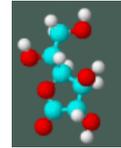


February 3, 2020



Home History Library Nutrients Resources Contact Contribute

[Back To Archive](#)

This article may be reprinted free of charge provided 1) that there is clear attribution to the Orthomolecular Medicine News Service, and 2) that both the OMNS free subscription link <http://orthomolecular.org/subscribe.html> and also the OMNS archive link <http://orthomolecular.org/resources/omns/index.shtml> are included.

FOR IMMEDIATE RELEASE

Orthomolecular Medicine News Service, Jan 30, 2020

Nutritional Treatment of Coronavirus

by Andrew W. Saul, Editor

(OMNS January 30, 2020) Abundant clinical evidence confirms vitamin C's powerful antiviral effect when used in sufficient quantity. Treating influenza with very large amounts of vitamin C is not a new idea at all. Frederick R. Klener, MD, and Robert F. Cathcart, MD, successfully used this approach for decades. Frequent oral dosing with vitamin C sufficient to reach a daily bowel tolerance limit will work for most persons. Intravenous vitamin C is indicated for the most serious cases.

Bowel tolerance levels of vitamin C, taken as divided doses all throughout the day, are a clinically proven antiviral without equal. Vitamin C can be used alone or right along with medicines if one so chooses.

"Some physicians would stand by and see their patients die rather than use ascorbic acid. Vitamin C should be given to the patient while the doctors ponder the diagnosis."
(Frederick R. Klener, MD, chest specialist)

Dr. Robert Cathcart advocated treating influenza with up to 150,000 milligrams of vitamin C daily, often intravenously. You and I can, to some extent, simulate a 24 hour IV of vitamin C by taking it by mouth very, very often. When I had pneumonia, it took 2,000 mg of vitamin C every six minutes, by the clock, to get me to saturation. My oral daily dose was over 100,000 mg. Fever, cough and other symptoms were reduced in hours; complete recovery took just a few days. That is performance at least as good as any pharmaceutical will give, and the vitamin is both safer and cheaper. Many physicians consider high doses of vitamin C to be so powerful an antiviral that it may be ranked as a functional immunization for a variety influenza strains. [1]

Dr. Cathcart writes:

"The sicker a person was, the more ascorbic acid they would tolerate orally without it causing diarrhea. In a person with an otherwise normal GI tract when they were well, would tolerate 5 to 15 grams of ascorbic acid orally in divided doses without diarrhea. With a mild cold 30 to 60 grams; with a bad cold, 100 grams; with a flu, 150 grams; and with mononucleosis, viral pneumonia, etc. 200 grams or more of ascorbic acid would be tolerated orally without diarrhea. The process of finding what dose will cause diarrhea and will eliminate the acute symptoms, I call titrating to bowel tolerance.

"The ascorbate effect is a threshold effect. Symptoms are usually neutralized when a dose of about 90% or more of bowel tolerance is reached with oral ascorbic acid. Intravenous sodium ascorbate is about 2½ times more powerful than ascorbic acid by mouth and since for all practical purposes huge doses of sodium ascorbate are non-toxic, whatever dose necessary to eliminate free radical driven symptoms should be given."

The coronavirus, in acute infections, may be expected to be just as susceptible to vitamin C as all of the other viruses against which it has been proven to be extremely effective. There has never been a documented situation in which sufficiently high dosing with vitamin C has been unable to neutralize or kill any virus against which it has been tested.

Even the common cold is a coronavirus. A "new" opportunistic virus is a not a big surprise. History is full of them.

Flu Pandemic of 1919-1920

About 10 million soldiers were killed in World War I (1914-1918), charging machine guns and getting mowed down month after month. There were nearly a million casualties at the Somme and another million at Verdun. A terrible slaughter went on for four years. Yet, in just the two years following the war, over 20 million people died from influenza. That is more than twice as many deaths from the flu in one-half the time it took the machine guns.

With a century's worth of accumulated scientific hindsight, we must today ask this: Was a lack of vaccinations really the cause of those flu deaths, or was it really wartime stress, and especially war-induced malnutrition, that set the stage in 1918? And now, once again, we have an alarming and rather similar scenario: between nutrient-poor processed convenience foods, McNothing meals and TV news scare stories, we have the basic ingredients for an epidemic.

Influenza is a serious disease, and historically, has been the Reaper's scythe. There is no way to make light of that. It warrants a closer look at how the medical profession and government have approached different types of influenza.

Swine Flu

In the mid-1970s, there was the colossal Swine Flu panic. Here is what the government of the United States said about the infamous Swine Flu vaccine, in a 1976 mass-distributed FDA Consumer Memo on the subject:

"Some minor side effects - tenderness in the arm, lowfever, tiredness - will occur in less than 4% of (vaccinated) adults. Serious reactions from flu vaccines are very rare."

Many will remember the very numerous and very serious side effects of Swine Flu vaccine that forced the federal immunization program to a halt. So much for blanket claims of safety.

As far as being essential, in the same memo the FDA said this of the same vaccine:

"Question: What can be done to prevent an epidemic? Answer: The only preventive action we can take is to develop a vaccine to immunize the public against the virus. This will prevent the virus from spreading."

This was seen to be totally false. The public immunization program for Swine Flu was abruptly halted and still there was no epidemic. If vaccination were the only defense, one might expect that tens of millions of Americans would have been struck down with the Swine Flu, for a large percentage of the population of the U.S. was not vaccinated.

"Vaccines are being used as an ideological weapon. What you see every year as the flu is caused by 200 or 300 different agents with a vaccine against two of them. That is simply nonsense." (Tom Jefferson, MD, epidemiologist) [2]

Bird Flu

Robert F. Cathcart, MD, writes: *"Treatment of the Bird Flu with massive doses of ascorbate would be the same as any other flu except that the severity of the disease indicates that it may take unusually massive doses of ascorbic acid orally or even intravenous sodium ascorbate. (Why the dose needed is somewhat proportional to the severity of the disease being treated is discussed in my paper published in 1981, Titrating to Bowel Tolerance, Anascorbemia, and Acute Induced Scurvy.) I have not seen any flu yet that was not cured or markedly ameliorated by massive doses of vitamin C but it is possible that the bird flu may require even higher doses such as 150 to 300 grams a day. Additionally, this flu could be primarily respiratory. This means that hospitalization might be necessary. If massive doses of ascorbate are not used, they may not be adequate. Most hospitals will not allow adequate doses of ascorbate to be given.*

"Initial oral doses of ascorbic acid should also be massive. I would suggest like 12 grams every 15 minutes until diarrhea is produced. Then, however, doses should be reduced but not much. Listen to your body. If there are many symptoms, keep taking doses that cause a little diarrhea. You do not want constant runs because it is the amount you absorb that is important, not the amount you put in your mouth." [1,3]

BBC - 9 April 2006: *"The chances of bird flu virus mutating into a form that spreads between humans are 'very low' the government's chief scientific adviser has said. Sir David King said any suggestion a global flu pandemic in humans was inevitable was 'totally misleading.'"* [4]

SARS

The coronavirus outbreak in China seems to be due to a virus similar to SARS (Severe Acute Respiratory Syndrome), which was also a coronavirus. You may remember SARS from 2002. I most certainly do, as I was in Toronto, Canada at the time, smack in the middle of it. I took a lot of vitamin C preventively and had zero symptoms. [5]

"The common cold is a coronavirus, and SARS is a coronavirus, so they are the same viral type." (David Jenkins, MD, Professor of Medicine and Nutritional Science, University of Toronto)

Waiting for a vaccine?

"We have set up a situation where a fear is created, and then we try to create the treatment for this fear. The public gets the idea that the flu is going to kill them and the vaccine will save them. Neither is true." (Marc Siegel, MD, author of *False Alarm: The Truth About the Epidemic of Fear*) [2]

Robert F. Cathcart: *"All this talk about a vaccine is too late; a waste of time now, especially when we know how to cure the disease already. Every flu I have seen so far (since 1970) has been cured or ameliorated by massive doses of ascorbate. All of these diseases kill by way of free radicals. These free radicals are easily eliminated by massive doses of ascorbate. This is a matter of chemistry, not medicine. The time has come to stop hiding our ability to treat these acute infectious diseases with massive doses of ascorbate."*

"Ideally, however, in serious cases this disease should be treated first with at least 180 grams or more of sodium ascorbate intravenously every 24 hours running constantly until the fever is broken and most of the symptoms are ameliorated. If after a few hours that rate of administration does not have an obvious ameliorating effect, the rate should be increased." [6]

What dosage?

Vitamin C fights all types of viruses. Although the dose should truly be high, even a low supplemental amount of vitamin C saves lives. This is very important for those with low incomes and few treatment options. For example, in one well-controlled, randomized study, just 200 mg/day vitamin C given to the elderly resulted in improvement in respiratory symptoms in the most severely ill, hospitalized patients. And there were 80% fewer deaths in the vitamin C group. [7]

But to best build up our immune systems, we need to employ large, orthomolecular doses of several vital nutrients. The physicians on the *Orthomolecular Medicine News Service* review board specifically recommend at least 3,000 milligrams (or more) of vitamin C daily, in divided doses. Vitamin C empowers the immune system and can directly denature many viruses. It can be taken as ascorbic acid (which is sour like vinegar), either in capsules or as crystals dissolved in water or juice. It can also be taken as sodium ascorbate, which is non-acidic. To be most effective, it should be taken to bowel tolerance. This means taking high doses several (or many) times each day. See the references below for more information.

Nebulized hydrogen peroxide

Thomas E. Levy, MD: *"Viral syndromes start or are strongly supported by ongoing viral replication in the naso- and oropharynx. When appropriate agents are nebulized (into a fine spray) and this viral presence is quickly eliminated, the rest of the body "mops up" quite nicely the rest of the viral presence. The worst viral infections are continually fed and sustained by the viral growth in the pharynx. Probably the best and most accessible agent to nebulize would be 3% hydrogen peroxide for 15 to 30 minutes several times daily."* [10]

An example of successful treatment by ascorbate:

"Chikungunya is a viral illness characterized by severe joint pains, which may persist for months to years. There is no effective treatment for this disease. We treated 56 patients with moderate to severe persistent pains with a single infusion of ascorbic acid ranging from 25-50 grams and hydrogen peroxide (3 cc of a 3% solution) from July to October 2014. Patients were asked about their pain using the Verbal Numerical Rating Scale-11 immediately before and after treatment. The mean Pain Score before and after treatment was 8 and 2 respectively (60%) ($p < 0.001$); and 5 patients (9%) had a Pain Score of 0. The use of intravenous ascorbic acid and hydrogen peroxide resulted in a statistically significant reduction of pain in patients with moderate to severe pain from the Chikungunya virus immediately after treatment." [11]

Available evidence indicates that supplementation with multiple micronutrients with immune-supporting roles may modulate immune function and reduce the risk of infection.

Micronutrients with the strongest evidence for immune support are vitamins C and D and zinc. [8,9]

Additional recommended nutrients

Magnesium: 400 mg daily (in citrate, malate, chelate, or chloride form). Many people are deficient in magnesium, because modern agriculture often does not supply adequate magnesium in the soil, and food processing removes magnesium. It is an extremely important nutrient that is essential for hundreds of biochemical pathways. A blood test for magnesium cannot correctly diagnose a deficiency. A long-term deficiency of magnesium can build up in the body that may take 6 months to a year of higher than normal doses to replete.

A very cheap and highly beneficial adjunct for any acute infection, especially viral, is oral magnesium chloride. Amazingly, just as intravenous vitamin C has been shown to cure polio, an oral magnesium chloride regimen has been shown to do the same thing, as or even more effectively than the vitamin C. [12-14]

Mix 25 grams $MgCl_2$ in a quart of water. Depending on body size (tiny infant to an adult), give 15 to 125 ml of this solution four times daily. If the taste is too salty/bitter, a favorite juice can be added.

Vitamin D3: 2,000 International Units daily. (Start with 5,000 IU/day for two weeks, then reduce to 2,000). Vitamin D is stored in the body for long periods but takes a long time to reach an effective level. If you are deficient (e.g. if you haven't taken vitamin D and it's near the end of winter when the sun is low in the sky) you can start by taking larger than normal doses for 2 weeks to build up the level quickly. The maintenance dose varies with body weight, 400-1000 IU/day for children and 2000-5000 IU/day for adults.

William Grant, PhD, says: *"Coronaviruses cause pneumonia as does influenza. A study of the case-fatality rate from the 1918-1919 influenza pandemic in the United States showed that most deaths were due to pneumonia. The SARS-coronavirus and the current China coronavirus were both most common in winter, when vitamin D status is lowest."* [15-19]

"I have found the value of bolstering immune function with Vitamin D to be incredibly powerful." (Dr. Jeffrey Allyn Ruterbusch)

Zinc

Zinc is a powerful antioxidant and is essential for many biochemical pathways. It has been shown to be effective in helping the body fight infections. [20,21] A recommended dose is 20-40 mg/day for adults.

Selenium: 100 mcg (micrograms) daily. Zinc is an essential nutrient and an important antioxidant that can help to fight infections. Dr. Damien Downing says: *"Swine flu, bird flu and SARS (another coronavirus) all developed in selenium-deficient areas of China; Ebola and HIV in Selenium-deficient areas of Sub-Saharan Africa. This is because the same oxidative stress that causes us inflammation forces viruses to mutate rapidly in order to survive. 'When Se-deficient virus-infected hosts were supplemented with dietary Se, viral mutation rates diminished and immunocompetence improved."* [22]

B-complex vitamins and vitamin A: A multivitamin tablet *with each meal* will supply these conveniently and economically.

Nutritional supplements are not just a good idea. For fighting viruses, they are absolutely essential.

References:

1. Orthomolecular Medicine News Service (2005) Vitamin C beats bird flu and other viruses, too. <http://orthomolecular.org/resources/omns/v01n12.shtml>.
 2. Gardner A (2005) Flu Vaccine Only Mildly Effective in Elderly. HealthDay News. <https://consumer.healthday.com/senior-citizen-information-31/misc-aging-news-10/flu-vaccine-only-mildly-effective-in-elderly-528105.html>.
 3. Cathcart RF. Avian (bird) flu. <https://vitaminfoundation.org/www.orthomed.com/bird.htm>.
 4. BBC News (2006) Risk of human flu outbreak 'low'. http://news.bbc.co.uk/2/hi/uk_news/4893366.stm.
 5. Saul AW. Respiratory infections: colds, influenza, and pneumonia. <http://www.doctoryourself.com/colds.html>.
 6. Saul AW. Notes on Orthomolecular (Megavitamin) Use of Vitamin C. http://www.doctoryourself.com/ortho_c.html
http://www.doctoryourself.com/klenner_table.html
<http://www.doctoryourself.com/klennerpaper.html>
- Additional free-access, full-text papers by Robert F. Cathcart, M.D.:
http://www.doctoryourself.com/biblio_cathcart.html
7. Hunt C, Chakravorty NK, Annan G, Habibzadeh N, Schorah CJ. (1994) The clinical effects of vitamin C supplementation in elderly hospitalized patients with acute respiratory infections. *Int J Vitamin Nutr Res.*64:212-219. <https://www.ncbi.nlm.nih.gov/pubmed/7814237>.
 8. Gombart AF, Pierre A, Maggini S. A Review of Micronutrients and the Immune System-Working in Harmony to Reduce the Risk of Infection. *Nutrients.* 2020 Jan 16;12(1). pii: E236. <https://www.mdpi.com/2072-6643/12/1/236>.
 9. Case HS (2017) *Orthomolecular Nutrition for Everyone: Megavitamins and Your Best Health Ever.* Basic Health Pubs. ISBN-13: 978-1681626581.
 10. Levy TE (2019) Reboot your gut. <http://orthomolecular.org/resources/omns/v15n16.shtml>
 11. Marcial-Vega V, Idxian Gonzalez-Terron G, Levy TE. (2015) Intravenous ascorbic acid and hydrogen peroxide in the management of patients with chikungunya. *Bol Asoc Med P R.* 107:20-24. <https://www.ncbi.nlm.nih.gov/pubmed/26035980>.
 12. Levy TE (2019) *Magnesium: Reversing Disease.* Medfox Pub. ISBN-13: 978-0998312408
 13. Dean C (2017) *Magnesium.* <http://www.orthomolecular.org/resources/omns/v13n22.shtml>.
 14. Dean C. (2017) *The Magnesium Miracle.* 2nd Ed., Ballantine Books. ISBN-13: 978-0399594441.
 15. Cannell JJ, Vieth R, Umhau JC, Holick MF, et al. (2006) Epidemic influenza and vitamin D. *Epidemiol Infect.* 134:1129-1140. <https://www.ncbi.nlm.nih.gov/pubmed/16959053>.
 16. Grant WB, Giovannucci E. (2009) The possible roles of solar ultraviolet-B radiation and vitamin D in reducing case-fatality rates from the 1918-1919 influenza pandemic in the United States. *Dermatoendocrinol.* 1:215-219. <https://www.ncbi.nlm.nih.gov/pubmed/20592793>.
 17. Martineau AR, Jolliffe DA, Hooper RL et al. (2017) Vitamin D supplementation to prevent acute respiratory tract infections: systematic review and meta-analysis of individual participant data. *BMJ.* 356:i6583. <https://www.ncbi.nlm.nih.gov/pubmed/28202713>.
 18. Yin Y, Wunderink RG. (2018) MERS, SARS and other coronaviruses as causes of pneumonia. *Respirology.* 2018 Feb;23(2):130-137. <https://www.ncbi.nlm.nih.gov/pubmed/29052924>.
 19. Zhu N, Zhang D, Wang W, et al., China Novel Coronavirus Investigating and Research Team. (2020) A Novel Coronavirus from Patients with Pneumonia in China, 2019. *N Engl J Med.* 2020 Jan 24. doi: 10.1056/NEJMoa2001017. [Epub ahead of print] <https://www.ncbi.nlm.nih.gov/pubmed/31978945>.

20. Fraker PJ, King LE, Laakko T, Vollmer TL. (2000) The dynamic link between the integrity of the immune system and zinc status. *J Nutr.* 130:1399S-1406S.

<https://www.ncbi.nlm.nih.gov/pubmed/10801951>.

21. Shankar AH, Prasad AS. (1998) Zinc and immune function: the biological basis of altered resistance to infection. *Am J Clin Nutr.* 68:447S-463S.

<https://www.ncbi.nlm.nih.gov/pubmed/9701160>.

22. Harthill M. (2011) Review: micronutrient selenium deficiency influences evolution of some viral infectious diseases. *Biol Trace Elem Res.* 143:1325-1336.

<https://www.ncbi.nlm.nih.gov/pubmed/21318622>.

Recommended reading:

Orthomolecular Medicine News Service (2008) On reducing the duration and severity of influenza.

<http://orthomolecular.org/resources/omns/v04n04.shtml>

Levy TE. (2020) Vaccinations, Vitamin C, Politics, and the Law

<http://orthomolecular.org/resources/omns/v16n04.shtml>

Levy TE. (2012) Vitamin C prevents vaccination side effects; increases effectiveness

<http://orthomolecular.org/resources/omns/v08n07.shtml>

Downing D. Flu (2012) Vaccine: No Good Evidence.

<http://orthomolecular.org/resources/omns/v08n02.shtml>

Downing D. (2009) Why This Doctor Questions Flu Vaccination.

<http://orthomolecular.org/resources/omns/v05n06.shtml>

Smith RG. (2009) Flu, Viruses, and Vitamin C Megadoses.

<http://orthomolecular.org/resources/omns/v05n07.shtml>

Orthomolecular Medicine News Service (2008) Flu Shots For The Elderly Are Ineffective.

<http://orthomolecular.org/resources/omns/v04n17.shtml>

Orthomolecular Medicine News Service (2008) Vitamins Reduce the Duration and Severity of

Influenza. <http://orthomolecular.org/resources/omns/v04n04.shtml>

Cathcart RF. (1981) Vitamin C, titrating to bowel tolerance, anascorbemia, and acute induced scurvy.

Med Hypotheses. 7:1359-76. <http://www.doctoryourself.com/titration.html>

Cathcart RF. (1993) The third face of vitamin C. *Journal of Orthomolecular Medicine*, 7:197-200. Free

access at http://www.doctoryourself.com/cathcart_thirdface.html

Other Dr. Cathcart papers posted at http://www.doctoryourself.com/biblio_cathcart.html.

Smith LH. (1988) (Ed) Clinical guide to the use of vitamin C. (Also published as: Vitamin C as a fundamental medicine: Abstracts of Dr. Frederick R. Klenner, M.D.'s published and unpublished work). F. R. Klenner, M.D., "reports cases of influenza, encephalitis, and measles easily cured with Vitamin C injections and oral doses."

http://www.seanet.com/~alexs/ascorbate/198x/smith-lh-clinical_guide_1988.htm

Orthomolecular Medicine News Service (2009) Vitamin C As An Antiviral: It's All About Dose

<http://orthomolecular.org/resources/omns/v05n09.shtml>

Jonsson BH. (2016) Vitamin C for Pneumonia? OMNS.

<http://orthomolecular.org/resources/omns/v12n18.shtml>

Dalton WL. (1962) Massive doses of vitamin C in the treatment of viral diseases. *J Indiana State*

Med Assoc 55:1151-1154. http://www.mv.helsinki.fi/home/hemila/CP/Dalton_1962_ch.pdf

Hemilä H, Louhiala P. (2013) Vitamin C for preventing and treating pneumonia. *Cochrane Database*

Syst Rev 2013, 8:CD005532. <http://www.ncbi.nlm.nih.gov/pubmed/23925826>

Jungeblut CW. (1935) Inactivation of Poliomyelitis Virus in Vitro by Crystalline Vitamin C (Ascorbic Acid). *J Exp Med* 62:517-521.

Twenty-one additional Jungeblut papers were published in the Journal of Experimental Medicine. They are available for free online access at: <http://jem.rupress.org/search?submit=yes&author1=jungeblut&sortspec=date&where=author1&y=11&x=29&hopnum=1>

Miller F. (1977) Dr. Klenner urges taking vitamins in huge doses. Greensboro Daily News, Tues, Dec 13, 1977, p A8-A10.

Saul AW. (2007) Hidden in plain sight. The pioneering work of Frederick Robert Klenner, M.D. J Orthomolecular Med.22:31-38. <http://www.doctoryourself.com/klennerbio.html> and <http://orthomolecular.org/hof/2005/fklenner.html>

Duconge J, Miranda-Massari JR, Gonzalez MJ, et al. Pharmacokinetics of Vitamin C: insights into the oral and intravenous administration of ascorbate. P R Health Sci J 2008;27:7-19. <https://riordanclinic.org/wp-content/uploads/2014/12/13-75-1-PB.pdf>

Hickey S, Roberts H, Downing D. (2014) Can Vitamin C cure Ebola? OMNS, 10:13, Aug 20. <http://orthomolecular.org/resources/omns/v10n13.shtml>

Levy TE. The clinical impact of Vitamin C. My personal experiences as a physician. Orthomolecular Med News Service 2014, 10:14, Sept 3. <http://orthomolecular.org/resources/omns/v10n14.shtml>

Saul AW. Vitamin C and polio. The forgotten research of Claus W. Jungeblut, M.D. Orthomolecular Med News Service 2013, 9:16, Aug 7. <http://orthomolecular.org/resources/omns/v09n16.shtml>
<http://orthomolecular.org/resources/omns/v09n27.shtml>
<http://orthomolecular.org/resources/omns/v05n10.shtml>
<http://orthomolecular.org/resources/omns/v06n24.shtml>
<http://orthomolecular.org/resources/omns/v05n09.shtml>

Dosing vitamin C:

Cathcart RF. The method of determining proper doses of vitamin C for the treatment of disease by titrating to bowel tolerance. J Orthomolecular Psych 1981, 10:2, 125-132. <http://www.doctoryourself.com/titration.html> and free pdf download at <http://orthomolecular.org/library/jom/1981/pdf/1981-v10n02-p125.pdf>

Cathcart RF. (1985) Vitamin C: The nontoxic, nonrate-limited antioxidant free radical scavenger. Medical Hypotheses, 18:61-77. <http://www.vitaminfoundation.org/www.orthomed.com/nonrate.htm>

Cathcart RF (1984) Vitamin C in the treatment of acquired immune deficiency syndrome(AIDS) Medical Hypotheses, 14:423-433. http://www.doctoryourself.com/aids_cathcart.html

Klenner FR. Observations on the dose and administration of ascorbic acid when employed beyond the range of a vitamin in human pathology. J Applied Nutrition 1971, 23:3&4. <http://www.doctoryourself.com/klennerpaper.html>

All of Dr. Klenner's papers are listed and summarized in:

Clinical Guide to the Use of Vitamin C (ed. Lendon H. Smith, MD, Life Sciences Press, Tacoma, WA, 1988.) This book is now posted for free access at http://www.seanet.com/~alexs/ascorbate/198x/smith-lh-clinical_guide_1988.htm

Klenner FR. (1948) Virus pneumonia and its treatment with vitamin C. South Med Surg 110:36-8. https://www.seanet.com/~alexs/ascorbate/194x/klenner-fr-southern_med_surg-1948-v110-n2-p36.htm.

Klenner FR. (1949) The treatment of poliomyelitis and other virus diseases with vitamin C. J. South. Med. and Surg., 111:210-214.

Klenner, FR. (1951) Massive doses of vitamin C and the virus diseases. J. South. Med. and Surg., 113:101-107.

Klenner, FR. (1971) Observations on the dose and administration of ascorbic acid when employed beyond the range of a vitamin in human pathology. J. App. Nutr., 23:61-88.

Nutritional Medicine is Orthomolecular Medicine

Orthomolecular medicine uses safe, effective nutritional therapy to fight illness. For more information:
<http://www.orthomolecular.org>

Find a Doctor

To locate an orthomolecular physician near you:
<http://orthomolecular.org/resources/omns/v06n09.shtml>

The peer-reviewed Orthomolecular Medicine News Service is a non-profit and non-commercial informational resource.

Editorial Review Board:

Ilyès Baghli, M.D. (Algeria)
 Ian Brighthope, M.D. (Australia)
 Prof. Gilbert Henri Crussol (Spain)
 Carolyn Dean, M.D., N.D. (USA)
 Damien Downing, M.D. (United Kingdom)
 Michael Ellis, M.D. (Australia)
 Martin P. Gallagher, M.D., D.C. (USA)
 Michael J. Gonzalez, N.M.D., D.Sc., Ph.D. (Puerto Rico)
 William B. Grant, Ph.D. (USA)
 Tonya S. Heyman, M.D. (USA)
 Suzanne Humphries, M.D. (USA)
 Ron Hunninghake, M.D. (USA)
 Michael Janson, M.D. (USA)
 Robert E. Jenkins, D.C. (USA)
 Bo H. Jonsson, M.D., Ph.D. (Sweden)
 Jeffrey J. Kotulski, D.O. (USA)
 Peter H. Lauda, M.D. (Austria)
 Thomas Levy, M.D., J.D. (USA)
 Homer Lim, M.D. (Philippines)
 Stuart Lindsey, Pharm.D. (USA)
 Victor A. Marcial-Vega, M.D. (Puerto Rico)
 Charles C. Mary, Jr., M.D. (USA)
 Mignonne Mary, M.D. (USA)
 Jun Matsuyama, M.D., Ph.D. (Japan)
 Dave McCarthy, M.D. (USA)
 Joseph Mercola, D.O. (USA)
 Jorge R. Miranda-Massari, Pharm.D. (Puerto Rico)
 Karin Munsterhjelm-Ahumada, M.D. (Finland)
 Tahar Naili, M.D. (Algeria)
 W. Todd Penberthy, Ph.D. (USA)
 Dag Viljen Poleszynski, Ph.D. (Norway)
 Jeffrey A. Ruterbusch, D.O. (USA)
 Gert E. Schuitemaker, Ph.D. (Netherlands)
 Thomas L. Taxman, M.D. (USA)
 Jagan Nathan Vamanan, M.D. (India)
 Garry Vickar, MD (USA)
 Ken Walker, M.D. (Canada)
 Anne Zauderer, D.C. (USA)

Andrew W. Saul, Ph.D. (USA), Editor-In-Chief
 Editor, Japanese Edition: Atsuo Yanagisawa, M.D., Ph.D. (Japan)
 Robert G. Smith, Ph.D. (USA), Associate Editor
 Helen Saul Case, M.S. (USA), Assistant Editor
 Michael S. Stewart, B.Sc.C.S. (USA), Technology Editor
 Jason M. Saul, JD (USA), Legal Consultant

Comments and media contact: drsaul@doctoryourself.com OMNS welcomes but is unable to respond to individual reader emails. Reader comments become the property of OMNS and may or may not be used for publication.

To Subscribe at no charge: <http://www.orthomolecular.org/subscribe.html>

To Unsubscribe from this list: <http://www.orthomolecular.org/unsubscribe.html>

[Back To Archive](#)

[\[Home\]](#) [\[History\]](#) [\[Library\]](#) [\[Nutrients\]](#) [\[Resources\]](#) [\[Contact\]](#) [\[Contribute\]](#)

[Back To Molecule](#)



This website is managed by [Riordan Clinic](#)
A Non-profit 501(c)(3) Medical, Research and Educational Organization
3100 North Hillside Avenue, Wichita, KS 67219 USA
Phone: 316-682-3100; Fax: 316-682-5054
© (Riordan Clinic) 2004 - 2017

Information on [Orthomolecular.org](#) is provided for educational purposes only. It is not intended as medical advice.
Consult your orthomolecular health care professional for individual guidance on specific health problems.