

## **Loh: Exercise caution when taking nutrition supplements**

A recently released report from the Department of Health and Human Services' inspector general found that 20 percent of the over-the-counter and online nutrition supplements purported to provide weight loss and immune enhancement lacked scientific evidence to back those claims and thus were illegally labeled.

Understanding this is an annual \$20 billion business certainly contributes to our knowledge of how marketing trumps validating.

With a public so carefully analyzed by Madison Avenue professionals to gauge how best to alter our spending behavior, it should be no wonder that we are willing to spend discretionary income on products that promise weight loss, improved skin, hair, immunity and sexual appeal and prowess. But wait, there's more.

Curing cancer, reversing heart disease, controlling diabetes, treating HIV / AIDS are also claims seen on television, infomercials, print media and ubiquitous Internet pop-up and click advertisements.

The public has the constitutional right to spend its hard-earned dollars on whatever it chooses — that is not illegal or even not effective — although the dilemma is that some of these "choices" may be directly or indirectly harmful.

Cosmetic products are one thing, but, in my estimation, health products are something else. Even if a supplement health product is not harmful per se (though contaminants, active chemicals and drugs have been found in some of these products), the fact that one may be spending money and time on unproven therapies and not on validated interventions may have serious implications since treatment efficacy may be enhanced if done as early as possible.

Inherent delays while trying unproven therapies may be the difference in whether proven therapies may be able to help ... or not. A recent high-profile example was Steve Jobs delaying his cancer treatment for many months while trying nontraditional approaches.

Whether in a grocery, big-box or health food stores or online, the public is bombarded by these advertisements.

How do these companies get away with this and not get shut down by the Food and Drug Administration? It turns out that it's the law.

There is a notorious piece of legislation called the Dietary Supplement Health and Education Act of 1994 that prohibits the FDA from regulating the supplement business as long as the manufacturers do not make overt health claims. That is why their labeling, if it exists at all, does not say that the product "will" prevent a disease, but that it "may."

It's pretty subtle and the verbiage is carefully nuanced to just stay under the FDA radar, but high enough to get your attention and slick enough for you to want to buy the product. And this piece of legislation was written by a senator from a state that is the home to many vitamin and food supplement companies.

The admonition for the public when purchasing anything has been caveat emptor — let the buyer beware. There are no guarantees that any treatment or medication will always work.

However, there are strategies to increase your knowledge about the odds that some intervention will be better than an alternative. This relies on our falling back on validated scientific standards of proof of benefit. The best proof of benefit comes from properly conducted, randomized clinical trials.

But even here, one has to be careful. The marketers have figured out that the increasingly sophisticated buyer knows about clinical trials, so they sprinkle the words liberally into their materials. That's why I phrased it as "properly designed randomized" trials.

I have been actively engaged in the clinical trial process, with a superb local team of professionals for almost 40 years. I gave an invited TEDx (Technology, Entertainment and Design) lecture a few months ago on this topic. No commercials! If you have about 19 minutes, go online to <http://www.youtube.com/user/TEDxTalks> and search my name and look for the talk that begins "How do doctors know?"

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