRT501 pill was said to activate Sirtuin1 many-fold greater than plain resveratrol. But later it was discovered that Sirtuin1 gene activation is not a universal measure of the biological action of a calorie-restricted diet in all organs and tissues. Therefore, while resveratrol itself is still a remarkable molecule, its ability to alter the Sirtuin1 gene is not a valid measure of its effectiveness. (*Genes & Development*, 2008 July 1; 22(13):1753-7)

Given the nebulous line of distinction here between a drug and a dietary supplement, a question arises as to the monetary value of the same molecule when used as both a pharmaceutical and a nutriceutical (an extract of foods claimed to have a medicinal effect on human health).

As background information, aging and disease states involve many genes, what are called gene networks. This says the entire \$73 billion biotech drug industry is on the wrong track. Biotech firms have patented ~4000 single genes in plants and animals to allay disease. But singlegene targeted molecules would not address the need to alter a broader set of genes. For example, single-gene targeted cancer drugs like Iressa, Herceptin, and Erbitux are largely ineffective.

So, when a study of a patented nutriceutical matrix (Longevinex® - resveratrol + quercetin + IP6 rice bran) was given to laboratory mice and found to significantly alter 9 times more longevity genes (1711) than plain resveratrol (225) or a calorie-restricted diet (198), this was the first demonstration that a nutriceutical could address a broad number of genes. (*Experimental Gerontology*, 2008 Sep; 43(9):859-66) A nutriceutical like this would immediately antiquate all of the biotech drug patents. But the research community, the news press, and the financial industry have largely ignored this discovery.

The same molecule, resveratrol, makes worldwide headlines on its promise to prolong human life as well as its unprecedented sale to a major pharmaceutical company for nearly ¾ of a billion dollars within two years of its development, but a resveratrol-based nutriceutical that alters far more genes goes ignored so far. Dietary supplements or nutriceuticals certainly have low status compared to prescription drugs, even if the science surrounding the nutriceutical is more promising than a comparable drug.

Collusion and Delusion

In January 2007, author Dan Hurley, author of the book Natural Causes: Death, Lies and Politics in America's Vitamin and Herbal Supplement Industry (Broadway Books), wrote an essay in the New York Times. Hurley called for dietary supplements to undergo rigorous human clinical trials like drugs. However, properly administered FDA-approved drugs dispensed in hospitals cause over 100,000 needless deaths per year. (Journal American Medical Assn, 1998; 279:1200-1205)

Hurley wrote his essay almost ten years after the above report showed drugs cause over 100,000 needless deaths. He overstated the potential risks posed by dietary supplements. Hurley made the statistics look large, citing data accumulated over 23 years. During that time span, according to Hurley, there were 1.6 million reports of adverse reactions to dietary supplements. From 1983 to 2004, Hurley also claimed, there were 230 supplement-related deaths (23 deaths a year). However, for comparison, an FDA-approved drug, Vioxx, caused the death of some 20,000 Americans before it was recalled. An FDA-approved drug killed far more people in one year than 20 years of dietary supplement use.

Despite the falsehoods in his book, Hurley himself was widely interviewed by TV and radio news reporters over the alleged threat to public health posed by vitamin pills.

But, later, the New York Times was confronted by the American Association of Poison Control Centers, which

said the adverse-reaction data quoted by Hurley in his essay actually consisted of "exposures," not adverse reactions. Only about 10 percent of "exposures" result in ''moderate to major'' medical outcomes.

For example, the true statistics for all dietary supplements in 2005 was: 125,595 exposures, but only 5,334 adverse reactions, 17,843 health care visits, 12,314 medical outcomes. Raw data on adverse events and deaths associated with dietary supplements do not confer a cause-and-effect. In some instances, these products may have been mistakenly consumed in excess or intentionally overdosed; or in consuming supplements along with drugs, the adverse-event reaction was falsely assigned to the supplements by drug-biased doctors. Obviously manufacturers cannot be held responsible for this kind of misuse.

Most advocates of dietary supplements never heard that a major antagonist of vitamin pills wrote a whole book that slammed vitamin pills, but the book massively over-stated adverse events associated with dietary supplements. The electronic news media did not interview a spokesperson from the American Association of Poison Control Centers to set the record straight. The public was left with the false impression that dietary supplements are relatively unsafe.

It is clear to see there is collusion, advertent or inadvertent, among researchers, medical-journal editors, public-health officials, and the news media in spreading these falsehoods about dietary supplements. The news media is financially captured by pharmaceutical companies, who are their biggest advertising clients. Pharmaceutical companies are going to yank their advertising dollars from news media outlets if they begin to critically examine the many pseudo-scientific studies now being published concerning vitamin pills.

While none of these strategies to spread falsehoods about dietary supplements are necessarily new, there appears to be a ratcheting up of efforts to malign vitamin pills. The public is hearing propaganda of the worst kind and paying for it with their lives.

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Just because you do not take an interest in politics does not mean that politics will not take an interest in you. —Pericles (c. 495 - 429 BC)