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As We
SEE IT**Should the President Declare a National Emergency?**

By William Faloon

On December 7, 1941, the Japanese bombed Pearl Harbor. In response to this attack, President Roosevelt declared an emergency and committed every national resource to supporting the war effort.

Another significant event occurred in 1941, but no government response was generated. The result of this oversight is that at least twelve times more Americans have died than all the US soldiers killed in World War II.

This historic 1941 discovery has been confirmed by recent human studies. It would thus seem appropriate for today's President to hold a news conference announcing a simple step that every American should take to drastically cut their risk of dying from age-related diseases.

When adding up the lives that could be spared, the numbers are staggering. For cancer alone, 275,000 American lives could be saved each year if a nationwide program was implemented.

When one considers how much money the government spends to protect against real and imaginary events, the cost of implementing this program would be trivial.



William Faloon

WHERE YOU LIVE AFFECTS YOUR CANCER RISK

In 1941, the first scientific study was published showing that greater sunlight exposure resulted in lower cancer mortality.¹ People living in northern

latitudes were shown to contract more cancers than those in southern latitudes, where there is greater year-round sun exposure.

Researchers subsequently identified vitamin D as the cancer-protective factor generated from sunlight.²⁻⁶ Published scientific studies have shown cancer risk reductions of 50% and more based on higher vitamin D status.⁷⁻¹³

In all, we have identified 89 studies that describe how greater vitamin D levels reduce cancers of the breast, prostate, colon, esophagus, pancreas, ovary, rectum, bladder, kidney, lung and uterus, as well as non-Hodgkin's lymphoma and multiple myeloma.⁷⁻⁹⁶

What has been lacking up until now, however, has been a double-blind, placebo-controlled study (with strong adherence levels) that specifically measured the effects of higher-dose vitamin D (with calcium) on cancer incidence.

AMERICAN JOURNAL OF CLINICAL NUTRITION PUBLISHES BREAKTHROUGH STUDY

In a report published this year, the effect of administering 1,000 IU/day of vitamin D (with calcium) was evaluated in 1,180 postmenopausal women living in the Midwest.⁹⁷

Unlike some recent flawed studies, the researchers took extraordinary steps to ensure that study participants were really taking their supplements and that all other variables were tightly controlled. After only four years, the risk of contracting any cancer was 60% lower in the vitamin D (and calcium) group compared with the placebo arm of the study.

The scientists then performed an even more detailed analysis of the data. By excluding cancers diagnosed in the first year of the



study, which would have included cancers present when participants began taking vitamin D, they found an astounding 77% reduction in cancer incidence in the group receiving vitamin D compared with placebo.⁹⁷ (Interestingly, in a third arm of this study in which the participants received calcium but no vitamin D, the cancer risk reductions were not as significant.)

What this means is that if all Americans began taking just 1,000 IU of vitamin D each day (with calcium), as many as three-quarters of all cancers could be prevented in just four years. The significance of this is such that a national emergency should be called to urge or mandate that all Americans over age 30 take at least 1,000 IU of vitamin D each day. There may not be a better example of what the federal government could do to save American lives than ensuring optimal vitamin D status in all citizens.

New findings show that children could also greatly benefit by supplementing with higher doses of vitamin D.⁹⁸⁻¹¹¹

HOW VITAMIN D PREVENTS CANCER

Cancer has been defined as the “accumulation of mutations in genes that regulate cellular proliferation.” Once genes that regulate cell division mutate, normal cells can turn into cancer cells.

Vitamin D has an effect on at least 200 human genes.⁹⁸ Many of these genes are responsible for regulating cell proliferation, differentiation, and apoptosis. In the next column are simple definitions of these cellular processes:

Proliferation: Uncontrolled cell division (cancer cells are characterized by rapid and uncontrolled division).

Differentiation: Process that cells undergo to mature into normal cells (uncontrolled reproduction of immature [undifferentiated] cells is a defining feature of cancer).

Apoptosis: Natural termination of defective cells (cancer cells are resistant to natural destruction, making them difficult to eradicate).

With less than optimal vitamin D status, the genes that regulate the three critical regulatory processes above become defective. These regulatory genes can therefore no longer maintain healthy cellular function (including programmed termination). The result is a sharp increase in cancer risks, as the DNA regulatory genes lack the vitamin D needed to maintain the normal proliferation, differentiation, and apoptosis of our cells.

In addition, vitamin D has been shown to help prevent angiogenesis (new blood vessel growth into tumors) and metastasis (spread of cancer).^{11,51} It is for all these reasons that Life Extension recommended ten years ago that cancer patients take the highest tolerable dose of vitamin D.

VITAMIN D PREVENTS NUMEROUS OTHER DISEASES

If vitamin D only reduced cancer risk, then it would be well worth supplementing with 1,000 IU/day and higher (depending on your level as determined by a blood test).

An abundance of recent studies, however, has uncovered a myriad of other diseases that vitamin D helps prevent.¹¹³⁻¹⁴⁶ One interesting report showed that elderly people with higher vitamin D levels suffered far fewer falls and were less frail.¹⁴⁷ This finding alone points to potentially huge reductions in nursing home confinements, along with less suffering and mortality, if every American adult took 1,000 IU/day of vitamin D.

Last year, Life Extension reported that the reason more people develop infections in the winter is not because of cold weather.¹⁴⁸ Instead, the reduction in sunlight during winter causes a vitamin D deficiency that impairs immune function.¹⁴⁹⁻¹⁵⁹ When one considers that 60,000 Americans perish each year from pneumonia-influenza,¹⁶⁰ it becomes apparent that maintaining optimal vitamin D could sharply reduce these grim statistics. Not only is vitamin D required for proper immune function, but by preventing falls and bone fractures, fewer elderly people will succumb to pneumonia as a result of being confined to a hospital setting.

If you've ever wondered why so many hospitalized people deteriorate so fast, look no further than the lack of vitamin D that caused their initial problem and the subsequent diminished vitamin D status that occurs in the absence of sunlight in the hospital setting.



CANCER RISK REDUCTION IN RESPONSE TO HIGHER VITAMIN D STATUS

Cancer Primary Site	Risk Reduction with Increased Vitamin D Intake
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Chronic inflammation is an underlying factor in the development of numerous age-related diseases. Vitamin D has been shown to suppress pro-inflammatory cytokines and protect against conditions ranging from rheumatoid arthritis, chronic muscle pain, and metabolic syndrome to congestive heart failure and stroke.¹⁶¹⁻¹⁶⁹

Breast ⁹	50%
Colon ^{10,62}	50%
Prostate ^{4,11}	49%
Ovary ¹¹²	36%

Furthermore, those living in higher latitudes contract multiple sclerosis at far higher rates than those who obtain more sunshine throughout the year.¹³⁸ Scientists have identified specific vitamin D receptors in the white matter of the brain, which may die prematurely in early life if given inadequate vitamin D (resulting in multiple sclerosis).¹³⁹

So for a nutrient that was once thought to only protect against osteoporosis, vitamin D has emerged as a superstar, which may sharply reduce the risk of most age-related diseases.

When looking at all the different lethal diseases that vitamin D has been shown to prevent, hundreds of thousands of lives could be spared each year if every American supplemented with at least 1,000 IU of vitamin D each day. This is why this issue deserves “national emergency” status.



A HISTORICAL PRECEDENT FOR ISSUING A NATIONAL EMERGENCY

Polio was one of the most feared diseases in the first part of the 20th century. The polio virus often attacked children, sometimes leaving them walking on crutches, confined to iron lungs because of pulmonary paralysis, or dead!

Dr. Jonas Salk discovered the polio vaccine in 1952. Two years later, a clinical trial was conducted whose scope was unprecedented in medical history. The results were dramatic. Within two hours of announcing the successful clinical trials, the vaccine was licensed for use. Thanks to guarantees from what is now the March of Dimes, vaccine production facilities were already built and ready to operate. In 1955, the vaccine was distributed to children throughout America.

In 1952, there were 58,000 cases of polio in the United States—the most ever. By 1964, there were only 121 cases reported. The last case of acquired polio occurred in the United States in 1979.¹⁷⁰

HOW MUCH VITAMIN D DO YOU NEED?

Vitamin D status can be assessed by having one’s blood tested. Optimal levels are considered to be in the range of 30-50 ng/mL (75-125 nmol/L) of 25-hydroxyvitamin D in the blood.

A meticulous study in a group of men to determine how much orally supplemented vitamin D is required to increase vitamin D blood levels revealed the following data over an eight-week time period:¹⁷²

Daily dose of vitamin D Increases blood levels by:

1,000 IU	11.6 ng/mL
10,000 IU	58.5 ng/mL
50,000 IU	257.6 ng/mL

Based on the above findings, ideal daily intake of vitamin D ranges between 1,000 IU and 4,000 IU, depending on one’s baseline value. Those who receive less sun exposure would be expected to have lower baseline levels. (Note that vitamin D toxicity does not occur until blood levels of 150 ng/mL are reached, with doses of more than 50,000 IU vitamin D daily, so doses of up to 10,000 IU/day would appear to be safe for most people.)⁹⁸

An interesting finding from this study was the significant individual dose response variability. It turned out that body mass index (BMI) accounted for more than 90% of the dose response variance. What this means is that larger, heavier people need lots more vitamin D than smaller, thinner people in order to achieve optimal vitamin D status.

One strategy to consider is to achieve a serum vitamin D (25-hydroxyvitamin D) level of around 60 ng/mL, which is approximately the level of serum vitamin D achieved by young adults in the summer months.¹⁷³ A 154-pound (70 kg) subject with a baseline vitamin D of 20 ng/mL would thus require about 5,000 IU of vitamin D to increase their blood levels to the desired 60 ng/mL.

Many key players were involved in successfully eradicating the polio virus, including President Franklin D. Roosevelt, who was instrumental in establishing the National Foundation for Infantile Paralysis (known today as the March of Dimes).

There is a clear precedent for the federal government to treat today's epidemic deficiency of vitamin D as a health crisis emergency and take affirmative steps to ensure that every American achieves optimal vitamin D status, just as was done with the polio vaccine in 1955.

The reduction in human misery and number of lives saved if all Americans achieved adequate vitamin D status would exceed those saved by the polio vaccine.

SUN EXPOSURE DOES NOT GUARANTEE OPTIMAL VITAMIN D LEVELS

A new study reveals vitamin D levels can remain low in some people despite abundant exposure to sunlight.¹⁷¹

Researchers at the University of Wisconsin investigated the vitamin D status of people living in sun-drenched Hawaii. The participants in the study had a mean of 11.1 hours per week of total body skin exposure with no sunscreen used.

Despite this abundant sun exposure, 51% of these individuals were found to have low vitamin D levels. The research team concluded that it should not be assumed abundant sun exposure leads to adequate vitamin D status.

This finding corroborates previous research showing that as we age, our ability to use sunlight to convert vitamin D in the skin becomes significantly diminished, thus necessitating oral supplementation.



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BAILING OUT MEDICARE

If one adds up the diseases that vitamin D has been shown to prevent, it becomes clear that if all Americans supplemented with just 1,000 IU of vitamin D (plus calcium) each day, healthcare spending in the United States would plummet.

Medicare and some private insurance plans are facing insolvency based on projected healthcare costs that will affect the aging American population. Insolvency would turn into a surplus if vitamin D intake became mandatory.

One way of getting vitamin D into almost everyone's body would be to deny Medicare and other medical insurance disbursements to those whose vitamin D blood levels were severely deficient.

This may sound draconian to civil libertarians, but when one considers the dire economic consequences this country faces if healthcare costs are not brought down, mandating vitamin D supplementation would appear to benefit both the health of the citizenry and their pocketbooks.

I personally do not want to have to pay more Medicare taxes because some citizens are unwilling to swallow one tiny and inexpensive capsule each day that could dramatically cut their risk of contracting the most dreaded diseases of aging.

COMPELLING RESEARCH SUPPORTS INCREASED VITAMIN D INTAKE

A review article in the July 19, 2007 edition of the New England Journal of Medicine makes a compelling argument for Americans to supplement with more vitamin D.⁹⁸

The authors point out that between 40% and 100% of elderly people in the United States and Europe have insufficient or deficient levels of vitamin D. They also highlight disturbing findings that even children and young adults who supplement with 400 IU/day of vitamin D and consume vitamin D-containing foods often suffer from a vitamin D insufficiency.

When addressing critics who argue that studies using 400 IU of vitamin D do not show much benefit, the authors provide meticulous data showing that far higher doses of vitamin D are needed and that it is the amount of vitamin D in one's blood that determines disease risk reduction rather than how much is actually swallowed.

The authors have calculated the rates of various diseases affected by vitamin D status and have come up with the following startling numbers:

- 78% reduction in Type 1 diabetes in children taking 2,000 IU/day of vitamin D in the first year of life
- 200% increase in Type I diabetes in vitamin D-deficient children
- 33% reduction in Type II diabetes in those taking 800 IU/day of vitamin D plus calcium
- 72% reduction in number of falls in elderly people taking higher-dose vitamin D
- 30-50% more cancers in vitamin D-deficient people
- 42% reduction in multiple sclerosis in women taking more than 400 IU/day of vitamin D.⁹⁸

The New England Journal of Medicine authors then document increased incidences of autoimmune diseases, osteoarthritis, depression, hypertension, pulmonary disorders, schizophrenia, and cardiovascular diseases in those with less than optimal vitamin D status.

Furthermore, the authors of an editorial published in the American Journal of Clinical Nutrition have been sharply critical of the media and the government for failing to urge Americans to consume more vitamin D.¹⁷⁵ This editorial, titled "The urgent need to recommend an intake of vitamin D that is effective," goes on to state:

1. Human diets do not provide sufficient vitamin D.
2. Minimum vitamin D blood levels needed to reduce disease risk are 30 ng/mL.

The writers pose the question: "If a concentration of 75 nmol/L [30 ng/mL] is the goal to be achieved by consumption of vitamin D, then why is it so rare for members of the population to accomplish this?"

The American Journal of Clinical Nutrition editorial lashes out at the media for misleading the public about the amount of vitamin D they need to supplement with. As the authors point out, government-based recommendations of 200 IU/day for children, 400 IU/day for those aged 51-70 years, and 600 IU/day for those over 70 are horribly outdated. Yet fears of liability cause the media to continue regurgitating antiquated government vitamin D potencies that were long ago shown to be inadequate. The following quote is from the conclusion of this editorial:

"Because of convincing evidence of benefit and the strong evidence of safety, we urge those who have the ability to support public health—the media, vitamin manufacturers, and policy makers—to undertake new initiatives that will have a realistic chance of making a difference in terms of vitamin D nutrition."¹⁷⁵

EUROPEANS ARE EVEN WORSE OFF

If you think Americans have a problem, just imagine if the government forbade dietary supplements to contain in excess of 400 IU of vitamin D. In Europe, the upper limit potency is only 400 IU of vitamin D, making it difficult for people there to obtain adequate levels.

A German doctor authored a meticulous review showing significant reductions in cardiovascular disease and diabetes (in children and adults) in response to higher vitamin D status. As cardiovascular disease and diabetes account for up to 50% of all deaths in western countries, this doctor warned of significant health consequences if the pandemic of vitamin D deficiency was not corrected. The German doctor concluded his paper by stating:

"Given the high prevalence of insufficient and deficient vitamin D blood concentrations in the general population, an improvement in the population's vitamin D status must be a major effort for public health service in the future. For that reason, in many countries, legislation has to be changed in order to allow a vitamin D amount in over-the-counter supplements and vitamin D fortified food, which is sufficient to increase serum measurements of vitamin D into the adequate range."¹⁷⁴



MY LETTER TO PRESIDENT BUSH

On the next page is my letter to our President urging him to take immediate action to ensure that as many Americans as possible know to supplement with at least 1,000 IU of vitamin D3 each day.

As I point out, the federal government would save vast amounts on healthcare and disability outlays if it would give lower-income Americans a free bottle containing 365 (1,000 IU) capsules of vitamin D3 each year.

I have acquired the knowledge that hundreds of thousands of American lives could be saved each year merely by taking a low-cost vitamin. Not taking affirmative action to eliminate this vitamin deficiency as a cause of disease would be morally reprehensible, ergo my plea to the President to use the resources at his disposal to eradicate today's epidemic of vitamin D deficiency disease.

For longer life,

A handwritten signature in black ink, appearing to read 'William Faloon'. The signature is fluid and cursive, with a large initial 'W'.

William Faloon

P.S. Please note that in the American Journal of Clinical Nutrition study, each capsule was manufactured to provide 1,100 IU of vitamin D3 to make sure that each participant in the active group received at least 1,000 IU/day of vitamin D.

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As We SEE IT

Should the President Declare a National Emergency?

By William Faloon

President George Bush
The White House
1600 Pennsylvania Avenue NW
Washington, DC 20500

Dear President Bush:

In 2003, your office had the foresight to urge all Americans to increase their consumption of omega-3 fatty acids and decrease their intake of trans fats.

In the ensuing years, several hundred scientific studies have further substantiated the health benefits associated with greater omega-3 consumption, and many food producers now state "no trans fats" on their label.

The human research into vitamin D has now reached a point where we can predictably state that several hundred thousand American lives each year could be saved if every citizen supplemented their diet with 1,000 IU of vitamin D each day.

Please review with your advisors the materials I have attached and consider implementing the following immediate strategy:

1. Access a healthcare agency discretionary fund of about \$3 million that would enable the government to purchase fifteen minutes of airtime on the four major television networks on a Sunday night at 8:00 p.m. Eastern Standard Time.
2. Use that 15 minutes of airtime to announce a decision by the White House to urge all Americans to supplement with 1,000 IU of vitamin D3 each day for the purposes of significantly reducing risks of cancer, osteoporosis, chronic inflammation, stroke, congestive heart failure, pneumonia, influenza, and a host of other common diseases.

Then work with your advisors in devising a strategy to mandate that anyone expecting to file a claim with Medicare, Medicaid, or any other government-funded healthcare agency must take at least 1,000 IU of vitamin D3 each day. A blood test can be used to ascertain whether a person is really supplementing with vitamin D3.

If some individuals cannot afford this very low-cost supplement (less than \$19 a year), it would be in the federal government's economic interest to give low-income Americans a free bottle each year containing 365 (1,000 IU) capsules of vitamin D3.

Based on our analysis of the reductions in disease incidence that would result from universal supplementation with 1,000 IU/day of vitamin D, Medicare alone would save billions of dollars in outlays each year. The cost to the federal government to give away free vitamin D3 each year to those who request it would be trivial.

In consideration for you implementing something along the lines I have suggested in this letter, the Life Extension Foundation would provide to the federal government at no cost, 50,000 bottles of vitamin D3 (365 capsules, 1,000 IU/capsule) to give away to Americans who are unable to afford it.

There is significant legal precedent for the federal government taking affirmative action when the preponderance of scientific evidence shows that correcting a widespread deficiency of a nutrient (such as adding iodine to salt and folic acid to cereals) would lead to significant reductions in human suffering and death.

In the case of vitamin D, it may not be appropriate to mandate that it be added to a food group, as that could result in people getting too little (or too much) of this nutrient.

Our organization's scientific team will be at your disposal for assisting in the eradication of the epidemic of degenerative disease that can now be definitively traced to a vitamin D deficiency.

For longer life,



William Faloon, Co-Founder
Life Extension Foundation

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