

CRN Questions Conclusions Reached by Researchers in Recent Vitamin E Meta-Analysis

Washington, D.C., *November 10, 2004* – A meta-analysis on vitamin E and all-cause mortality (ACM) from today's on-line issue of *Annals of Internal Medicine* inappropriately tries to draw conclusions for the whole population based on a combination of studies of people who were already at grave risk with existing diseases including cancer, heart disease, Alzheimer's, Parkinson's and kidney failure, says the Council for Responsible Nutrition (CRN).

The researchers themselves noted limitations in their meta-analysis, stating "the generalizability of the findings to healthy adults is uncertain. Precise estimation of the threshold at which risk increases is difficult." Yet they go on to make sweeping generalizations about the use of vitamin E and all-cause mortality for the whole population, although they provide no evidence that these kinds of effects would occur in healthy populations.

"This is an unfortunate misdirection of science in an attempt to make something out of nothing for the sake of headlines," comments John Hathcock, Ph.D., vice president, scientific and international affairs, CRN.

The meta-analysis combined 19 individual studies, eighteen of which showed no statistically significant increase in mortality, squeezing out an overall finding of risk. Combining numerous clinical trials into a single large cohort gave greater statistical power but failed to capture the limitations of each study included.

Most of the trials involved middle-aged to elderly persons who had heart disease or other serious conditions or were at risk of disease. The placebo groups had an ACM rate of 1022/10,000 and the high-dose (defined by the researchers as 400 IU and up) vitamin E subjects had an ACM increase of 39/10,000.

Says Dr. Hathcock, "The overall conclusion of this meta-analysis is driven by the results from a few of these clinical trials, some of which are suspect and/or dated. For example, the WAVE trial (Waters et al., 2002) made no correction for multiple comparisons, and found one of 22 comparisons 'significant.' This is 1/22 whereas 1/20 would have been expected on a random basis. In other words, they found nothing."

Dr. Hathcock added, "In reviewing the totality of evidence on vitamin E, including all clinical trial data and several large observational studies, CRN agrees with the Institute of Medicine in finding vitamin E supplements safe at levels of at least up to 1,000 mg (1,600 IU) for normal, healthy adults. This meta-analysis provides no convincing evidence to the contrary."