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## Vitamin C and Illness

*This exchange continues a debate begun in the May-June Letters column. —EDITOR*

Recently Stephen Barrett claimed that vitamin C supplementation at best only slightly affects the symptoms of the common cold (*SI*, January-February). Barrett referred to the large-scale studies carried out by Anderson et al. but extracted no actual data from their reports. In their first study, Anderson et al. found that vitamin C supplementation (1-4 g/day) decreased the "numbers of days confined to house" per subject by 48 percent in subjects with a low dietary intake of fruit juices (1). Barretts claim that at best there is only a slight reduction in symptoms appears grossly misleading considering the published results (1-4). Unlike Barrett, I have written scientific papers analyzing the effect of vitamin C on the common cold (2-5), and my conclusions are quite different from his. Pauling complained that many of his critics had not read either his texts or the original reports, and gave several detailed examples to support his case (6). Apparently many critics have thought that their main task is to educate the general public on the silliness of vitamin C supplementation, but not to inform themselves about the hard science on the topic.

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### References

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2. Hemilä, H. Vitamin C and the common cold. *Br. J. Nutr.*, 1992, 67:3-16.
3. Hemilä, H. Does Vitamin C alleviate the symptoms of the common cold?—a review of current evidence. *Scand. J. Infect. Dis.*, 1994, 26:1-6
4. Hemilä, H., and Z. S. Herman. Vitamin C and the common cold—a retrospective analy-

*Stephen Barrett replies:*

*Andersons first study found that the average number of confined days was 1.30 for the vitamin group and 1.87 for the placebo group—about half a day per person —which I calculate to be a 30 percent difference (.57 ÷ 1.87). Subsequent studies by Anderson and others have yielded conflicting results: some show a similar decrease in symptoms, others show none. Thus if a difference in house confinement exists, it is half a day or less, which I think has little practical significance. The "complaint" about "many of his critics" that Hemilä attributes to Pauling is on page 226 of reference 6, where Pauling "surmised" that most physicians had read neither his book (Vitamin C and the Common Cold) nor any of the articles describing the controlled studies of vitamin C. The suggestion that no one who disagrees with Pauling has actually read the scientific literature on vitamin C is presumptuous and incorrect.*

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**Underlinings are added afterwards to show the discrepancy in the topics discussed / H Hemilä**

### More on Vitamin C and Illness

Harri Hemilä, in a letter (57, July/August 1995) responding to Stephen Barrett's "The Dark Side of Linus Pauling's Legacy" (January/February 1995) cites Anderson et al. (1) on the effect of vitamin C supplements. He says the Anderson study "found that vitamin C supplementation (1-4 g/day) decreased the 'numbers of days confined to house' per subject by 48 percent in subjects with a low dietary intake of fruit juices."

Barrett's reply in the same issue to the letter challenges Hemilä's reporting accuracy, but Hemilä is correct: Anderson et al. reported (Table IV) that for subjects taking three ounces of juice or fewer a day, the average confinement caused by colds or other illness was 1.87 days for the placebo group and 0.98 days for the vitamin group;  $(1.87 - 0.98)/1.87 = 47.59$  percent.

Barrett calculates the reduction in disability time as 30 percent. A reading of

Anderson et al. shows that this percentage is derived from their Table II, in which they report results for *all* of their subjects, including those taking four or more ounces of juice.

Both percentages are meaningful; the larger of the two indicates that vitamin C supplements are especially useful for persons who have diet deficiencies. Barrett, however, doesn't say he is citing a different part of the Anderson data, and thus makes it seem that Hemilä has either misread or misrepresented Anderson.

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1. Anderson, T. W., D. B. Reid, and G. H. Beaton. Vitamin C and the common cold: A double-blind trial. *Can. Med. Assoc. J.* 1972, 107:503-8.

*Stephen Barrett, M.D., replies:*

*Villchur is correct that Hemilä and I referred to different figures.* *The idea that people with a dietary deficiency might benefit from increasing their intake of the missing nutrient(s) is hardly novel. In most cases, this should be done by improving one's diet rather than by taking supplements. There is no evidence that ingesting amounts of vitamin C beyond what the body needs will prevent colds. Taking supplements (or drinking extra fruit juice) may slightly reduce the symptoms of a cold, but adequately nourished people have little or nothing to gain by doing this.*

## **POSTSCRIPT BY HARRI HEMILÄ**

I implicitly referred to Pauling's text:

"Cortez F Enloe, Jr. M.D., editor of Nutrition Today, in an editorial (1971) on my book, mentioned that he had not found one physician among his friends or among those attending a meeting of a state medical society who 'would admit to having even read the book' " (p. 226 in Ref. 6. above).

I implicitly also referred to several other specific cases explicitly discussed by Pauling on pp. 227-236 (either the people in question had not read or they did not understand what they had read; God knows).

I did not refer to Pauling's personal conclusion which Barrett misleadingly picked out of its context, ignoring the described cases.

In the **Anderson 1972** study, 31% of the subjects belonged to the group with fruit juice intake <4 oz/day.

It would seem unlikely that some third of adult Canadians suffer from true "dietary deficiency" which Barrett suggests as an explanation to Anderson's findings.

The Anderson trials reporting greater effect of vitamin C in participants with lower intake of fruit juices are currently available via the net:

### **Anderson 1972:**

<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1940935>

### **Anderson 1975:**

<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1958969>