Are all intravenous vitamin C infusions created equal and do they have equal effects, or are some demonstrably better than others? We know that commercial vials of vitamin C have had excellent results. The recent Adam Smith swine-flu case in New Zealand clearly illustrates the power of these commercial products. However, we believe physicians can observe even more remarkable results as the following mercury-poisoning case illustrates. A man was able to compare and evaluate his sister's response to be commercial IV/C drips and the Catchart “home-made” IVs.

There are solid reasons to suspect that commercial vitamin C, now produced outside the USA, may have had only 50% to 70% of the vitamin C potency of the IV bags made from sodium ascorbate crystals such as those prepared in the Robert Cathcart medical practice. The FDA is actively interfering with physician's ability to purchase commercial solutions and many physicians are being forced to purchase small batches from a pharmacy or mix their own stock vitamin C (sodium ascorbate) solutions. The Vitamin C Foundation would like to assure the alternative community that utilizing Cathcart's method of preparation is not only a good way, but probably is the best way to prepare vitamin C for infusions.

The Vitamin C Foundation also agrees with Dr. Cathcart opinion that the pH of the commercial solutions may be too low (acidic) and thus potentially harmful to veins during heavy use. Too low, Cathcart said, because of a “quirk” in the U.S. Pharmacopeia which requires the commercial stock solutions to start with ascorbic acid (not sodium ascorbate) and then buffer the solution with sodium carbonate. According to Thomas E. Levy, MD, JD, “The commercial IV/C bottles are buffered to end up from 5.5 to 7.0 in pH. When you mix up sodium ascorbate according to Cathcart's instruction, it reliably comes in at a pH of 7.0 to 7.4.”

The late Robert Cathcart experienced few problems with his IVs, despite the high number of infusions administered during his many years in practice. He was surprised by all the calls he received from other doctors about problems with their IVs. While many of the problem were caused by the use of ascorbic acid intravenously (instead of sodium ascorbate) this error did not explain everything. Queries from other doctors induced Cathcart to write a short paper entitled Preparation of Sodium Ascorbate

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1 Dr. Levy highly recommends sodium ascorbate powder (private correspondence)
2 Private correspondence with Dr. Levy
for IV and IM Use. We have updated and posted his document at the Vitamin C Foundation web site. Additionally, the Vitamin C Foundation has posted a video recording of Dr. Cathcart's lecture on the preparation and use of intravenous vitamin C on youtube.com. The salient points for medical professionals:

A) Cathcart's nurses produced their own IV stock solutions using sodium ascorbate which they then refrigerated.

B) These solutions are sterile because sodium ascorbate in this concentration is bacteriacidal,

C) The nurses did not mix vitamin C in the water right away, rather the sodium ascorbate was left at the bottom of the stock solution as a sludge and stored this way in the refrigerator.

D) The solutions are shaken and mixed just before they are added to the I/Vs. When the stock solutions are made this way the nurses noticed the solutions remained clear and do not turn as yellow.

And E) Cathcart added one gram of edetate disodium (EDTA) to the 500 cc stock solution. The EDTA acts as a preservative as recommended by author and biochemist Sherry Lewin, Ph.D. The idea is to chelate stray metal ions which would otherwise react with and speed the breakdown of the volatile vitamin C in solution. (Dr. Levy is of the opinion the EDTA is only necessary if the stock solutions are stored for more than a few days.)

**Vitamin C Chemistry in Solution is a Tendency to Explode**

Dr. Sherry Lewin was a British scientist and vitamin C expert and author of VITAMIN C: Its Molecular Biology and Medical Potential. Dr. Lewin's laboratory measurements showed that vitamin C as ascorbic acid dissolved in water degrades asymptotically by approximately 50% in only four hours. After about 10 hours, the vitamin remains around the 30% potency level for some time, even days. Sodium ascorbate does not degrade this fast. Lewin found that vitamin C degrades faster in water when light and air are present, but that EDTA can help preserve the vitamin in solution. (The theory is that EDTA acts as a preservative and chelates (grabs) stray copper and iron atoms in the water which might otherwise react with the vitamin C. His book contains the following asymptotic chart of vitamin C (ascorbic acid) in solution as measured in her laboratory (fig 1.3). Cathcart often referred to this book in his lectures.

This rapid breakdown in water is probably the main reason Cathcart's protocol of not dissolving vitamin C until just prior to IV infusion is more potent than the commercial solutions. The only way for the active vitamin C in commercial solutions not to have degraded below 30% of their listed dosages is for there to be preservatives present that we at the Vitamin C Foundation do not yet fully understand.

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3 Which we have updated and posted at vitamincfoundation.org/civprep.pdf

4 [http://www.youtube.com/watch?v=Zgi-7xPrCAg](http://www.youtube.com/watch?v=Zgi-7xPrCAg) Cathcart IVCprep lecture

5 IV vitamin C should be sodium ascorbate (the pH of his preparations is generally higher than commercial)
In the following case, a mercury-poisoned woman underwent weeks of continuous intravenous vitamin C infusions using commercially available vitamin C for injection. These drips provided considerable relief of her symptoms, but her veins eventually became damaged beyond repair and she could no longer tolerate IV/C. Her brother researched the Internet and found Dr. Cathcart’s IV/C preparation instructions. After using IV/C sodium ascorbate, the alleviation of mercury-poisoning symptoms improved dramatically.

This case illustrates the obvious benefit of any form of intravenous vitamin C for mercury poisoning. However, there is clearly an important difference between Cathcart’s method and commercial solutions for injection with respect to efficacy and perhaps safety in continuous usage. A difference that is not

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6 Due to the vein damage, they began using a picc line, giving the Cathcart-style ascorbate through her arteries.
well understood.

The following excerpts from the Vitamin C Foundation.org forum have been edited for brevity.

[quote]
Sep 14, 2009
My name is Michael. My sister had mercury poisoning from a silver amalgam that leached into her gum line. She went to Hal Huggins and has made a tremendous recovery. However, she still has some pain when she wakes up in the morning due to residual mercury being detoxed during her sleep. When she takes the lypospheric vitamin C upon waking she is fine within an hour.

However, do you know of any time released vitamin C that will stay in your system overnight, or at least a much longer time...so that she doesn't have to wake up in pain every morning? Any suggestions will be greatly appreciated.

Once again...thank you for the website...I'm sure you have touched thousands of lives and many never get the chance to say thank you. Thank you for your time.
[end quote]

[quote]
Sep 21, 2009
The intravenous vitamin C works wonders for my sister with mercury poisoning...however...it is expensive and she needs it 2-3 times a week to feel optimal all the time...the pill form and even the lypo give her gastrointestinal issues along with the sodium ascorbate.

The question is...will the 50 gram vitamin C injections work as well as 50 grams intravenously?

This would save a tremendous amount of time and money...I'm just trying to ponder a way that won't upset her stomach that will work effectively...and because she has so much mercury in her body...the pill form and lypospheric just doesn't get enough vitamin C in her body to completely take away her symptoms..
[end quote]

[quote]
Jan 03, 2010
I have great news...we had a Picc line placed and with about 10 intravenous drips of 75 grams each...my sister is remarkably better! And has stayed better!

However, I have noticed a dramatic difference between the absorbic acid sold by commercial distributors such as [..deleted..] for intravenous use and the sodium ascorbate that Cathcart made up himself. We have used the sodium ascorbate (made up according to Cathcart's formula) and noticed much better recovery especially when it comes to the brain related issues.

I noticed the commercial absorbic acid is much more viscous then the formula that was made using Cathcart's protocol. Cathcart's turns bright yellow and the absorbic acid sold by [..deleted..] is not.

Could it be possible that Cathcart and Klenners formula is dramatically superior in regards to healing

7 http://www.vitamincfoundation.org/forum/viewtopic.php?f=10&t=7563
THE BRAIN BECAUSE IT CROSSES THE BLOOD BRAIN BARRIER BETTER???

I WOULD REALLY APPRECIATE YOUR EXPERTISE ON THIS SUBJECT AS I WAS NOT ABLE TO FIND MUCH INFORMATION ABOUT THE DIFFERENCES BETWEEN THE TWO TYPES OF VITAMIN C FOR INTRAVENOUS USE ON THE INTERNET.

Now curious, we asked for more details.

Jan 4, 2010

She is on the Huggins protocol for mercury detox. However we did this for months with little noticeable help. She used alpha lipoic acid but had to stop it because of an allergy to it. I know that sounds weird to me too. His supplements are on this page below. When the mercury was removed from her mouth a 60% reduction in symptoms happened practically overnight, but then for months nothing really made a difference...even all the vitamin protocol from Huggins..until we started the intravenous C treatments. Then the difference was amazing and very fast.

We asked for more background.

Jan 4, 2010

My sisters condition was mercury poisoning from an amalgam in her mouth that leached into her gum line. Just to give you an idea of how sick she was...she had severe pain in her arms and legs..heart pain..losing her eyesight..horrific depression..lower back pain...from a 1 to a 10 her pain levels were a 10 for at least 5 hours a day. Nothing would end this pain and suffering except when she took Lypoospheric vitamin C it would knock the pain down about 40%. She was months from death at the age of 31. We went to Dr. Huggins to have the amalgam tattooing removed. Gave her 10 treatments of 75 grams intravenous vitamin C. Her symptoms are close to non existent now. I can not thank you enough from the bottom of my heart for your website as it has so much invaluable information.

A PICC LINE was placed because her veins were so sclerosed from having IV’s before for months. (Before we ever had the mercury removed) and because of her peripheral neuropathy made starting IV’s very painful. The PICC LINE allows someone to get IV treatment without having to start a new IV each time.

However, we have discovered that the commercial absorbic acid by IV is very sclerosing to the veins. Sodium ascorbate...Cathcart’s formula does not sclerose the veins. Once the veins are sclerosed they are gone forever. Doctors don’t know this and constantly destroy veins. We went to a special infusion nurse to learn this.

One last thing. I have not found anything on the internet about how to treat chronic poisoning such as poisoning from mercury with IV/C. We have found through trial and error it is best to cycle the treatments. Say one 75 gram drip every 3 days for 4 treatments. Then 2 weeks off. This allows the body to cleanses out the toxins that have built up from the prior treatments. If you don’t give the body this break it will crash. The Herxheimer effect is very obvious. As soon as the patient becomes exhausted and tired...its time to give them a break for at least a week.
Have you found any information about how to correctly treat chronic poisoning with vitamin C intravenously? If so please email the links.

[End quote]

[Quote]
Jan 24, 2010

Owen

The difference between the 2 different types of Intravenous Vitamin C is so dramatic to me that its obvious that Cathcarts formula is vastly superior. I’m here to answer any questions you have...your welcome to speak with my sister or myself...at any time...its the least I can do considering what you have contributed with your website.

I also have seen the most amazing difference in my brother with Cathcarts formula...and I mean amazing Owen.

I have given him about 10 drips at 100 grams each of absorbic acid from the commercial outfit. There was about a 60% improvement in symptoms. His issues were all brain related unlike my sisters. He has taken many different pharmaceutical drugs that left him having trouble with many different things. He had problems with human interaction.. feeling feelings of fear, anxiety, severe sensitivity to bright light and loud noise. (I know this all happened after use of benzodiazepines that cause a paradoxical effect..meaning they cause you to have these symptoms after you have taken them. I know these problems were all caused by brain toxins as before he took these drugs that made him ill and kept him ill...he loved to be the center of attention and was extremely quick witted...not to mention he didn’t have the sensitivity to light and sound.

So I gave him 100 grams of Cathcarts formula and in hour of the drip he became extremely sensitive to light and sound and couldn’t take even the slightest noise or even watch a movie. (All his symptoms came back...but worse than ever) This is obvious herxheimer response to me that is caused by Cathcarts formula penetrating the blood brain barrier and chelating out brain toxins. This never happened at all on the commercial formula!

The next day he woke up like a new man...laughing, joking, sharp as a tack. My sister and I have seen more improvement in him with 2 drips of Cathcart’s formula than 10 of commercial stuff! It is shocking to say the least.

It’s obvious to me there is a dramatic difference between to two formulas that is not well documented. He never had any of those symptoms when on the absorbic acid drips from [..deleted..].

[End]

[Quote]
Jan 07, 2010

Actually...before we knew the mercury in her mouth was the issue...because of her severe problems...we sent her to an integrated medicine doctor that normally charges $330,000 for a 12 week treatment. Ironically most of what he does is intravenously vitamin C. Of course ...most people that fly in on their private jets are happy to pay the money to cure their cancer or other illness. Well, he hooked my sister up to 30-50 grams of intravenous C and other B vitamins for 3 months..every 2 days..for 8 hours a day! This destroyed her veins..because he was using the absorbic acid from the commerical supplier...not Cathcart’s formula..Cathcart claimed his formula is very gentle on the veins...and he never had any problems with sclerosed veins. Long story short...that kept my sister alive for 3 months..but when she went back to Los Angeles where she
Lived...she crashed horribly and all the pain and suffering came back. That's when I was furious and decided to find out what the hell was going on with her on my own. I noticed during treatment at this doctor she went to that during the Intravenous C treatments her gums would get swollen but only around her bridge...that led me to believe that the bridge might have been an issue...which led me to Dr. Huggins...which led me to learning about vitamin C...

After Huggins team removed the dental mercury...and other toxic metals...she was almost immediately 60% better...but trying to chelate the rest out with his protocol was just too painful...so I insisted on more Intravenous C treatments...which worked quickly and remarkably well. However, her veins were now destroyed and she couldn't get any more intravenous vitamin C. So I found ivcinfusions.com and we drove up to see these specialists in infusion treatment...and they said my sister's veins were shot and to get a PICC line...so now we have a PICC line...and she is getting her vitamin C again...keep in mind that because her veins were shot...we couldn't get any IVC in for about a month...and she stayed stable...because the 10 IVC treatments she had after Huggins...brought her to a new level of health...but I wanted to make sure all of the poison was gone because she wasn't 100%...so we got the PICC line and now if you see her you would never know she was ill. She looks like the picture of health.

So she does not need 2-3 treatments a week now...to keep her healthy...she is stable without them...but we just want to knock out the rest of the toxicity in her body that is left over to be sure.

If only the doctor that was giving her 2-3 treatments a week knew about Cathcart's formula...her veins would never have been destroyed permanently by the commercially available ascorbic acid.

One more thing...her mind is getting much sharper...and I know that is true because Cathcart's formula gets past the blood brain barrier much much much better. This makes me think that all the other brain related toxin issues such as Alzheimer's, Parkinson's, Autism...could be dramatically affected...but only by Cathcart's formula...not the commercially available ascorbic acid.

[end quote]

Information on IV/C Dosages

We asked vitamin C expert and author Thomas E. Levy, MD, JD, for his advice on recommending specific IV/C dosages. This was his kind response:

“Dosage is always empirical, as in give more if the clinical response, especially in infections or poisonings, is not adequate.

“One gram per kilogram of body weight would be a very good general guide, which would be about 20 to 25 grams for a 50-pound child and 100 grams for a 220 pound-adult. However, just giving most adults 50 grams at a time for most conditions works out well. Rate of infusion can range anywhere from 30 minutes to 3 hours, depending upon comfort of the IV, the amount being administered, and the condition being treated (toxins, more rapid, infections, cancer, etc., less rapid). The more rapid infusions will often be associated with hypoglycemia, which can usually be easily addressed with a little fruit juice or even a candy bar. But it is best if the added glucose/sugar can be avoided.

“50, 75, or 100 grams of stock solution can each go in 500 cc sterile water:
“I would always go with 100 grams for most cancer patients, as long as it was well tolerated.

“Since you can give the stock solution IV push, there should be no arbitrary limit to how much you can add. However, it's a bit difficult volume-wise to put much more than 100 grams in a 500 cc bottle, unless you take significant water out. And remember, this is for pure sodium ascorbate infusions. Many other vitamins and minerals need much more attention to detail with regard to concentration. Really, unless you are treating a very small toddler or infant, you should be giving 25, 50, 75, or 100 grams of sodium ascorbate in a bottle. Otherwise, giving IVC based on 1 gram per kilogram of body weight should be specific enough.

“Powder is better than vitamin C crystals when making lots of solution. I do think the Millipore filtration is important, and the magnetic stirrer is very important when doing this on a regular basis.”
- Thomas Levy MD

**Conclusion**

Our government has taken unjustified action against McGuff Pharmaceuticals which has resulted in the suspension of cancer trials of megadose IV/C. These trials are unlikely to recover, a boon for the Cancer industry. If there is a silver lining, it is that now and for the foreseeable future, physicians may be required to obtain their vitamin C solutions for injection in small quantities from compounding pharmacies, or make it themselves. This creates an economic incentive for physicians doing a high volume of IV/C to adopt Dr. Cathcart's method of preparation. The author predicts that physicians using Cathcart-style IV's will observe significantly increased positive responses from their sodium ascorbate infusions.

It is understandable why a physician, especially those new to intravenous vitamin C, would prefer commercial IV/C products and not want the hassle associated with producing their own stock solutions. With the government actively trying to suppress this option, it should be noted that ordering all vitamin C drips from a compounding pharmacy may well have privacy issues. Do we really want to give Big Brother a way to track IV/C use from the paper trail of these prescriptions? Patients may very well demand that physicians mix their own stock solutions, especially after they begin to understand that there could be a substantial improvement in their potency and safety as well as privacy.

The mercury poisoning case is instructive on many levels. Not only was IV/C very effective for mercury detoxification, but the relief of the woman's symptoms allowed her brother to evaluate the effectiveness of different forms of vitamin C. We hope that the reasons we have come to believe that Cathcart's method is far superior became readily apparent. The Cathcart method is supported by Dr. Sherry Lewin's laboratory work and book, as well as Cathcart's own extensive experience. Our forum poster Michael is willing to discuss details of his sister's case with others and we can put physicians in touch with him. For now, we are protecting his privacy. Please visit vitaminCfoundation.org/ivc for links to more information for physicians about Cathcart's method of preparation and sources of sodium ascorbate.

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8 And yes, unfortunately, the report of $350,000 charge by the integrated doctor has been doubled checked and accurate