## Why the Foundation Does Not Recommend Ester-C®

By Owen R Fonorow

It is true that studies have shown so-called Ester-C® will enter cells faster and therefore less of it is required to ward off scurvy in guinea pigs. However, we are wary of any form of vitamin C that does not match what animals make "naturally" in their livers or kidneys. We agree with Linus Pauling that the true and best form of vitamin C is L-ascorbic Acid (C6H8O6).

Patrick Holford, formerly of the British Institute of Optimum Nutrition (ION) tells us how animals make vitamin C, ascorbic acid:

"Vitamin C is <u>not</u> a necessary component of diet, at least for all mammals with the exception of guinea pigs, fruit eating bats, the red vented bulbul bird and higher-order primates – which includes us. All other species make their vitamin C by converting glucuronic acid derived from glucose into ascorbic acid (C6H8O6). At least three enzymes are required to make this conversion. One of these liver enzymes, L-gulonolactone oxidase, or part of the enzyme system, is missing in primates. Irwin Stone proposed, in 1965, that a negative mutation may have occurred in these species so as to lose the ability to produce vitamin C. In primates this is thought to have occurred in the region of 25 million years ago. "

According to Robert Cathcart,MD, the physician with vast experience with high dose vitamin C protocols, mineral ascorbates are generally not as effective therapeutically as ascorbic acid:

"...it was not entirely clear that the dramatic effects are always with ascorbic acid orally and sodium ascorbate intravenously. I have not been able to achieve the ascorbate effect with mineral ascorbates orally. Mineral ascorbates are fine forms of vitamin C but when you are really sick, the mitochondria are failing in their refueling of the free radical scavengers with electrons. The ascorbic acid carries 2 extra electrons per molecule where the mineral ascorbates seem to carry only one (plus per molecule the mineral ascorbates are heavier due to the mineral weighing more than the hydrogen the mineral replaces). So the mineral ascorbates are not potent enough to accomplish the ascorbate effect. There may be other reasons that we do not appreciate additionally." Robert Cathcart, III, MD

Another of our concerns is balancing the exaggerated hype against the following down-side about the Ester-C manufacturing process, as expressed by people experienced in the field, who wish to remain annonymous:

"Note: it's my understanding that Roche at al. have long been less than thrilled with Inter-Cal's method for making Ester-C(r). After all, when C is heated to high temps under pressure, as their patent specifies, dehydroascorbate (DHA), to the tune of about 10% by weight of finished product, is the consequence. Of course, their claim to fame was that other organic acids were formed by their process, for which they claimed proprietary effects. But, there's no hiding the DHA content -- for which they sort of disingenuously claim biological value, based on the fact, I guess, that DHA can be

reduced to to work again as an antioxidant." E. F.

It is true that Ester-C reaches cells and enters them faster. An anonymous informant with ties to the U.S. biological weapons program told us:

"Ester-C is not an ester. My late friend was a former scientist involved in biochemical warfare with a high security clearance. He dissected the patent and had several meetings with Dr. Virlangieri, one of the researchers that touted its virtues. My friend favored good old ascorbic acid or sodium ascorbate. He told me quite literally that ester-C was "two pounds of 'dung' in a one pound bag." He was an avid Pauling devote and was concerned that under certain conditions, ester-C was dangerous and contraindicated. The prevailing propaganda changed from its being an ester to its providing threonine metabolites. He told me that Pauling would have laughed the ester-C boys back to chemistry class! "R. L.

That is to say there might not be serious conditions where Ester-C is indicated. We have seen an impressive argument for Ester-C in an anti-cancer patent based on the work of former Pauling associate R. Jariwalla. However, since Ester-C also seems to trap vitamin C, and perhaps other toxins in cells, using Ester-C with Chemotherapy is problematic.

## Truth is truth. Vitamin C is vitamin C.

Some respected authorities are now claiming that L-ascorbic acid is not vitamin C! (However, if this were true, Linus Pauling was wrong, and 80,000 research studies are fatally flawed.) We are unaware that Pauling's *HOW TO LIVE LONGER AND FEEL BETTER* (1986) treastise on vitamin C contained any errors what so ever!

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