

The Vitamin Paradox

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Last night I had a chocolate milkshake for dinner. I don't eat like this all the time, but often enough. I eat lots of salads, but I also eat cheeseburgers. And if I'm tired I eat pretzels, or skip eating entirely. In short, I'm far from a nutritional purist.

But I take a multi-vitamin every day, and have for as long as I can remember. I figure it's the least I can do for my personal health, plus it's easy and fairly cheap. I guess I'm hedging my bets.

And I'm not alone. Sales of nutritional supplements have grown dramatically over the past decade or so, and now total more than \$20 billion a year. More than half of Americans take some kind of vitamin pill. But here's the rub: Even though sales of vitamins have risen steadily, there has been no corresponding improvement in public health. Indeed, the opposite is true, with obesity and diabetes climbing perilously. What's going on here?

A team of psychological scientists in Taiwan, led by Wen-Bin Chiou of National Sun Yat-Sen University, has been exploring this paradox from the perspective of behavioral "licensing." Licensing is the notion that when we do something that we believe is good for us—like popping a vitamin—this action ironically gives us permission to engage in subsequent bad behavior—like munching potato chips—adding up to a net loss. We make these perverse tradeoffs because doing something positive bolsters our "health credentials," which boosts our sense of invulnerability, which in turn encourages self-indulgence.

At least that's the theory, which the scientists tested in a couple of laboratory experiments. In the first, they fooled a group of volunteers into thinking they were participating in an unrelated study, for which some took a placebo and others a vitamin pill; this is what they were told, but in fact they all got the dummy pill. Afterward, they all filled out a survey about their preferences for leisure-time activities. Some of the listed activities were exercise-related—yoga, cycling and so forth—while others were immediately gratifying but hazardous in the long run—sunbathing, heavy drinking, partying and casual sex. They also filled out a measure of their perceived invulnerability, rating phrases like "Nothing can harm me." Finally, all of the volunteers were given a meal voucher, which allowed them to choose either a healthful, organic meal or a full buffet.

The scientists predicted that, because of psychological licensing, those who took the vitamin would choose less healthy alternatives later—and that's just what they found. These volunteers were more interested in pleasurable but risky activities, and less interested in exercise. They also were much more likely to opt for the rich buffet than the healthy meal. What's more, the ones who acted this way clearly did so because their nutritional licensing made them feel less vulnerable to health risks.

The scientists wanted to double-check the licensing idea a different way—this time with actual exercise rather than mere intentions and desires. So they again led some volunteers to think they were taking vitamins, and others that they were taking placebos. Then they asked all of them to help test a pedometer, when in fact they were measuring how far each of them chose to walk. The results, [reported on-line in the journal *Psychological Science*](#), were basically the same: Those who had pumped up their nutritional credentials by taking the vitamins walked less than the others. And what's more, they walked less even after being explicitly reminded about the health benefits of walking. In other words, they felt entitled to laziness because they had popped a vitamin pill.

This is troubling. Earlier studies have shown that people can get a sense of moral license from actual exercise, leading them to eat more—and less healthy foods—afterward. But exercise has known health benefits, so it's at least an honest tradeoff. Vitamins may or may not enhance health—the jury's really still out on that—so it's a cheap and easy way to acquire moral license without any certain benefit. The sense of invulnerability is illusory, yet it feeds a feeling of entitlement to rewards—and not just dietary rewards. It appears that people have a very general concept of their health and well-being, so that a simple vitamin can license misbehavior totally unrelated to nutrition—casual sex and sunbathing and boozing. It's a license for a risky lifestyle, all in a single capsule.

Wray Herbert's book, [*On Second Thought*](#), is about irrational decision making in health, finance and relationships. Excerpts from his two blogs—"We're Only Human" and "Full Frontal Psychology"—appear regularly in *The Huffington Post* and *Scientific American Mind*.