Why People Think Science is Fraud Transcript

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Introduction: Why Trust in Science Has Eroded

For nearly two decades, Alzheimer's research has been dominated by what's called the amyloid hypothesis. The idea that the buildup of amlyloids beta protein plaques in the brain is the primary driver of the disease.

Working alongside top protein tangles, which are the other major hallmark researchers look at. Welcome to Health Breakthroughs with Dr. Stengler. I'm Dr Mark Stegler and each episode we cut through the noise to bring you practical, science-backed insights for more energy, better health and a life that feels like yours again.

Hey everybody, great to be with you. If your trust in science and medicine has taken a real hit over the last few years, you're not alone. Survey after survey shows that public confidence in scientific institutions has dropped dramatically, especially since COVID.

And honestly, as someone who's spent my entire career in healthcare, I think a lot of that skepticism has been earned. So today I want to walk you through some of the real reasons behind the lack of confidence in science because of what people have experienced.

Going through documented cases of fraud, manipulation, conflicts of interest, and other reasons why the most respected journals in the world have become suspect.

We're going to look at how common fraud actually is in medical research, a landmark Alzheimer's case that may have shaped two decades of research funding, some of the most infamous COVID-era attractions, the role pharmaceutical money plays in what gets published, and take a deep dive into one of most prescribed classes of drugs in the world, antidepressants.

Also, I'm going review a controversial 2025 genetics paper. what the data really shows about how we're so different from other supposed ancestors. And also look at some scary vitamin and cancer headlines that fell apart once you look deep at the fine print like I've done.

My goal isn't to make you throw out science altogether, but to help you become more informed, more critical of it. You've done everything you were told to do and something still feels off.

Health Breakthroughs with Dr. Stengler, we go beyond symptom management to explore integrative, science-backed approaches to the issues that medicine too often overlooks.

Retractions, Fraud, and Paper Mills in Research

Chronic fatigue, brain fog, gut dysfunction, inflammation, hormone imbalance, and healthy aging. If you're ready for real answers and practical tools to support your health naturally, follow Health breakthroughs of Dr Stegler on Doctor Talks or wherever you listen to podcasts.

Let's start with the numbers, because they're honestly staggering. In 2023, more than 10,000 scientific papers were retracted worldwide. According to the publication Nature, a new annual record and more the total number retract in the three years from 2020 to 2022 combined.

For example, in 2024, another 9,000 plus retractions followed, and 2025 was on pace for thousands more. Researchers who study this, including the team behind the Retraction Watch database, say this is just a tip of the iceberg because most fraudulent papers are never caught at all.

And the reasons behind these retraction are telling. A large share are linked to what are called paper mills. businesses that sell fake research, fabricated data, and even authorship slots to researchers who need

publications for career advancement.

Thousands more retractions have been tied to compromised peer review, where reviewers and editors essentially rig the system. An older analysis of more than 2,000 retracted biomedical papers found that 43% were due to fraud or suspected fraud, with research misconduct as a share of all retractions increasing roughly tenfold since the 1970s.

So when people say trust of science, it's worth remembering that science is a human institution. Really, some methodology used by humans. And like any human institutions, It has a real and growing fraud problem.

One that even the people running these databases openly call alarming. So let's talk about the pharmaceutical industry's influence on research. Now this is something that doesn't always involve outright fraud, but is arguably even more pervasive, that is the influence of pharmaceutical companies funding on what gets studied, what is published, and how results get framed.

A major Cochrane review, one of the gold standards for evidence synthesis, pulled data from more than 8,000 clinical trials and found that industry-funded studies were about 27% more likely to report favorable efficacy results and about 34% percent more like to reach favorable overall conclusions compared to independently funded research.

And here's the interesting part. This wasn't because the industry-funded trials had worse methodology. In fact, on paper, they often looked just as rigorous, sometimes even better designed in terms of blinding.

The researchers concluded that there is a bias here that simply can't be explained by standard quality checks. Funding source itself appears to shape outcomes.

A more recent study took this even further by comparing trials where the exact same two drugs were tested against each other, with the only difference being who paid for the study.

Pharmaceutical Funding and Publication Bias

The example researchers point to is the antidepressant Effexor versus Prozac. When EffExor's manufacturer funded the trial, EffXor came out looking better in 12 out of 14 studies.

But in the handful of trials funded by other sources, that pattern flipped. Only one out three found EffExor superior. Same drugs, same comparisons. widely different results depending on who was footing the bill.

And this goes beyond just funding outcomes. Investigations have documented how pharmaceutical companies sometimes use ghost writers for studies that are then signed by academic researchers, how unfavorable trial results often simply never get published at all, and how companies have, in some documented cases, actively tried to block publication of studies, that made their products look bad.

One review of the New England Journal of Medicine found that out of 73 new drug studies, a pharmaceutical company funded 60 of them, half had drug company employees as co-authors, and the majority of lead researchers had taken money from a drug companies.

That's not necessarily proof of wrongdoing in any individual case, but it paints a picture of just how intertwined industry money is with the research that ends up shaping clinical guidelines and ultimately what your doctor recommends to you.

Now let's get into a specific case that I think illustrates just how much damage one fraudulent paper can do. And this one is connected to Alzheimer's disease, one of the most devastating and costly conditions in modern medicine.

For nearly two decades, Alzheimer's research has been dominated by what's called the amyloid hypothesis. The

idea that the buildup of amlyloids beta protein plaques in the brain is the primary driver of the disease.

Working alongside top protein tangles, which are the other major hallmark researchers look at. In 2006, a study published in the prestigious journal Nature, led by neuroscientist Lesney, claimed to identify a specific amyloid beta protein assembly as a direct cause of memory loss in mice.

This paper became one of the most cited Alzheimer's studies in history. cited in roughly 2,300 other papers, and it helped funnel hundreds of millions of dollars in NIH funding towards amyloid-focused research every single year.

Then in 2022, a science magazine investigation, prompted by a whistle-blowing neuroscientist named Matthew Schrag, found evidence that key images in that 2006 paper called Western Blots appeared to have been digitally manipulated to better support the hypothesis.

Once investigators started looking closer, they found similar red flags across more than 20 of Lesnay's other papers. In 2024, the original 2006 paper was formally retracted, becoming the second most highly cited paper ever retract in scientific history.

Now, to be fair, most researchers in the field say this one paper didn't single-handedly create the amyloid hypothesis. There are many other studies pointing that direction too, but here's the part that should concern all of us.

For nearly 18 years, failures to replicate this work were largely ignored.

The Alzheimer's Amyloid Hypothesis and the Lesnu00e9 Retraction

The lead researcher kept receiving multi-million dollar grants and an enormous share of Alzheimer's drug development, drugs that ultimately failed in clinical trials.

This was built on a foundation that included fabricated data. Meanwhile, alternative angles, including top-focused approaches, vascular contributions, neuroinflammation, arguably didn't get the attention or funding they deserve.

This is a case where fraud didn't just embarrass one scientist, it may have shaped the direction on an entire field of medicine and the patients waiting for treatments for two decades.

Now let's move to the COVID-19 fiasco because this is where a lot of people's trust really started to crack. And that includes not just the population, but also many doctors and researchers.

There are so many things that one could talk about from the misleading statement that those vaccinated would not spread the disease to the six feet distancing to promoting vaccination to healthy children without any research.

And let's talk about published data known as the Surgeosphere scandal. In May 2020, in the early chaotic months of COVID-19, two papers were published using data from a company called Surgesphere.

One in The Lancet and one in New England Journal of Medicine. Two of the most prestigious medical journals on the planet. The Lancet paper claimed that hydroxychloroquine, a drug that had become politically and publicly controversial, significantly increased the risk of death in COVID-19 patients.

The single paper was so influential that the World Health Organization temporarily halted global clinical trials of the drug. But almost immediately, independent scientists started raising red flags.

The numbers in Surgesphere's supposed database of tens of thousands of patients across hundreds of hospitals worldwide didn't add up. Some of the reported patient counts exceeded the actual number of COVID cases in those countries at the time.

When the reviewers were asked to audit the raw data, Surgeon Sphere refused to hand it over. Within about two

weeks, both papers were retracted, and the World Health Organization resumed its trials.

The retraction notice itself admitted the authors could no longer, quote, vouch for the racity of their primary data sources, unquote. Here's the kicker, though.

Even after the retraction, researchers found that one of these papers was still being cited by other scientific articles hundreds of times afterward. Because retractions don't always catch up with how fast bad information spreads, especially once it's shaped public health policy, and media coverage.

This episode showed millions of people in real time just how fast unverified data could move from a sketchy company into two of the most trusted journals in the world and into the World Health Organization decision all in a matter of weeks.

Let's bring this conversation closer to home because this next example touches millions directly anti-depressants. One of the most influential investigations here came from psychologist Irving Kirsch and his colleagues.

Their 2008 study titled Initial Severity in Antidepressant Benefits, a meta-analysis of data submitted to the Food and Drug Administration. and this was published in the journal PLOS Medicine.

Instead of looking only at studies that appeared in medical journals, Kirsch's team obtained both the published and unpublished antidepressant trials that pharmaceutical companies had submitted to the FDA for approval.

The results shocked a lot of people. Kirshner's team found that roughly 82% of improvement seen in patients taking antidepressants was also seen patients in taking a placebo, which of course are pills with no active medication at all.

COVID-Era Journal Scandals and the Surgisphere Case

The average difference between antidespressant and placebo was still statistically significant, but much smaller than many doctors and patients had been led to believe.

Even more striking for people with mild to moderate depression, that benefit often failed to reach the threshold the United Kingdom's National Institute for Health and Care Excellence uses to define a clinically meaningful improvement.

It was really only among people of very severe depression that antidepressants showed a more substantial advantage over a placebo. Then another landmark study raised even more questions.

That same year, Eric Turner and his colleagues published a paper called Selective Publication of Anti-Depressant Trials and Its Influence on Apparent Efficacy in the New England Journal of Medicine.

They compared the anti-depressants trials that had been submitted to the FDA with the studies that eventually appeared in medical journals, and the pattern was striking.

Nearly all of the positive trials were published, while many of negative studies either remained unpublished or were written up in ways that made the results look positive.

As a result, Turner's team concluded that the medical literature had exaggerated the apparent effectiveness of antidepressants by roughly 32%. Hey everybody, I want to take just a quick moment and invite you to my website drstengler.com.

Here we have the supplements that we've been using with our patients for many, many years. High quality and high potency supplements, very pure. So, if you're looking for high quality supplements where you can notice a difference, both in how you feel and on your lab tests, go to our website at dr.stegler dot com.

At this point, some people understandably conclude that anti-depressants didn't work at all. But the story doesn't end there. A decade later, in 2018, Andrea Cipriani and a large international team published a paper called Comparative Efficacy and Acceptability of 21 Anti-Depressant Drugs for the Acute Treatment of Adults with Major Depressive Disorder in the Lancet.

one of the largest analyses ever performed on this topic, pulling together 522 clinical trials involving more than 116,000 patients. Their conclusion was that every single antidepressant studied performed better than placebo, but the differences were generally modest rather than dramatic, and a large share of patients still didn't respond to treatment at all.

So where does that leave us? Not at antidepressants are sham and not at anti-depressants or miracle drugs either. The honest evidence-based middle ground is something closer to this.

These medications do on average outperform placebo, especially for more severe depression.

Antidepressants: Published vs. FDA Trial Data

But for a lot of people with milder symptoms, the real world benefit appears to be smaller than decades of marketing and even well-meaning clinical guidance that's been suggested.

And notice what it took to get an accurate picture here. It wasn't a retraction. it wasn' t a whistleblower exposing fabricated images. t was independent researchers going around the published literature entirely employing the raw trial data straight from the FDA.

Once again, the full picture only emerged once people went looking at the data that never made it into a journal in the first place. Now I want to bring up a more recent example and it involves genetics because I think it highlights how the most important numbers in a major scientific paper can end up being tucked away where almost nobody will read them.

In May 2025, Nature published a paper called Complete Sequency of Ape Genomes. Now, for decades, the figure most of us have heard is that humans and chimpanzees share about 99% of their DNA, sometimes phrased as only 1% different.

That statistic has been repeated in textbooks, museum exhibits, and documentaries for years. The new paper, however, used complete, gap-free, end-to-end genome sequences for the first time.

And the results tell a very different story. But you have to go looking for them. The main 17 page article does not state a simple overall percent difference figure between humans and chimpanzees.

Instead, that number is buried inside a separate 173 page supplementary information document and tables numbered 3.19 and 3.20. When you pull those numbers out here's what they show.

For the autosomes, that is the regular non-sex chromosomes, the gaps alone, meaning stretches of DNA that don't even line up between the two species, accounts for somewhere between 12.5 and 13.3 percent difference.

When you add in the single letter differences within the parts that do line up, the total divergence between the human and chimpanzee autosomes comes out somewhere between 14 and 15%. That's roughly 14 to 15 times higher than the famous 1% figure.

In addition, if you look at the Y chromosome, the similarity was only 12.4%, so a major difference. So you have a 2025 paper published in one of the most prestigious journals on the planet, reporting that humans and chimpanzees are roughly 14 to 15% different across the autosomes, and even more different on sex chromosomes by high magnitudes.

And that headline number doesn't appear anywhere in the main text in that main paper.

Genetics Claims and the Human-Chimpanzee DNA Gap

For a finding of this magnitude on a statistic that has been quoted in classrooms and documentaries for 40 years, it's reasonable to ask why the actual comparison wasn't placed front and center in the paper itself, rather than requiring readers to dig through more than 100 pages of supplementary tables to find it.

So at one point, you may have heard that vitamin E causes cancer, or that beta carotene, the supplement, increases lung cancer risk. But here's the twist, and the details matter a lot.

Take the SELECT trial, a massive study with over 35,000 men, published in JAMA back in 2011. It found that men taking 400 IUs of vitamin E every day had about a 17% higher risk of developing prostate cancer compared to men on placebo.

Sounds alarming, right? But here's the catch. The vitamin used in that study was a synthetic lab-made version called DL-alpha-ticarferol. The DL is the giveaway.

It means the supplement was actually a mix of eight different molecular versions and only one of those eight is to form your body actually recognizes as natural vitamin E.

In other words, it's not in the foods you eat and it is actually not even the type you find in vast vast majority of supplements. So when headlines say that vitamin E causes cancer, what they're really describing is one specific synthetic form, giving it high doses to a general population and not anywhere near what you'd find in the structure of natural vitamin D most people are using as a supplement.

A similar story plays out with beta-carotene. Two major trials, the ATBC study and the CARET study, both published in the New England Journal of Medicine in 1990s, found that high dose beta caroten supplements actually increased lung cancer rates.

in one case by 18% plus higher overall mortality. But again context is everything. These studies were done specifically in heavy smokers and asbestos workers.

People already at high risk for lung cancer and the beta-carotene used was it was a synthetic. It was a synthetic version used at very high doses. So that's quite different from the mix of natural carotenoids you'd get from food or what's typically used in carots blends in supplements today.

Before we see beta caroten causes cancer, it's worth asking which beta-carotene at what dose and in whom. Putting all this together, a record-breaking number of retractions, A two-decade Alzheimer's research scandal involving doctored images, A pandemic-era fraud case that influenced the World Health Organization policy within weeks.

Well-documented financial bias running through pharmaceutical-funded research.

Vitamin E, Beta-Carotene, and Misleading Supplement Headlines

And also a deep dive into antidepressant data that only became clear once researchers went straight to the FDA data. A landmark genome paper that buried its most newsworthy numbers in a 173-page supplemental.

a major finding in terms of genetics and uniqueness of human DNA. And how about a pair of vitamin trials whose scary headlines about vitamin E and beta carotene left out the crucial details about the formulation's dose and who's actually being studied.

It's not hard to see why public trust has eroded. But here's what I want to leave you, because don't think the answer is just to throw your hands up and reject science altogether.

Science is actually a methodology, but the information that's given out to people comes from scientists and from

journals. So the same systems that allow this fraud to happen are also the systems, that caught it in many cases.

Whistleblowers, image forensic experts, independent researchers, auditing the data, and investigative journalists that outlooks at different outlets. and groups like Retraction Watch.

So there are ways to self-correct this process, but let's face it, it is messy and it's quite tangled up. What do we do? We need to be critical readers.

Look at who funded the study, look at whether it's been replicated by independent groups. When you see a scary supplement headline, ask what the formula of supplement being used was, what was the dose, and what population the studies actually was used with, as we saw with the vitamin E and beta carotene studies.

How to Read Science Critically and Final Takeaways

Those details can completely change what a finding means for you. Be especially cautious of single studies that get huge media coverage right away, especially during a crisis.

And don't assume that because something appears in a famous journal, it's automatically beyond question. Some of the most damaging cases in this video happened in the prestigious journals in Subscribe for more content like this and let me know in the comments which of these topics you'd like me to go deeper on.

I've got many videos on different topics within medicine, nutrition, and integrative medicine. And I look forward to sharing another one with you in near future.

Thanks for listening to Health Breakthroughs with Dr. Stengler. If today's episode resonated with you, please follow the show, share with someone who needs it, and leave a review.

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