

THE SLIPPERY SLOPE OF MODERN MEDICAL REPORTING – PART III

ALBERT CILIA-VINCENTI

With few exceptions, top scientists publish fewer, but much more important papers – Nobel Prize winners in physics, such as Albert Einstein or Richard Feynman are examples. Why keep repeating studies unless one is unhappy with their findings?

If one continually repeats studies, one is trying to get random chance to back them up, rather than letting science confirm their effectiveness. There may be 1000 studies showing a positive result and 950 showing a negative result, yet the “positives” are considered to prevail. Physicians often think this slight preponderance “proves it works”.

The more studies performed, the greater the random chance of success when there should be failure. In medical statistics, studies are given a “statistical significance” rating, which is the level of confidence in the results. It answers the question: how much of the results are based on chance? A 95% confidence level is often used to show that a certain effect works, but also means there is a 5% probability that the result is due to chance alone – i.e., the “positive finding” would actually be false. A higher level of statistical significance raising confidence to 99% means much more money must be spent in the study, requiring more subjects, and also possibly entailing much more failure.

There have been about 15,000 fish oil studies based on 95% confidence level, meaning that $5\% \times 15,000 = 750$ are truly failed studies which show positive results by pure chance. Therefore one should be wary of such enormous numbers of studies and that a negative finding is much stronger than a positive one.

When there is a desire to prove something, results are often incorrect or misinterpreted. This happens frequently in the nutritional field. Most of the recent more rigorously controlled studies prove fish oil doesn't work as claimed, reversing outdated 20th century findings. The latest is the failure of niacin to lower LDL cholesterol. Robert Giugliano of Harvard Medical School says that in a study of 25,000 people, niacin had not only no benefit, with no reductions in heart attack, stroke or death, but also showed higher risk of bleeding and new onset type 2 diabetes or diabetic complications.¹

Do specific measurements really mean anything? For almost 50 years we have been led to believe that higher blood cholesterol levels accelerate atherosclerosis. Does this mean

cholesterol itself is the problem, or is atherosclerosis actually caused by something else? There are now doubts whether lowering cholesterol with a drug automatically provides health benefits – as we'll see in future articles.

The influenza vaccine has been highly promoted as effective since 1946, but recently this vaccine has been reassessed. By 2020, US health leaders want 80% of the population to be vaccinated annually. This is a multibillion-dollar global business, but how good is the vaccine? Scientists at the Centre for Infectious Disease Research and Policy at the University of Minnesota recently claimed that the vaccine provides only modest protection for healthy young and middle-aged adults, and little if any protection for those over 65, who are most likely to succumb to the illness or its complications.² Moreover, the report's authors concluded that the expansion of vaccination recommendations was based on inadequate evidence and poorly executed studies. Michael T.

Osterholm, director of both the Centre for Infectious Disease Research and Policy and of its Centre of Excellence for Influenza Research and Surveillance, states that “we have over-promoted and overhyped this vaccine. It does not protect as promoted. It's all a sales job and public relations”. He continues, “I'm an insider. Until we started this project, I was one of the people out there heavily promoting it. It was only with this study that I looked and said, what are we doing?”

Dr Osterholm said the authors discovered a recurring error in influenza vaccine studies that led to an exaggeration of the vaccine's effectiveness. They also discovered 30 inaccuracies in the statement on influenza vaccines put forth by the expert panel that develops vaccine recommendations, all of which favour the vaccine.

Medical researchers, just like professionals in other fields, are often highly motivated by status and rewards, and are often not objective. They can dogmatically defend an incorrect idea, even if they didn't originate it. Researchers linked to multi-billion industries are a particular risk to transparent correct science. ❌

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REFERENCES

1. Giugliano RP. Niacin at 56 years of age--time for an early retirement? *N Engl J Med.* 2011 Dec 15;365(24):2318-20.
2. Osterholm, MT et al, “Efficacy and effectiveness of influenza vaccines: a systematic review and meta-analysis”, *The Lancet*, vol 12, Jan 2012, p36-44.