

I hope you read the information presented last time about heart bypass surgery, angioplasty, and Tamiflu. I slanted you in the direction of believing that these procedures are done, or the drug is prescribed for the profit involved and not for the good results.

At the end of the video I said we'd move on to discuss the controversy of several decades ago that tobacco smoke and products cause cancer. This was a hot and heavy fight for a long time with cancer-causing supporters and deniers just like for climate change.

But before we move to tobacco, I'd like to return to heart disease, cholesterols, and Tamiflu to discuss that a little more.

So am I suggesting that there are supporters and deniers involved in these health care issues in the same way there are for climate change? Actually yes! Mainstream medicine and the business community in general believes that high cholesterol is bad for you and that Tamiflu and heart by-pass surgery, angioplasty, and statins are good for you.

How do we sort this out? Well, eventually large scientific studies will help settle the question. In the case of bypass surgery, this has already occurred. The surgery is useful in prolonging life in only about 15% of cases, which can easily be identified clinically. The rest of the bypass surgeries carried out (around 250,000 in the U.S. in 2013) are largely useless despite a cost of around \$100,000 each (over \$2.5 billion total).

I think that most cardiologists are true believers in the efficacy of these procedures and most GP's are true believers that Tamiflu works. Well, these true believers simply aren't keeping up with the scientific literature. Combine that with the tremendous profit involved in all of these and you have the current situation.

The same goes for cholesterol, which, according to Dr. Stephen Sinatra, a board-certified cardiologist, is a "minor player in heart disease." "Cholesterol levels," he says "are a poor predictor of heart attacks. Half the people with heart disease have normal cholesterol."

So why are we all so "cholesterol conscious," and why are we bombarded with information and ads for everything low cholesterol? And why are statins racking up \$26 billion in annual sales when lots of information indicates they have an extremely minor effect in reducing deaths due to heart disease and a raft of huge side effects?

I'll quote Dr. Sinatra again for a clue to a possible answer: "Two hundred years ago physicians routinely bled, purged, and plastered their patients. Bloodletting was the standard treatment for a host of diseases and had been so since the time of the philosopher physician Galen almost 2,000 years before. The theory was that there were four humors—blood, phlegm, black bile, and yellow bile. Blood was dominant, requiring the most balancing for returning an ill patient to health.

"Every doctor's kit was equipped with a variety of lancets, brutal-looking scarificators, and, starting in the early nineteenth century, leaches....learned physicians conferred on the best veins to tap for given disease...and countless protocols dictated the proper amount of blood to be let....Doctors wrote lengthy papers describing their own bleeding techniques and presented them at August medical conferences.

"The whole idea was nonsense, of course, and has been shown to be so in the early 1600's by William Harvey, the discoverer of how the circulatory system actually works. But the facts that the "scientific basis for bloodletting was nonexistent didn't give pause to physicians 200 years ago....in the case of George Washington [they] relieved him of almost two quarts of blood in an effort to treat the throat infection that, coupled with the physician-caused anemia, ultimately killed him.

"Sadly, many doctors today have the same herd mentality as those doctors of yore. By the tens of thousands, they treat a nonexistent disease with drugs that are far from benign. Also they do so based not on any hard scientific data, but because they, like their colleagues of 200 years ago, are firmly in the group think method. What is the nonexistent disease? Elevated cholesterol.

"The vast majority of laypeople have been bombarded with so much misinformation about cholesterol that most take it as a given that cholesterol is a bad thing and that the less they have the better. The reality is that nothing could be further from the truth." End quote.

We could devote an entire course to what drives this sort of misinformation. Profit would come out near the top.

I don't assign much for this course that costs money. But you are well advised to purchase or obtain from the library Dr. Sinatra and Bowden's book "The Great Cholesterol Myth." On Amazon.com, a Kindle copy is \$9.20 and used copies are available for around \$10.

If you have an interest in philosophy you might want to check out Thomas Kuhn's book "The Structure of Scientific Revolutions." He challenges the traditional belief that science progresses in a linear fashion as we gather more and more answers to questions we ask, using the scientific method.

Kuhn believes that science undergoes periodic "paradigm shifts" which open up new approaches to understanding that scientists would never have considered valid before.

So, for example the four humors paradigm of disease gave way to modern medicine, and bloodletting was realized to be stupid and ineffective.

So, for example disease wasn't caused by things like "bad air, as in the case of malaria" but rather by microscopic bacteria and viruses.

So, for example heart disease isn't caused by cholesterol and bad plumbing but by inflammation inside arteries.

So, for example, we cannot continue to pollute the atmosphere with CO<sub>2</sub> from the burning of fossil fuels, and expect nothing to result.

Do you think the people who manufactured bloodletting equipment gave up the four humors theory easily? And what about the doctors who made their living practicing the procedure and noted that their people often recovered?

The people hawking statins and radical surgeries are in the same position in modern times.

To get back to climate change, the present grenade lobbing by climate change promoters and deniers will be silenced eventually by rigorous scientific studies. In the meantime, there is money to be made, not only by those in the fossil fuel industries but also by people promoting "green" technologies.

After a bit of delay, let's take a look finally at the theory that tobacco products, including second hand smoke, cause cancer. While this is accepted and "proven" today, in the 1950's, the question was anything but settled. The tobacco story is kind of a model for how complex science gets hijacked by special interest for a period of years before enough reliable data can be connected to make a secure scientific decision. We can learn a lot from the tobacco story that will help us understand the current climate change debate.