

# The Gift of Vitamin C

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## Introduction

The British government sponsored Foods Standards Agency warns that vitamin and mineral supplement users should confine vitamin C intake to no more than 1,000 mg daily in order to assure a “safe upper level” and to avoid symptoms such as intestinal gas and diarrhea. The implication of this “upper limit for safety” warning is that we could damage or poison ourselves with anything above the stated “safe” dose. Nothing could be further from the truth!

Their recommendations are arrived at by eliminating any dosage at which anyone ever reported, including anecdotally, any problematic symptoms while they were taking a vitamin or mineral. This is like saying, if a person dies of a heart attack while wearing shoes, the heart attack was caused by the shoes!

I'm tired of being warned about the so-called dangers of vitamins, while pharmaceutical manufacturers and advertisers continue to encourage us to take medications to treat everything from bad moods, to acid indigestion, to sexual difficulties, despite long lists of serious possible side effects from these same drugs. Have you ever wondered why there is no government-sponsored agency issuing warnings regarding our heavy cultural reliance on pharmaceuticals with their serious and well documented side effects? Why aren't government sponsored groups studying the reasons our population suffers from so many conditions requiring pharmaceuticals? What credibility is there in the “Say No to Drugs” campaign when everyone knows it's really “say yes to drugs as long as they're produced by pharmaceutical companies?”

We are asked to be fearful of how we might harm ourselves with vitamin C, when the reality is that vitamin C is ex-

tremely safe, as attested to by extensive research<sup>1-4</sup> much of which was documented by Hoffman LaRoche researchers Adrienne Bendich and Lawrence Machlin and by voluminous documented LD-50 safety data testing. Furthermore, the safety is attested to by the experience of a large group of Orthomolecular health practitioners utilizing massive doses with each of their thousands` of patients. Safety Information Data Sheets conclude that vitamin C is very safe even in enormous doses in animal experiments and that it is not mutagenic, or teratogenic. (Toxic Substance Division Department of the Environment, Roche Products Ltd)

The truth is vitamin C has the potential to vastly improve all kinds of chronic health problems and could actually save your life or the life of someone you love. Access to this miraculous substance must not be limited by false and misleading information. Special interests subtly manipulate people to create irrational fears about nutritional supplements. These same special interests have been lulling the public into becoming irrationally comfortable taking drug after drug to suppress the symptoms of all sorts of health problems.

I'd like humbly to add my voice in support of the many vitamin C pioneers who collectively have already proven both its safety and its efficacy in a wide range of conditions and circumstances. During my 16 years of private practice as an orthomolecular nurse-nutritionist, 3,000 mg of vitamin C daily was the starting recommendation for my thousands of patients and for my 3-year-old son. In all those thousands of people, I'm unaware of any noteworthy negative reactions.

I think the medical under-use and promotion of fear of vitamin C ranks along with the under-use and fear tactics previously directed at folic acid. For years we were warned not to use high doses of folic

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acid despite growing evidence that neural tube defects might result from insufficient folate intake. How sad for the thousands of children born with spina bifida which resulted from fear of recommending a few pennies per day of non-toxic folic acid. How hollow is the phrase, "above all, do no harm" when the harm is seen in those occupying thousands of wheel chairs around the country. Are we destined to keep repeating mistakes?

I'd like to share my professional and personal experience with vitamin C, including the use of large doses both orally and intravenously, as well as looking at some history regarding the clinical use of high dose vitamin C.

### Personal Experience

In January, 2003, I developed a sinus and upper respiratory infection that wouldn't clear up despite four rounds of different antibiotics to which I was developing reactions such as progressively worsening headaches. I'd been prone to such infections, having had bronchitis one to three times per year for many years. However, I was becoming increasingly resistant to antibiotics and was fearful that I was running out of effective treatment for these recurring infections.

Around the same time, I learned of a young girl who had apparently developed viral encephalitis that turned her into a vegetative cripple after her acute febrile symptoms resolved. My illness and that little girl's deterioration reminded me of the work of one of the now deceased vitamin C pioneer, Dr. Fred Klenner, a Duke University graduate and practicing physician from Reidsville, North Carolina. Klenner was the first physician to use massive doses of vitamin C to cure many serious and life threatening conditions including viral encephalitis, polio, meningitis, and poisonings.<sup>5-8</sup>

After rereading Klenner's and McCormick's<sup>9</sup> published work, followed by some of Robert Cathcart's papers,<sup>10-12</sup> particularly his papers on titrating vitamin C

to bowel tolerance,<sup>10,11</sup> I was reinforced to utilize "bowel tolerance" doses of vitamin C in the hopes of clearing my current respiratory problems.

Years earlier after my first exposure to the writings of Klenner, Stone, McCormick, Cathcart, Pauling, et al., I recovered from influenza, from which I was very sick, within about a day and half during which time I consumed (by mouth) 120,000 mg or 120 g of Vitamin C per 24-hour period.

I had no problem from that dose except that when my flu symptoms disappeared faster than my tapering of the vitamin C dosage, I experienced gas and diarrhea, a small price to pay for getting rid of the flu. The gas and diarrhea is transitory and is the basis for the papers by Cathcart: "The Method of Determining Proper Doses of Vitamin C for the Treatment of Diseased by Titrating to Bowel Tolerance"<sup>10</sup> and "Vitamin C, Titrating to Bowel Tolerance, Anascorbemia, and Acute Induced Scurvy."<sup>11</sup> The gas and diarrhea produced by oral vitamin C are not toxicity symptoms, and do not occur when vitamin C is given parenterally. Intravenous doses as high as 700 mg/kg/24 hours have been administered with no problems and great benefit.<sup>7,8</sup>

Cathcart writes that he has "safely prescribed doses of ascorbic acid up to 200 or more grams per 24 hours to over 20,000 patients during a 23 year period" in his practice.<sup>12</sup>

### Evidence of Safety and Efficacy

Klenner stated, "Ascorbic acid is the safest and the most valuable substance available to the physician. Many headaches and many heartaches will be avoided with its proper use."<sup>5</sup> I'd like to echo Klenner and add that it is also one of the least expensive substances.

Commenting on the safety of vitamin C and particularly the sodium ascorbate form that he used intravenously Klenner: "I've used over 200,000 ampules, 50,000 vials and millions of 500 mg tablets of vitamin C and

the only complication I've ever seen is diarrhea and gas."

"I remember a patient with a malignancy taking 10,000 grams of sodium ascorbate over six months [or 57,000 mg daily] and his blood sodium was low at one point."

These are direct quotes taken from my audiocassette tape of Klenner at a talk that he gave at the 20th Annual Symposium of the International College of Applied Nutrition (ICAN) in Los Angeles.

So what exactly did Klenner do with all those ampules, vials, and pills?

Using megadose vitamin C he treated viral encephalitis (remember the young girl) comparing his results with other published work: "Their results [without vitamin C]: Some recovered, some died and still others lived as 'vegetative mental cripples. All of our patients recovered."

"In the poliomyelitis epidemic in North Carolina in 1948, sixty (60) cases of this disease came under our care." The treatment employed was vitamin C in massive doses. It was given like any other antibiotic every two to four hours. The initial dose was 1,000 to 2,000 mg, depending on age. Children up to four years received the injections intramuscularly." "All patients were clinically well after 72 hours."

"One single injection of ascorbic acid calculated at 500 mg/kg of body weight will reverse heat stroke."

"Observations made on over 300 consecutive obstetrical cases using supplemental ascorbic acid, by mouth, convinced me that failure to use this agent in sufficient amounts in pregnancy borders on malpractice. The lowest amount of Ascorbic acid used was 4 grams and the highest amount 15 grams each day".

Klenner continues: "Labor was shorter and less painful. There were no postpartum hemorrhages. No patient required catheterization. No toxic manifestations were demonstrated in this series. There was no cardiac stress even though 22 patients of the series had rheumatic hearts. Leg

cramps were less than three percent".

"Infants born under massive ascorbic acid therapy were all robust. Not a single case required resuscitation. We experienced no feeding problems."

Klenner also remarked that he recommends 1,000 mg of vitamin C for every year of age up to 10,000 mg. He added, "10 grams is the lowest amount adults should take for normal use."

In 1949 Klenner wrote that the single most important determinant of positive results from vitamin C is the size of the dose and the frequency of its administration.

Cathcart has clearly echoed this statement in his extensive work with massive dose vitamin C. Klenner says that out of thousands of virus colds treated, vitamin C always works if you go high enough.

Pauling on colds: "My recommendation is not 1 gram a day, or 2 grams a day of vitamin C but at the first sign of a cold, take a gram of vitamin C or 2 grams and then an hour later, if the symptoms still exist - if you're still sneezing, or your nose is running or feel shiver, take another 1 or 2 grams of vitamin C. Keep doing that until you forget because the symptoms have gone away and this will stop a cold in almost every person who follows the regimen."<sup>13</sup>

Pauling's comment on vitamin toxicity: "...conventional medical practice relies heavily on drugs, all of which essentially are toxic substances. It's hard for me to think of an example of a drug that is like the vitamins in having nearly zero toxicity" (aspirin's LD-50 is quite low and contrast this with vitamin C in which the LD-50 is virtually unattainable since it is so high)

"What they did not do was to ask this question: here is a substance which has no known toxicity... Is there a possibility that very large doses of vitamin C and the B vitamins and vitamin A, beta carotene and vitamin E, would have much additional value in improving the health of the people?"

"I looked in the medical and nutritional literature to find out how much vi-

tamin C a person should take in order to be in the best health, perhaps to control diseases other than scurvy. I couldn't find anything". For 25 years Pauling looked for the answer to "how much of these very powerful and important substances should we take to be in the best of health?"

I believe Cathcart has supplied the answer to the optimal oral dose of vitamin C: the bowel tolerance level. He noted that "the sicker a patient was, the more ascorbic acid he would tolerate by mouth before diarrhea was produced. At least 80% of adult patients will tolerate 10-15 g of ascorbic acid fine crystals in one half cup of water in four divided doses per 24 hours without having diarrhea."<sup>10</sup>

For my respiratory infection in January, 2003 I began my self-treatment by gradually increasing my dosage of Vitamin C from my usual 1,000-3,000 mg per day up to 3,000-4,000 mg per dose, initially taking it about four times daily (around 16,000 mg per day). This failed to produce diarrhea so I began to increase both the dosage and the frequency, finally getting up to between 60,000 and 120,000 mg per day or approximately 7,500 to 15,000 mg eight times daily (every three hours around the clock). These numbers are not typographical errors. I am talking about 60 to 120 g taken by mouth daily. I noticed that as soon as I reached the diarrhea point, my respiratory symptoms seemed to be gone and so too were my fibromyalgia symptoms that I'd had for a couple of years and for which I had often taken various anti-inflammatory drugs. I also noticed that my gradually increasing need for sleep was drastically reduced, while my energy level increased.

Some individuals, unfamiliar with such dosages, will be frightened by these numbers fearing death or bodily harm. Others may become overwhelmed imagining the insanity of swallowing of 120 pills of 1,000 mg per day. The mechanical problems are easily overcome by the use of vitamin C in powdered form. Pure ascorbic acid powder

provides 5,000 mg per teaspoon while a non-acidic form of vitamin C, sodium ascorbate, provides 4,448 mg of vitamin C per teaspoon. Other forms of C powder are rendered non-acidic by buffering with calcium, magnesium, zinc, and potassium. Typically, the latter provide about 2,600 mg of vitamin C, 350 mg of calcium, 350 mg of magnesium, 100 mg of potassium, and 6 mg of zinc per teaspoon. Fifteen hundred (1,500) mg tablets are available and convenient for certain times.

For individuals who wish to utilize high dose vitamin C therapy, I recommend having all of the above on hand, as this makes the achievement of sufficiently high intake both easy and palatable. For example, sodium ascorbate is very palatable in low sodium V-8 juice, tomato juice and in milk or soy drinks or shakes. The ascorbic acid form works very well in all kinds of fruit juice (apple, orange, grapefruit, grape, pineapple), as well as tomato or V-8. When you're trying to use very high doses your palate may get very tired of the same flavors. Some individuals may find they have difficulty with one form or another as a result of the acidity of ascorbic acid or the "saltiness" of the sodium ascorbate. (Note that Klenner states that the sodium ion does not act the same as in sodium chloride, in that it does not raise the blood pressure, nor does it raise blood sodium levels).

I don't recommend taking more than 2 or 3 teaspoons of calcium/magnesium buffered vitamin C per day as more will bring in too much of these minerals, but taking some in this form is of benefit. For the same reason, Klenner advised not to use calcium ascorbate in infusions as the patient would be getting too many calcium ions, although he added one gram of calcium gluconate to 50 gram ascorbate infusions in 500 cc of normal saline or dextrose in water decanted to accommodate the vitamin C. Klenner stated this mixture could then be infused in one hour at 120

drops per minute. The vitamin C chelates calcium ions that could result in tetany if rapidly infused without calcium.

Another convenient idea for the oral dosing is to put enough of the vitamin C for multiple doses in a container of water, milk or juice, so you can drink one dose each hour or two. Every 5 to 6 oz of liquid can take two teaspoons of vitamin C (10,000 mg); 20-24 oz could contain 40,000 mg (8 teaspoons of ascorbic acid powder). This way you can drink a little hourly. The sicker you are, or the more serious your health problem, the more frequently you should take your doses.

Be sure to write down how much vitamin C was put in whatever volume of water, juice, or milk in order to keep track of the dosage and the response so you can adjust it according to the reduction of symptoms and for the minimizing of diarrhea. If your symptoms haven't reduced in intensity and you haven't been getting diarrhea, you're not taking the optimal amount for your body at that moment. Be sure to consume plenty of liquid by also drinking water in addition to vitamin C drink.

When you consume your optimal dose, you will notice a marked improvement in your symptoms. After awhile, I realized that if I took a dose of vitamin C and didn't notice a sharp reduction of symptoms, it meant I'd under-dosed. I've subsequently discovered vitamin C can be used to reduce or eliminate many different kinds of symptoms when you get the dose up high enough and keep it just below the diarrhea point.

In addition to my current respiratory illness I had been suffering for the previous two years with what was ultimately diagnosed as fibromyalgia. I had experimented with every and any nutrient that I thought might impact upon this with little result. Much to my chagrin, I wound up taking Vioxx on a somewhat regular basis. When using the massive doses of vitamin C for the respiratory problem, I note that there had been a marked reduction of my

fibromyalgia symptoms, virtually eliminating the need for Vioxx. The vitamin C did not cure the fibromyalgia. In order to sustain the benefit, I must remain on very high dose vitamin C. Since I've also noticed a great improvement in my energy, and a sharp reduction in my previously increasing need for sleep, I'm happy to continue with very high dose vitamin C for this mysterious syndrome.

As a result of feeling so improved from an opti-dose, I sometimes forget to keep up the frequency and then the symptoms return as my reminder. I've also found that there was a somewhat narrow window in which vitamin C could be used in this way to treat infections. If the dose was too low: no results, if the dose was too high: diarrhea. Like in the story of the Three Bears, it had to be "just right."

To fully recover, I had to remain on a minimum of 60,000 mg daily for about two months before I was able to gradually taper down the doses without getting a re-occurrence of bronchitis and sinusitis symptoms.

The key to success for me in treating my infection seemed to be keeping the dose of the vitamin high enough while my body gradually healed itself. Stopping the vitamin suddenly at the first sign of improvement simply didn't work. I found it is necessary to remain at the same dose that improved or eliminated symptoms until that new lower dose causes diarrhea. I could then drop the dose successfully and remain at the new level at which symptoms were controlled without diarrhea.

Cathcart refers to this as "the burn" or the rate at which the body is using vitamin C. Generally, the greater "the burn," the sicker the person, although some individuals may exhibit what appears to be vitamin C intolerance at comparatively low intakes as a result of gastro-intestinal or metabolic problems and may try to gradually raise their bowel tolerance by using vitamin C at low but gradually increasing doses. This

method may eliminate their vitamin C intolerance as the vitamin gradually aids in the correction of their metabolic lesions. Some individuals may be more tolerant of one form of the vitamin than another, such as the non-acidic sodium ascorbate.

A few comments and precautions when first experimenting with high dose vitamin C:

1. Use pure pharmaceutical grade vitamin C without additives. There are many good products.

2. Start high dose vitamin C gradually to give your system time to adjust and see how you will react. In an unhealthy gut, very high doses of oral vitamin C taken suddenly may produce a large amount of gas and can occasionally result in severe gas pains. Lowering the dose and gradually raising it again should solve the problem. Be sure to consume plenty of fluids prior to, and during, the use of vitamin C to avoid dehydration.

3. I suggest that when the vitamin is used intravenously it's best not to add other nutrients with their preservatives to the IV until you've tried very high dose vitamin C by itself. Mild adverse symptoms like lightheadedness or nausea are sometimes reported when vitamin C is combined with mixtures of other nutrients that contain preservatives. According to Klenner and Cathcart, this does not occur with straight 100% sodium ascorbate preservative-free infusions.

4. Both oral and IV vitamin C offer extremely exciting potential in the treatment of cancer patients. Hugh Riordan's website offers a must read summary of his experience using IV ascorbic acid with cancer patients. He concludes that: "Tumor cells are more susceptible to the effects of high-dose, ascorbate-induced peroxidation products because of a relative catalase deficiency", and that "concentrations of ascorbate high enough to kill tumor cells likely can be achieved in humans."<sup>14</sup>

5. While Riordan acknowledges that side effects are rare, he notes that there are some precautions to be applied in treating

such patients. Contraindications include kidney failure, dialysis patients, and some forms of iron overload. There is a very rare genetic abnormality common to certain ethnic groups, red cell glucose-6-phosphate dehydrogenase (G6PD) deficiency that can result in hemolysis of red blood cells following high dose intravenous vitamin C. Riordan recommends testing for this abnormality prior to starting infusions with vitamin C. To my knowledge, none of the other massive dose IV vitamin C pioneers had ever reported this problem.

6. For further information on cancer and vitamin C, I refer the reader to Riordan's papers detailed on his website at [www.brightspot.org](http://www.brightspot.org) and Dr. Abram Hoffer's work at: [www.islandnet.com/~hoffer/](http://www.islandnet.com/~hoffer/) or [www.doctoryourself.com](http://www.doctoryourself.com). Riordan is probably the world expert in treatment of cancer patients with very high dose vitamin C.<sup>13</sup>

## Conclusion

Will vitamin C in very high doses kill you? No. MSDS (Material Safety Data Sheets) and thousands upon thousands of patients attest to this (I'm still here, writing this article).

Will it cause permanent diarrhea or toxic damage to the bowel? No. All bowel symptoms produced by vitamin C will disappear by lowering the dose or discontinuing it.

Will it cause kidney stones? No. It will raise oxalic acid levels in certain susceptible people but it does not precipitate into stone formation. Rats given 20,000 mg of vitamin C per kg, exhibited increased oxalate production but it had no effect on calcification. The rats were healthy and vigorous. Riordan also notes that two groups of researchers have demonstrated that giving vitamin B<sub>6</sub> and magnesium in sufficient quantity to oxalic acid stone formers will reduce oxalic acid excretion and generally prevent the formation of such stones in that subset of people.<sup>14</sup>

Will it cause blindness, deafness, and rotting of teeth? No, but government agencies spurred by special interests seem to be

trying to figure out how to make it so! Slander does not need high intelligence.

I have found the writings of these courageous vitamin C pioneers extremely exciting and very comforting. Hopefully, these words will encourage you to experiment with high-dose vitamin C for yourself, your family and your patients, and will fortify you to stand up to any further or future attacks upon this miraculous substance, vitamin C.

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13. From an interview with Linus Pauling excerpted from [www.DrLam.com](http://www.DrLam.com): “This [was] his last interview before death at the age of 93. Dr. Pauling attributed the last 18 years of his life to vitamin C supplementation. He is called the Father of Vitamin C.” 1995.
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