

The Top 16 Junk Science Stories of 2016



By Alex Berezow, PhD — November 30, 2016



If you're anti-science, we will make goat noises at you. (Shutterstock) [1]

Junk science is everywhere. Just today, it was [reported](#) [2] that President-Elect Donald Trump had a meeting with the anti-vaccine fraud Andrew Wakefield, who claimed that Mr Trump is "open-minded" about the issue.

This is why our mission is so important. People in power often have a poor grasp of science. If journalists and advocates don't speak up for good science, cranks and quacks will take over.

As part of our ongoing effort to eradicate pseudoscience, here is a list of the top 16 junk science stories we debunked in 2016.

#16. Olympic athletes should not be cupping. Remember seeing those [nasty red welts](#) [3] all over Michael Phelps's body? He and many other athletes were engaging in a practice called cupping, in which suction cups are placed on the body to supposedly relieve soreness. The red welts form because blood vessels burst. This is a terrible idea, akin to being kicked in the groin. There is absolutely [no evidence](#) [4] to support this "traditional remedy."

#15. Firewalking isn't about "mind over matter." Motivational speaker Tony Robbins believes in the [magic of firewalking](#) [5]. Unfortunately, the "ability" to firewalk is more about physics than positive thinking. If you do it incorrectly, you can limp away with second- or third-degree burns.

#14. A jury thinks baby powder causes cancer. There is a reason scientists and lawyers often do not get along. The former live in a world full of uncertainty, and the latter exploit that. In the latest example of lawyers using science against scientists, [attorneys convinced a jury to award a woman \\$70 million](#) [6] by drawing a false connection between the use of baby powder and her ovarian cancer.

#13. Your endocrines aren't being disrupted. The latest bandwagon upon which chemophobic fearmongers are jumping is so-called "endocrine disruptors," which are claimed to interfere with our hormones. A study can be found linking pretty much anything to endocrine disruption. [Bisphenol A](#) [7]? Check. [Fracking](#) [8]? Check. [Triclosan](#) [9]? Check. [Green tea](#) [10]? Check. [Salt](#) [11]? Check. [Marijuana](#) [12]? Check. It's safe to say that, in 2016, we have hit Peak Endocrine Disruption.

#12. The Food Babe is lying again. Of course, that's like saying, "The sky is blue," or, "Haters gonna hate." This time, Vani Hari is worried about glyphosate, and she manages to [butcher the science](#) [13] yet again. We pointed this out to her, and [she blocked at least one of us on Twitter](#) [14]. Even [WebMD](#) [15] isn't immune to publishing shoddy articles on food.

#11. Anti-science activists cyberbully scientists into submission. Anti-science activists have turned their "[keyboards \[into\] weapons of mass defamation](#) [16]." Most recently, cyberbullying tactics have been deployed against biotech scientists. Kevin Folta's saga serves as a terrifying reminder of the extent to which unhinged activists will go to intimidate and destroy scientists personally and professionally.

#10. The *New York Times* published an anti-GMO propaganda piece. Science coverage in the *New York Times* is, quite frankly, embarrassing. The paper regularly features articles from anti-GMO food activists, such as [Michael Pollan](#) [17] and [Mark Bittman](#) [18]. Their diatribes, however, constitute first-rate journalism compared to a [propaganda piece](#) [19] written by Danny Hakim, in which he cherry-picked evidence to downplay the benefits of GMOs and compared pesticides to Nazi-made sarin gas. Because of such shabby journalism, perhaps we should not be surprised that Clinton campaign manager [John Podesta believes GMOs cause migraines](#) [20] and the NY State Parent-Teacher Association [considered](#) [21] banning GMOs from school food.

#9. March Against Monsanto reveals itself to be an anti-vaccine conspiracy movement. Scientifically literate people were never fooled by MAM; its anti-Monsanto opinions were rooted in a fear of genetic engineering. With Monsanto being bought out by Bayer, however, the movement needs a new bogeyman. And it found one in [vaccines](#) [22], which it blames for microcephaly and every other evil under the sun. Vaccine preventable diseases continue to spread in large part because of this anti-vaccine propaganda. One [negligent parent with shingles](#) [23] gave chickenpox to nine children.

#8. JAMA goes political. The Journal of the American Medical Association continues gambling with its reputation. This year, it published an article by President Barack Obama, in which he [analyzed and applauded the impact of his own healthcare policy](#) [24]. The article was essentially not peer reviewed and met the very definition of a conflict of interest. *Current Biology* also made an unfortunate foray into politics. The journal published a [hysterical article](#) [25] on the scientific consequences of Brexit.

#7. Several cities pass a soda tax. "Big Soda" has been demonized as the new "Big Tobacco." While there is no such thing as smoking in moderation, a person certainly can consume soda in moderation. Yet, common sense failed to convince voters in several U.S. cities, which implemented taxes on soda and sugary drinks. Of course, [fruity yogurt, mangos, grape juice, and vanilla lattes](#) [26] all have about as much, if not more, sugar as soda, but pesky facts didn't matter in these politically motivated campaigns.

#6. Pre-diabetes is not a real medical condition. The CDC, generally an excellent public health organization, whiffed on this one. It believes that 86 million Americans suffer from pre-diabetes. The problem, elaborated by ACSH President Hank Campbell in [Chicago Tribune](#) [27], is that pre-diabetes isn't a real medical condition. Half the people given that diagnosis revert to normal blood sugar levels. A pre-diagnosis with no predictive value is completely worthless.

#5. E-cigarettes do not lead to cigarette smoking. Many who are opposed to e-cigarettes believe that they will serve as a "gateway" to actual cigarettes. This is a bizarre argument, considering that the once widely believed claim that marijuana is a gateway to hard drugs has been debunked. Similar research holds true for e-cigs, as well; there [does not appear to be a trend of vapers adopting cigarettes](#) [28].

#4. Bill Maher and Robert F. Kennedy, Jr say the darndest things. Two of the most high-profile anti-science cranks in America continue to spew garbage. Anti-vaccine, anti-Western medicine [Bill Maher lectured America](#) [29] on the importance of knowledge, while anti-vaxxer [RFK, Jr joined the Dakota Access Pipeline protests](#) [30], despite the fact that pipelines are about 4.5 times safer than rail. We eagerly await the wisdom that these two giants of the Enlightenment will bestow upon us in 2017.

#3. Crazy Joe Mercola hits rock bottom... we think. Crazy Joe Mercola never misses an opportunity to display his complete ignorance of science. In this year alone, he: (1) claimed Zika-linked microcephaly is not caused by a virus but by [vitamin A deficiency](#) [31]; (2) appears to [prefer that people get bitten by disease-carrying mosquitoes](#) [32] rather than use DEET; and (3) displayed that [he does not understand basic chemistry](#) [33]. If 2016 isn't the lowest point in "Doctor" Mercola's career, we fear for what the future might hold.

#2. Polling isn't science. Pollsters have had a couple of bad years. They missed Brexit and wrongly predicted the 2016 presidential election. There's a good reason for this: [Polling isn't science](#) [34], though many pundits pretend that it is. At its best, polling is very good guesswork; at its worst, polling produces [biased results](#) [35] that can mislead the public. One of the biggest peddlers of the predictive power of polling is Nate Silver. It is hard to imagine how his unearned sage-like reputation will recover after 2016.

#1. A chiropractor kills a young woman. A young, single mother went to a chiropractor for a "neck manipulation." After about 72 hours, [she was dead](#) [36]. Don't go to chiropractors. And [don't take your babies to them](#) [37], either.

Phew! That was just the pseudoscience we debunked in 2016 alone!

Here at ACSH, our motto is: "Science. Not Hype." Since 1978, we have promoted evidence-based science and health, while debunking junk. We look forward to continuing this work in 2017 and beyond!

COPYRIGHT © 1978-2016 BY THE AMERICAN COUNCIL ON SCIENCE AND HEALTH

Source URL: <https://www.acsh.org/news/2016/11/30/top-16-junk-science-stories-2016-10509>

Links

- [1] <http://www.shutterstock.com/pic-339451460/stock-photo-funny-goat-head-of-silly-looking-black-goat-closeup-portrait-with-shallow-depth-of-field.html>
- [2] <https://www.statnews.com/2016/11/30/donald-trump-vaccines-policy/>
- [3] <http://www.cnn.com/2016/08/08/health/cupping-olympics-red-circles/>
- [4] <http://acsh.org/news/2016/08/10/cupping-and-other-performance-enhancing-utensils>
- [5] <http://acsh.org/news/2016/06/28/magical-moron-moments-burn-your-feet-with-tony-robbins>
- [6] <http://www.usatoday.com/story/opinion/2016/11/17/jackpot-verdicts-junk-science-ovarian-cancer-talcum-powder-column/93451262/>
- [7] <http://www.acsh.org/news/2015/07/13/no-bpa-is-not-altering-the-genes-in-your-placenta>
- [8] <http://www.acsh.org/news/2014/12/08/fracking-newest-endocrine-disruptor-term-meaning>
- [9] <http://www.acsh.org/news/2016/09/04/antibacterial-soap-ban-right-move-wrong-reason-9980>
- [10] <http://www.acsh.org/news/2015/12/09/green-tea-said-to-be-an-endocrine-disruptor-next-mothers-milk>
- [11] <http://acsh.org/news/2016/11/23/salt-new-endocrine-disruptor-please-10467>
- [12] <http://acsh.org/news/2016/06/30/psst-nrdc-stoners-your-endocrines-are-disrupted>
- [13] <http://www.acsh.org/news/2016/11/21/glyphosate-os-most-important-meal-day-10455>
- [14] <https://media.giphy.com/media/134CbbASMeRPDa/giphy.gif>
- [15] <http://acsh.org/news/2016/09/08/webdumb-swallows-stupid-food-scares-10126>
- [16] <http://acsh.org/news/2016/10/05/cyberbullying-strategy-destroy-scientists-10263>
- [17] <http://acsh.org/news/2016/11/30/how-michael-pollan-victimizes-small-farmers-10501>
- [18] <http://www.acsh.org/news/2015/09/14/let-them-eat-kale-bittman-bids-farewell-to-the-new-york-times>
- [19] <http://acsh.org/news/2016/10/31/gmo-crops-attacked-knowledge-resistant-nyt-journalist-danny-hakim-10385>
- [20] <http://acsh.org/news/2016/10/12/wikileaks-reveals-hillary-clinton-campaign-manager-john-podesta-believes-gmos-cause>
- [21] <http://acsh.org/news/2016/09/16/science-literacy-under-assault-anti-gmo-propaganda-invades-ny-state-parent-teacher>

- [22] <http://acsh.org/news/2016/09/19/march-against-monsanto-now-anti-vaccine-conspiracy-movement-10186>
- [23] <http://acsh.org/news/2016/09/09/parent-shingles-gives-chickenpox-their-unvaccinated-kids-10142>
- [24] <http://www.latimes.com/opinion/op-ed/la-oe-berezow-hartsfield-obama-jama-20160718-snap-story.html>
- [25] <http://acsh.org/news/2016/08/10/current-biology-another-science-journal-goes-political>
- [26] <http://acsh.org/news/2016/09/29/san-francisco-soda-tax-feel-good-policy-based-junk-science-10226>
- [27] <http://www.chicagotribune.com/news/opinion/commentary/ct-prediabetes-diabetes-pharma-epidemic-perspec-0801-jm-20160729-story.html>
- [28] <http://acsh.org/news/2016/08/16/e-cigarettes-make-smoking-seem-abnormal>
- [29] <http://acsh.org/news/2016/11/04/anti-vaxxer-bill-maher-preaches-importance-knowledge-10407>
- [30] <http://acsh.org/news/2016/11/18/anti-vaxxer-robert-f-kennedy-jr-joins-dakota-pipeline-protest-10453>
- [31] <http://acsh.org/news/2016/08/17/joe-mercola-hits-a-new-low-saying-zika-is-caused-by-vitamin-a-deficiency>
- [32] <http://acsh.org/news/2016/07/20/is-deet-bad-for-you-a-very-good-time-to-know>
- [33] <http://acsh.org/news/2016/06/13/pour-me-a-nice-frosty-mug-of-antifreeze>
- [34] <http://acsh.org/news/2016/11/07/nate-silvers-chance-winning-election-forecasts-are-complete-nonsense-10414>
- [35] <http://acsh.org/news/2016/08/26/gallup-poll-great-example-of-how-to-bias-a-social-science-study>
- [36] <http://www.acsh.org/news/2016/10/20/if-you-think-chiropractors-cant-kill-you-think-again-10334>
- [37] <http://acsh.org/news/2016/07/29/why-not-just-throw-babies-under-steam-rollers>