

On 24 March 2006, The British Medical Journal published a meta-analysis (a study of other studies) on omega-3 fatty acids [1] that prompted headlines around the world to the effect that fish oils don't work. This is not the first time a meta-analysis has triggered headlines that discredit natural health supplements.

The vitamin E meta-analysis of 2004 In November 2004, Dr Edgar Miller and colleagues published electronically in the Annals of Internal Medicine a meta-analysis [2] that provided headlines as bizarre as "High dose vitamin E death warning" (this headline was run by none other than the BBC on 11 November 2004). The meta-analysis appeared to be pitched to tarnish the reputation of vitamin E, a nutrient in which many are known to be deficient. Among many of its problems, the study failed to show how healthy people would respond to supplemental intakes of vitamin E and it only included studies on synthetic vitamin E (dl-alpha-tocopherol). It therefore omitted any consideration of the effects of the seven other related compounds that make-up full spectrum natural vitamin E, as found in vegetable oils. Interestingly, the body's absorption of the most important dietary form (gamma-tocopherol) is hindered by high doses of synthetic vitamin E, and this could have explained the negative results found by Miller et al.

The overall conclusion that high-dose vitamin E causes increased mortality could also have been a statistical artefact, with no biological relevance. Since the study assessed all-cause mortality, and not just cardiovascular mortality, other factors could easily have contributed to the greater death rate in the higher dose vitamin E group found when trials were pooled. It should be noted that the increased death rate was marginal; just 6.3 additional deaths per 10,000 persons, compared with the control group. Given that the confidence interval ranged from 6 to 119, this increased death rate cannot be said to be statistically significant.

Prior to this meta-analysis on vitamin E market research data from Frost & Sullivan showed that vitamin E was the second most