Vegetarian Diet "Weakens Bones" (Worldwide headlines July 2, 2009)

A joint Australian-Vietnamese meta-analysis of 9 observational studies of 2,749 people found that vegetarians had bones five percent less dense than meat-eaters and vegans were six percent weaker. However, the results were of such little significance that the authors ended their paper by saying: "In conclusion, the results of this meta-analysis suggest that there is a modest effect of vegetarian diets, particularly a vegan diet, on BMD, but the effect size is unlikely to result in a clinically important increase in fracture risk."

This article, released ahead of scheduled publication, which gives the public the perception that the news was so important that it could not wait, in the *American Journal of Clinical Nutrition* was by the same authors as the vegan-osteoporosis article I discussed in my June 2009 newsletter. The article I reported on received little press worldwide and showed results very favorable for a vegan diet and bone health. Published in the April 2009 issue of the journal *Osteoporosis International,* the same researchers directly examined 105 postmenopausal Mahayana Buddhist nuns, and compared them to 105 omnivorous women and found, "…although vegans have much lower intakes of dietary calcium and protein than omnivores, veganism does not have (an) adverse effect on bone mineral density (BMD) and does not alter body composition."

The highly publicized study showing negative effects of a vegan diet was a meta-analysis—a selected compilation of similar studies. This kind of analysis is notorious for showing bias and is easily manipulated by the choice of studies included or excluded in the research paper. Because of the ease of exploitation, meta-analysis has been referred to as an exercise in "mega-silliness." Their original research found 922 studies, but after applying exclusion criteria there were only 9 studies left, which included 2749 individuals; 5 studies were of Asians, populations where osteoporosis-related fractures are much lower because of their healthier diet and greater physical activity, than Westerners.

This analysis found no correlation between dietary calcium intake or protein intake and BMD. The results comparing diets of vegetarians and omnivores with BMD were considered clinically insignificant by the authors. Furthermore, BMD is a poor predictor of future fracture risk. The criticisms could go on, making this one of the worst studies ever published in a respected journal. So why did this article condemning eating a vegan diet get so much attention?

This flawed research telling people worldwide that vegan diets are bad for the bones was funded by the AMBeR alliance incorporated in Malaysia, which owns Amber F&B Nutrition Sdn Bhd, a dairy products producer and wholesaler. This company's business is the "manufacturing of sweetened condensed milk, evaporated milk and dairy products." Once a study is published then the public relations department of the industry takes over and sends "Press Releases" to the media worldwide. Because people love to hear "good news about their bad habits (eating beefsteaks, fried chicken, cheese, and ice cream)," the press and the public revel in this good news, even when the conclusions are untrue as in this case. You might think there would be at least one curious reporter who would read the research before spreading the lie.

You can write the authors at: tuan.nguyen@unsw.edu.au and ask your questions about the two studies and why the one funded by a dairy industry showing no relevance to a person's choice of a vegan diet and the risk of fracture received so much worldwide attention.