



*There is a commonly held perception that statin medications are so successful, necessary, and safe they should... be put in our water supply.*

## Fifty percent is wrong!

Stuart E. Mirvis, MD, FACR

When you go through medical school you hear a lot about how 50% of what you are learning will ultimately prove to be wrong, but nobody knows which 50%. So as time and knowledge progress, eventually that 50% (or some of it) comes to light. All the while a new 50% takes its place. Some of what is taught as medical gospel can become foolish or dangerous in time. Physicians of the future will look back upon us as barbarians as we similarly may view our less advanced medical predecessors. Probably most disciplines evolve along a similar path. Well understood and nearly universally accepted “scientific truths” in every field can turn out in time to be plumb wrong. Unfortunately, even in our world of instant information transfer and massive electronic pools of data, what was once the common wisdom takes a long time to be questioned, as newer contradictory data shakes up or outright demolishes what was once accepted without question.

So what does all this have to do with the price of eggs in Shanghai? Let’s start our story at a restaurant with 2 couples jabbering away (myself and my wife, Linda; my friend, Howard and his wife, Faye). Of course as we all age, the topic of health issues pops up more and more in our conversations. It turns out Howard had developed muscle aches and general fatigue while

taking a low dose of a statin drug. These symptoms completely resolved when the medication was withdrawn by his physician. He had encountered a well-known statin side effect that’s mentioned in all the commercials. What caught my attention was that the dose of the statin requires a fork-lift to get the pill into my mouth.

After this experience, Howard decided to read a book titled: *The great cholesterol myth: Why lowering your cholesterol won’t prevent heart disease – and the statin free plan that will.*<sup>1</sup> Basically, this book states that statins are really unhealthy drugs and are needed for only a very small part of the population and have some nasty side effects that are unlikely to be mentioned by prescribing physicians. Probably no one would take any drug after being told of *all* the side effects. The book points out that the effectiveness of statins to actually prevent strokes and heart attacks (the ultimate goal of treatment) is way oversold. One statin is reported to lower the heart attack rate by 36%, but what that means is simply that for 100 people taking the drug, there will be 3 heart attacks in the control group and 2 in the medication group. So to prevent one heart attack, 99 people spend a lot of money and risk a lot of side effects.<sup>2</sup> A point from the book, which I like best, is that that one’s dietary habits may not actually correlate

*Dr. Mirvis is the Editor-in-Chief of this journal and a Professor of Radiology, Diagnostic Imaging Department, University of Maryland School of Medicine, Baltimore, MD.*

with his or her blood cholesterol level anyway. Wonderful, alright come to papa you juicy fried Maryland crab cakes!

Cholesterol is, of course, a vital component of cell membranes and a precursor of all steroids and other hormones. Cholesterol is converted to Vitamin D in the skin catalyzed by sunlight. In order to move fats through the watery bloodstream, they need a protective protein covering, which is how the liver packages them for transport. The actual levels of cholesterol and high (good) and low-density (bad) lipoproteins that are the recommended goals of treatment were, in no small part, influenced by the pharmaceutical industry (really?). To see this process in action, I suggest viewing a quick Youtube video.<sup>3</sup>

Despite this editorial, I certainly do not mistrust the pharmaceutical industry (much). We all know most of its products safely treat a lot of illnesses and prolong and improve the quality of our lives. Some products are nothing short of miraculous. But, pharmaceutical companies are businesses with stockholders and need to make profits on the drugs that manage to jump all the hurdles to reach the market, and which require years of research and tens of millions of dollars to create. However, there is a commonly held perception that statin medications are so successful, necessary, and safe, that they should, perhaps said in jest, be put in our water supply. There's lots of new and not so new evidence to the contrary indicating the subject deserves more very robust and transparent scientific scrutiny. It seems we

may be the victims of medical gospel that's part of the 50% that's wrong.<sup>4</sup>

I am certainly no expert or even particularly knowledgeable about this topic, but I know a real controversy when I see one. If statins are a part of your life, which they are for one in 4 Americans 45 or older, you just might want to check out the potential downsides a bit more closely.<sup>5</sup> The references here are a good starting point.<sup>1,2</sup>

P.S. Some experts believe that statin drugs deplete the body of CoenzymeQ10. Remember that one from medical school? It helps run the Krebs cycle powering your cells. A decreased level of CoenzymeQ10 may lead to muscle weakness, soreness, and potentially heart failure. CoQ10 supplements are found in most drug stores.

#### REFERENCES

1. Bowden J, Sinatra ST. The great cholesterol myth: Why lowering your cholesterol won't prevent heart disease – and the statin free plan that will. Fair Winds Press. Beverly, MA. 2012.
2. Mercola J. The cholesterol myth that could be harming your health. <http://www.huffingtonpost.com/dr-mercola-cholesterol-myth>. Updated August 12, 2010. Accessed September 8, 2013.
3. CNBC host recommends statins be put in the water supply. <http://www.youtube.com/watch?v=VmBnaJlQdUw>. Accessed September 8, 2013.
4. Parker-Pope T. Statins in the water? Not so fast. [http://well.blogs.nytimes.com/2008/11/17/statins-in-the-water-not-so-fast/?\\_r=0](http://well.blogs.nytimes.com/2008/11/17/statins-in-the-water-not-so-fast/?_r=0). Updated November 17, 2008. Accessed September 8, 2013.
5. Wehrwein P. Statin use is up, cholesterol levels are down: Are Americans' hearts benefiting? Harvard Health Publications. <http://www.health.harvard.edu/blog/statin-use-is-up-cholesterol-levels-are-down-are-americans-hearts-benefiting-201104151518>. Updated April 15, 2011. Accessed September 8, 2013.

**APPLIED  
RADIOLOGY**

R A D I O L O G I C A L C A S E

## Call for Radiological Cases

*Applied Radiology* is once again accepting radiological cases

for publication in the journal either in print or online.

Visit <http://www.appliedradiology.com/Author-Guidelines.aspx> to download information about our criteria and about how to submit your case for review.