VOL. 1, NO. 4
FALL 1978

THE LINUS PAULING INSTITUTE OF SCIENCE AND MEDICINE

NEWSLETTER

ROBERT FULTON CATHCART, III, M.D.

An Orthomolecular Physician

by Linus Pauling

The word *orthomolecular* was first used ten years ago. It means involving the right molecules in the right amounts. Orthomolecular medicine is the achievement and preservation of good health and the prevention and treatment of disease by regulating the concentration of molecules that are normally present in the human body. Important orthomolecular substances are the vitamins, especially vitamin C.

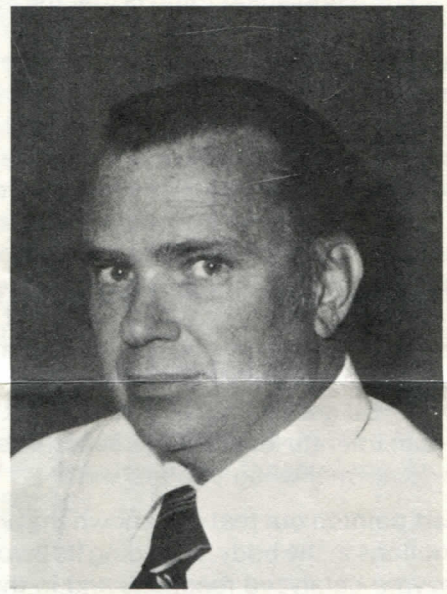
Several books on orthomolecular medicine have been written. There are orthomolecular societies, a journal of orthomolecular psychiatry, and many physicians who describe themselves as orthomolecular physicians.

One of these physicians is Robert Fulton Cathcart, III, who is now practicing medicine in Incline Village, Nevada, a small town of about 5,000 on the north shore of Lake Tahoe. Dr. Cathcart is a general practitioner there.

He is, I think, an unusual physician. Seven years ago he wrote a long letter to me, telling me about his experiences with vitamin C. In his letter he said that he felt that his way of thinking was more like that of an engineer than that of the usual physician, and that perhaps he should have become an engineer.

In fact, we might say that he did some engineering work. For five years he practiced orthopedic surgery in San Mateo, California. In that practice he made use of a hip-joint prosthesis, a metal ball attached to a spike that fits inside the upper end of the femur, and replaces the round part of the upper leg bone when it has been broken off, as happens rather often with elderly people. This prosthesis had been invented by Austin Moore, an English investigator. The Austin Moore prosthesis has been used for many years, even though about one-third of the patients have trouble with it, because of erosion of the hip socket into which the ball fits. Austin Moore had made the ball perfectly round and smooth, with the idea that this would prevent the erosion.

Dr. Cathcart decided to try to find out why the prosthesis was not more successful. At Stanford Medical School he measured 35 hip bones, and found that the ball at the top of the femur is not perfectly round, but is ellipsoidal, with the larger and smaller diameters differing by about 2%. He accordingly designed a new hip-joint prosthesis, with an ellipsoidal ball, similar to that found in human femurs. This change in design seems to have solved the problem, and now about 500 of the Cathcart prostheses are being installed each month in the United States, Canada, and Australia. The reason for the success of the Cathcart prosthesis probably is that the cartilage in the socket is porous, and the pores contain synovial fluid to "oil" the joint. The ellipsoidal Cathcart ball, as it moves in the socket, pumps the synovial fluid around, giving the cartilage nutrition and lubricating the joint.



Dr. Robert F. Cathcart, III

Dr. B. J. Luberoff, editor of the journal, *Chemtech,* which is published by the American Chemical Society, interviewed Dr. Cathcart recently (*Chemtech, Feb. 1978*), questioning him especially about his use of vitamin C in his medical practice. In 1971, while he was still practicing orthopedic surgery in San Mateo, Dr. Cathcart read my book, "Vitamin C and the Common Cold", and tried taking a few grams of vitamin C at the onset of a cold in order to check whether or not it would stop the cold. He then wrote me that two grams of vitamin C every hour seemed to do the job, but that he preferred taking eight grams at one time, and that this was usually effective.

(Continued on page 2)

In his interview he said, "After reading Pauling and everthing else I could on the subject, I started 'experimenting' with vitamin C, first on myself and the family, and then on a few selected patients. In San Mateo I had little opportunity to treat patients with vitamin C. Peer pressure at that time, about seven years ago, was pretty much against the physician using vitamin C. Besides, as an orthopedic surgeon, I seldom saw patients who had colds, or other viral diseases. So I commuted to Incline Village every week for a year . . . . . where I went into association with a general practitioner who planned to go to another town after about another year. During that year I demonstrated that, properly used, vitamin C could decrease most of the morbidity and all of the mortality from viral diseases. I contacted Pauling about this, and he said that he knew of no other physician who was doing exactly what I was doing."

Dr. Cathcart then said that Dr. Fred Klenner of Reidsville, North Carolina, had during the past thirty years found that he could detoxify most virus diseases with intravenous doses of vitamin C, which he uses even for carbon monoxide poisoning, barbiturate poisoning, and snake bites.

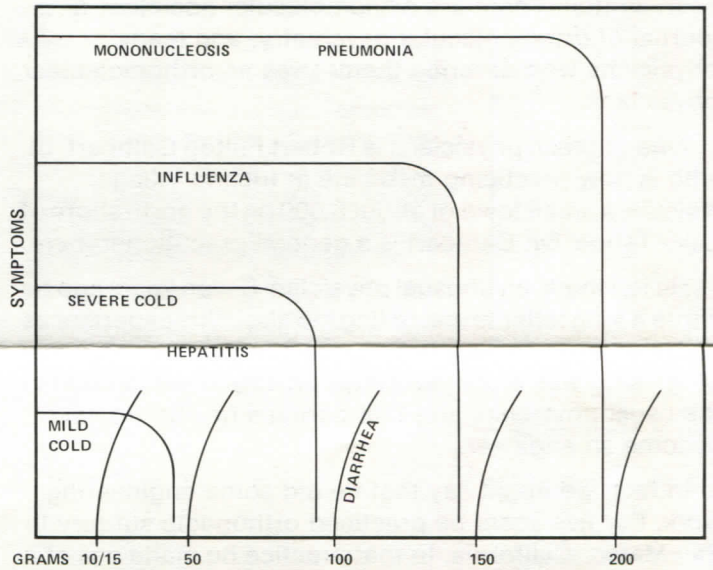
What Dr. Cathcart discovered was that, although most people develop a mild diarrhea when they take 10 or 15 grams of vitamin C in divided doses in one day when they are well, they can tolerate much greater amounts if they are ill.

He stated, "The astonishing thing is that the same person - the patient who when well gets diarrhea on, say, 12 grams - when ill with a moderate cold can take 30 to 60 grams without diarrhea; with a bad cold or the flu, 100 grams, sometimes even 150 grams, and with viral diseases such as mononucleosis or viral pneumonia I've used in excess of 200 grams a day without its producing diarrhea. . . In some cases the body evidently *needs* that much, albeit for only a short time. With mononucleosis or viral pneumonias, during the first couple of days of the disease we sometimes see a need for that half pound of the vitamin . . . Essentially, the sicker you are, the more you can take, and taking enough - *and that's important* - seems to detoxify you. You get well quickly. And as you do, you find that you can tolerate less and less ascorbic acid until you go back to normal when you are well."

Dr. Cathcart pointed out that it is known that vitamin C has many functions in the body, including its involvement in several enzyme-catalyzed reactions and in the body's ability to make collagen, dentyne, adrenalin, and corticosteroids. It maintains proper functioning of the immune system, the blood coagulation system, and controls the metabolism of several amino acids.

With respect to the treatment of patients, he said, "My practice is to let the body take as much vitamin C as it needs . . . to take an amount proportional to the amount of toxin that's around. Remember, everyone else has been talking about a fixed dose, usually at what I consider to be only a homeopathic level. Those studies go from two to maybe four grams a day and they see little clinical effect and no effect statistically. That doesn't surprise me. If you have a 100-gram cold . . . it's my custom to put a number before the name of a disease to represent the amount of vitamin C that that patient can consume the first couple of days of the disease without diarrhea . . . so that if you have a 100-gram cold and the patient is taking roughly 100 grams a day, you will quickly eliminate perhaps 90% of the symptoms of the disease. But if you treat that same cold with 2 grams or even 20 grams a day, you won't see much happen."

"In some cases, especially if treated early, it almost seems as if megadoses were killing viruses. With bad colds or influenza we don't seem to shorten the duration of the infection, but we render patients sufficiently asymptomatic so that they weather the infection without complications. Most of the time my patients don't have to miss any work time. If you're using enough ascorbic acid it will promptly take a fever down to normal, and you won't have the normal aches and pains of flu-like diseases . . . . The typical patient who gets mononucleosis is exactly the one who does the best on vitamin C: older teenagers or young adults are just fantastic vitamin-C takers. They can understand the bowel tolerance idea, have iron stomachs, and couldn't care less about slight gas and diarrhea when they have this horrible disease. In fact, the sicker a patient is the better he does because the relief of symptoms is so dramatic that they don't need any arguments to convince them to continue treatment. So what usually happens is that in three to five days the symptoms are 90% relieved . . . The important thing with mono or other responsive diseases is that we can get people back to work in days."



DR. CATHCART'S MINIMUM DOSE OF VITAMIN C PER 24 HOURS TO NEUTRALIZE ACUTE SYMPTOMS OF DISEASE

"The other disease that is very specific is infectious hepatitis . . . It's a cinch for vitamin C. The difference between the course of the disease with and without vitamin C is quite obvious if only because hepatitis is a disease that we can put numbers on. There are various enzyme systems that we can follow to show the course of the disease. Infectious hepatitis can be mild, where the patient is just a little yellow and maybe a bit tender in the abdomen, but not very sick. But the patients I'm talking about - 20 of them, at least - were profoundly ill with hepatitis, and here again we were able to detoxify them in

(Continued on page 5)

(Robert Cathcart, continued from page 2)

three to five days. It generally took about six days for the jaundice to clear. In two or three days the urine returned to normal color."

"Hepatitis is a serious problem following blood transfusions. As a matter of fact the whole system of gathering blood in this country is undergoing revision because people who sell their blood have a high incidence of hepatitis. That's why they're trying to go completely to a voluntary system. I'm not sure that's necessary because it's apparently so simple to control hepatitis: just give patients vitamin C after blood transfusions. One Japanese physician (Dr. Fukumi Morishige, Non-resident Fellow of the Linus Pauling Institute) has shown that his patients don't get hepatitis if he puts them on maintenance doses of ascorbic acid following blood transfusions. Anybody who is stressed enough to need a blood transfusion should be getting large doses of vitamin C anyway."

Dr. Cathcart talked about side effects of large doses of vitamin C, saying that they seem not to be very important. When asked about kidney stones, he answered, "I've never seen an oxalate kidney stone among my regular vitamin C takers. There is a theory that says that ascorbic acid breaks down to oxalate so that if a person had difficulty handling oxalate, he could precipitate oxalate stones. But the situation is paradoxical: I'll grant that if a person did have difficulty handling oxalates, and he took maybe 500 mg of ascorbic acid a day, he might increase his oxalate load, but the paradox is that if a person takes vitamin C in large doses, as large as I've been talking about, it somehow makes the oxalate more soluble in the urine. Anyway, the pragmatic fact is that in my experience oxalate stones caused by vitamin C are not something to worry about."

Dr. Cathcart, who has now been practicing in Incline Village for seven years, stated that he had given megadoses of vitamin C to about 7000 patients. He said that the manufacturers of vitamin C think that Incline Village consumes more vitamin C per capita than any other place in the world. When asked about danger, he said, "If a patient who's accustomed to high vitamin C intake is hospitalized or otherwise comes under the care of certain physicians, the physician may cut off the C . . . and do it just when the patient needs it most."

When asked about vitamin C and the common cold, he said, "I think that a person who has no really good reason to take vitamin C, no immediate illness, probably should do as Pauling says and take somewhere around 4 grams a day. People with allergies may find that they are more comfortable with higher amounts. I'm the last person in the world to maintain that you will never get a cold if you're taking maintenance doses of vitamin C. I get occasional colds, but I can block the symptoms with vitamin C. I never cease to be amazed at the number of patients who report to me that they used to get colds all the time and never get them since they began taking vitamin C . . . . I take 10 to 15 grams a day, first because I used to have hay fever, - vitamin C takes care of hay fever nicely in about two-thirds of all cases, - and second, because there is evidence that it reduces cholesterol and thus helps prevent arteriosclerosis. Third, I believe that vitamin C contributes to prevention of some cancers."

When asked about the basis for his statement about cancer, Dr. Cathcart referred to the work done in Scotland by Dr. Ewan Cameron, a Non-resident Fellow of the Linus Pauling Institute, and he concluded by saying, "I think that anyone with cancer should be taking high doses of vitamin C."

In a question and answer format, the interview in *Chemtech* continued: Dr. Cathcart was asked if he had published his observations about vitamin C in the standard medical journals. He answered, "No, but I've tried. My manuscripts were rejected."

Q. What did the referees say? In chemical periodicals the editor refers the paper to *referees* he chooses, experts in the field, and then forwards their comments, anonymously usually, to the author. Is that the practice in the medical periodicals?

A. In my case the manuscripts were just flat out refused.

Q. Just like that, without any explanation?

A. Yes.

Q. Might it have something to do with an establishment protecting itself or something like that? Do you want to comment on this?

A. Well, really I don't. You know I really believe that the doctors involved in these decisions don't believe this is true.

Q. In other words you think they are saying that this qualified physician who has an international reputation for his hip prosthesis has made all this up. Colds, flu, hepatitis, mononucleosis, diseases a second-year medical student could recognize with high probability . . . they don't *believe* this?

A. Yes, they just don't believe it. They think I'm deceiving myself somehow.

In the interview as published in *Chemtech*, there was the following caution: "This article is only for a mature audience. The views expressed here are unorthodox and do not necessarily represent those of the American Chemical Society." □