

The Top Ten Unfounded Health Scares of 2010

By ACSH Staff — December 29, 2010

Introduction

As the year draws to a close, some of us will be reminded that olde acquaintance should not be forgot. So, before we can officially commence the New Year, the American Council on Science and Health (ACSH) would like to reflect upon this year past. We'd especially like to spend an extra moment considering what we hope the world will eventually learn to forget the most unfounded health scares of 2010.

What were these? Not all of them were so novel. Just as old habits die hard, old scares don't seem to disappear easily either, and some headlines that received noted media attention in years past have reared their ugly heads once more in this current publication of our annual list of health scares.

But whether old or new, the hoaxes and frauds haven't left us.

After all, with greater tools at their disposal, like Twitter, blogs and Facebook, activist groups have amped up their fear-mongering. In this way, they distract parents from the real threats their children face by hyping non-existent dangers of everyday products like toys, cosmetics, rubber duckies and shower curtains. Phobias about these innocuous products are based on findings that trace amounts of certain supposedly toxic chemicals from which they are made may be found in our blood or urine. Through these claims radical environmentalists take advantage of the new-found ability of investigators to measure chemicals within our bodies in such miniscule quantities as parts per trillion. That this method of analysis lacks any toxicological validity is not a concern to the activists though it should be to the rest of us.

In addition, we remind our readers that correlation does not prove causation. Just because the presence of a particular substance or chemical is found in the body, it does not mean that it causes a negative health outcome. Also, don't forget that the results concluded from animal studies cannot be directly extrapolated to humans.

So...please read the following list, and remember that this is meant to reassure Americans that our health and well-being, and that of our children, is not really under attack by insidious exposures to chemicals, toys and vaccines though it may be from the activist groups that promulgate these fallacies.

1. Bisphenol-A

The (Unfounded) Scare: *Bisphenol-A (BPA) has been in use for over five decades in the manufacturing of certain life-saving medical devices as well as in baby and water bottles, dental devices, eyeglass lenses, DVDs and CDs and other electronics. In addition, it has been used to coat the inside of nearly all metal food cans to protect consumers against deadly illnesses like botulism. Despite its widespread use and demonstrated safety, certain activist groups have*

deemed BPA an endocrine disruptor that causes cancer, developmental abnormalities, diabetes, heart disease, infertility, obesity, early puberty and is a risk factor for breast cancer.

Origin of the Scare: Ever since a 2008 study published in the *Journal of the American Medical Association* found that elevated levels of BPA in adult urine were associated with a higher risk of cardiovascular disease and diabetes, numerous environmental activist organizations such as the U.S. Public Interest Research Groups (PIRG), the Environmental Working Group (EWG), and the Natural Resource Defense Council (NRDC) as well as some breast cancer organizations and even certain academics have published reports falsely linking BPA to a slew of health maladies. Most recently, a report issued by The Washington Toxics Coalition and Safer Chemicals Healthy Families claimed that dollar bills they tested contained trace levels of BPA and found that 50 percent of thermal paper receipts, gathered from retailers in 10 different states and Washington, D.C., also contained BPA.

Media Coverage: Seven states have instituted a ban on the use of BPA for the sale and manufacture of baby bottles and sipping cups. In the past year, the European Union has implemented similar measures, though Canada has taken the most extreme stance by labeling the chemical as toxic, even though such a move would not be based on the best available data and scientific knowledge, Dr. Steven Hentges of the American Chemistry Council said in a letter to Environment Canada.

Newspaper articles have run rampant over the BPA craze in the past year and have inspired public fear over the alleged dangers of important medical procedures such as dental sealants. Even though the American Dental Association insists there's no basis for health concerns relative to BPA exposure from any dental material, the *Chicago Tribune* quoted Dr. Frederick vom Saal, a leading force behind the anti-BPA movement, as stating that the lack of information available about the composition of different dental sealants and their connection to BPA is a "big problem."

Following continued media coverage over the BPA scare, the EPA added BPA to its list of chemicals of concern and the agency said it would assess the chemical's potential environmental impact. After declaring the widely used plastic component safe in 2008, the FDA also said in January it would invest \$30 million into an 18 to 24 month study to conduct more research on BPA in animals and humans.

ACSH's Perspective: ACSH responded to this year's round of BPA scares with ACSH founder and president Dr. Elizabeth Whelan's castigation of the *Harvard Public Health Review's* article *How Dangerous Are Plastics?* Dr. Whelan writes that the article is a disgrace to the science of public health because it places at center stage purely hypothetical health risks from plastics-related chemicals called BPA (bisphenol-A) and phthalates.

ACSH advisor Robert L. Brent, M.D., Ph.D., distinguished professor of pediatrics, pathology and radiology at the Jefferson Medical College, duPont Hospital for Children, Wilmington, Del., followed up with another publication in which he criticized a BPA report by the National Workgroup for Safe Markets for prompting scary news stories. Dr. Brent filled in the gaps with overwhelming scientific evidence pointing to the conclusion that at current human exposure levels, BPA is not toxic and specifically is not linked to the various diseases outlined in the National Workgroup for

Safe Markets report. Studies by the FDA of the U.S. population have found only trace levels of BPA present in our bodies. The FDA has also stated that these levels are not dangerous in rats or humans.

After several states began banning BPA from children's products in 2010, Dr. Whelan offered her critique on *Dispatch*, expressing, "This is frightening for our country's future that a small, well-funded group of activists can scare politicians into banning a safe, useful, 50-year-old chemical. Where will it stop? If they can take down BPA, they can get the EPA to prohibit anything."

The Bottom Line: Special interest groups, in collaboration with various environmental activist groups, have wrested control of the truth about BPA from science to serve their own goals and garner greater media attention. Predictably, the media is jumping aboard this bandwagon by publishing controversial and unfounded studies indicting BPA. Even many private companies bought into this propaganda and have already begun to voluntarily reformulate their products as BPA-Free. While activists rejoice, ACSH would like to point out that the replacement chemicals used in these BPA-free goods have not been thoroughly researched and could pose an actual health threat rather than the well-studied BPA. While fulfilling their own political and ideological agendas, the anti-BPA do-gooders may actually be putting the public at greater risk.

2. E-Cigarettes

The (Unfounded) Scare: *E-cigarettes, an odorless and flameless clean nicotine delivery system, contain carcinogens such as diethylene glycol and nitrosamines that pose a health risk to the user. Due to their uncanny appearance to regular cigarettes, certain public health regulators believe they will encourage others to continue smoking.*

Origin of the Scare: Earlier this year, the FDA decided to treat e-cigarettes as drug delivery devices, not tobacco products, placing them under more stringent regulation that would require e-cigarette makers to conduct extensive clinical trials in order to allow their product to remain on the market. In July, ACSH joined several other public health and interest groups as an *amicus*, or friend of the court, to appeal the FDA's decision. In December, a federal appeals court overruled the FDA's injunction and determined that, due to its nicotine component, e-cigarettes should be regulated as tobacco products.

Media Coverage: In a statement for the Centers for Disease Control and Prevention (CDC), Nancy Brown, the CEO of the American Heart Association (AHA), stated, "No tobacco product is safe to consume. The health hazards associated with tobacco use are well-documented and a recent American Heart Association policy statement indicates smokeless tobacco products increase the risk of fatal heart attack, fatal stroke and certain cancers." Her concerns were based on a study published in the Nov. 5 issue of the CDC's *Morbidity and Mortality Weekly Report*.

Fortunately, A-list celebrities such as Katherine Heigl stepped up to the microphone and publicly promoted the use of e-cigarettes as a better alternative to smoking that helped them quit cigarettes for good when nothing else could. While appearing on *The Late Show with David Letterman*, Ms. Heigl demonstrated how to use an e-cigarette explaining, "You get the habit of this bringing her hand to her mouth and blow out water vapor so you're not harming anyone around you and you're not harming yourself."

ACSH's Perspective: After Mariann Piano, Ph.D., a professor in the Department of Biobehavioral Health Science at the University of Illinois at Chicago, said that "smokeless tobacco products are harmful and addictive that does not translate to a better alternative," in a September AHA policy statement, ACSH's Dr. Gilbert Ross answered with his own letter. In response to allegations that smokeless tobacco products are dangerous, Dr. Ross wrote: "The evidence is clear, disturbingly so, that you abandoned science in sounding this baseless, destructive alarm: the studies your own authors cite show minimal if any harm from using smokeless tobacco and even those few studies supporting your thesis are based on a mélange of various types of smokeless tobacco bearing little resemblance to modern snus-type smokeless products."

Fortunately, readers of *The Daily Caller* had a chance to peruse Dr. Whelan's op-ed defending Katherine Heigl's public display of e-cigarettes, in which she states, "Again, it's not the nicotine that's so dangerous about regular cigarettes, but the toxins and carcinogens in the products of combustion—the smoke that's inhaled deep into the lungs and then into the general circulation. There's no reason to think e-cigarettes present the same risks, since there's no combustion."

In addition, ACSH staffers asked our *Dispatch* readers to submit commentary regarding their own experiences using e-cigarettes as a smoking cessation device, and we were overwhelmed with the positive feedback we received, such as this response from Kim SanFanandre: "I was a 30-year, 2-pack-per-day smoker prior to finding e-cigarettes. I completely stopped smoking cigarettes 5 days after first trying the e-cigarette and have not smoked in 6.5 weeks. E-cigarettes should not be banned or demonized. Instead, e-cigarettes as an alternative to smoking should be encouraged."

The Bottom Line: ACSH has long supported harm reduction as an effective and successful strategy to allow regular cigarette smokers to quit the habit for good. ACSH advocates e-cigarettes as a form of [harm reduction](#) ^[1] for [currently addicted smokers](#) ^[2] who have tried and failed to quit, but we do not condone its use by anyone else. The chemical components found in e-cigarettes pose little danger to human health, and should not be considered toxins or carcinogens. It is irresponsible for public health organizations such as the CDC and the AHA to denounce the use of e-cigarettes as an effective smoking cessation method. In doing so, they only continue to promote the use of regular cigarettes for the majority of smokers who failed to quit using traditional approved cessation methods.

3. Atrazine

The (Unfounded) Scare: *Atrazine, one of the most effective and the second most widely used herbicide, has been implicated in birth defects, menstrual problems, and cancer when consumed by humans at concentrations below government standards. Some people claim that atrazine runs off farm fields and contaminates drinking water.*

Origin of the Scare: In March, 16 cities sued Syngenta, maker of atrazine, seeking to force the manufacturer to pay for the removal of the herbicide from their drinking water. Alarmist concerns about atrazine have surfaced for about a decade now.

Media Coverage: In May, the EPA began yet another reevaluation of atrazine's safety profile upon the behest of the NRDC, whose aim it has been for years to promulgate fears of atrazine contaminating groundwater and causing cancer, birth defects and other maladies.

But perhaps Atrazine's greatest foe has been Dr. Tyrone Hayes from the University of California, Berkley, whose work seeks to prove (unsuccessfully) that atrazine is a real threat to amphibian populations because it feminizes frogs at some, but not all, concentrations.

A May 3 op-ed in *The Wall Street Journal* notes that manufacturers such as Syngenta have been required to conduct millions of dollars worth of studies investigating these alarmist claims. EPA staff routinely review the studies in atrazine's favor.

Ironically, in October, the World Health Organization (WHO) recommended a new allowable concentration of atrazine in water, which was increased from the previous standard of two parts per billion to 100 parts per billion. The new WHO recommendation greatly exceeds the conservative standard of less than three parts per billion as set by the EPA.

ACSH's Perspective: In response to the Syngenta lawsuit, Dr. Ross counters, The allowable limits of atrazine apply to yearly average concentrations and not occasional spikes like these activists groups have found, and no studies have ever shown any adverse health effects on humans as a result of exposure to atrazine.

The fears surrounding atrazine can be attributed to the unfounded fear of chemicals in general, but as Dr. Whelan points out in *Toxic Terror: The Ongoing Environmentalists Battle Against Atrazine*, activists do not want to believe that atrazine has a stellar health and safety record even though levels of atrazine in U.S. waters are well within the federal lifetime drinking water standard a level containing a 1,000-fold safety buffer.

Various environmental activist groups refuse to listen to this evidence, and instead, continue to fuel the precautionary principle against vital herbicides that are used to protect crops and sustain adequate agricultural yields necessary to feed millions of people nationwide.

Fortunately, research by Alex A. Avery, director of research and education at the Center for Global Food Issues, debunks Dr. Hayes studies by pointing out his small sample sizes and irreproducible results. The EPA has also labeled Dr. Hayes work as insufficient and scientifically flawed.

Bottom Line: While herbicides and other pesticides have long been a target for various radical environmental groups, there is still no evidence that atrazine poses any health risk when found in miniscule quantities in groundwater. Its real benefits far exceed any of the hypothetical threats it

poses.

4. Phthalates

The (Unfounded) Scare: *A group of chemicals known as phthalates have long been added to polyvinyl chloride (PVC) in order to soften plastics. Phthalates can be found in a bounty of products including their most iconic use in rubber duckies as well as intravenous medical tubing, catheters, blood storage bags, pacifiers, shower curtains, hair sprays, body lotions, shampoos and various other personal care products. They have been incriminated as a deadly poison responsible for various health maladies including developmental and reproductive defects in fetal exposure.*

Origin of the Scare: In March, biostatistician Dr. Shanna Swan, professor of Obstetrics and Gynecology and Environmental Medicine at the University of Rochester School of Medicine & Dentistry, released yet another flawed study Phthalates and human health that attempted to demonstrate phthalates ability to demasculinize boys, thus causing preschool aged boys to play with more girly toys.

Media Coverage: CBS *60 Minutes* featured Dr. Swan on a special report chronicling the dangers of phthalates, in which they perpetuated baseless allegations against this safe chemical additive. The report was riddled with biases and made the specific claim that hypospadias (a defect of the urethra in baby boys) is increasing in frequency due to the greater prevalence of phthalates in the environment.

On June 4, Dr. Whelan was featured on the CNN special Toxic Childhood hosted by Dr. Sanjay Gupta in which she went head to head against EWG President Ken Cook. Within the special, Dr. Gupta claimed that residents who live near plants that manufacture PVC in Mossville, La. were subject to extraordinary health risks. After countering these fear-mongering fallacies, Dr. Whelan commented on her TV appearance: I would expect more accurate and balanced reporting from one of our leading cable news sources. This report was based solely on hype and emotion and lacked accurate scientific investigations.

In October, the European Environmental Bureau (EEB) claimed that phthalates are responsible for causing genital abnormalities in children and declines in male fertility. The EEB composed of 140 environmental activist groups called on the European Union to increase the stringency of phthalates in their chemical disclosure rules beyond just kids toys after elevated levels of the chemicals were measured in products such as erasers and pencil cases.

Most recently, PIRG published an annual report Trouble in Toyland, warning parents about toxic chemicals found in many commonly produced toys. In the report, PIRG scares shoppers about the horrors of plastic toys.

ACSH Perspective: A vast amount of scientific data already exists on the safety of phthalates and there is currently no evidence of health problems from phthalates in any consumer products, wrote Dr. Whelan in a May op-ed for *The Daily Caller*. Due solely to alarmist fears spurred by radical activist groups, the Consumer Product Safety Improvement Act has already issued restrictions on the use of some phthalates in children's products, even though no scientific evidence supports such a mandate.

In another op-ed for *The Daily Caller* in December, Dr. Whelan sets the record straight and exposes the truth behind panicky reports such as those disseminated by PIRG that phthalates have been in use for decades, studied ad nauseum for safety, and have even attained a seal of approval from the government. By sensationalizing false notions about the dangers of phthalates, activist groups are needlessly scaring parents and taking away their focus from real health concerns such as seatbelts and vaccinations.

The Bottom Line: ACSH is disturbed by the vast quantity of media attention devoted to pseudoscience reports on the nonexistent dangers of phthalates in 2010. This group of chemicals has been studied for decades and has been deemed safe by numerous governmental organizations; therefore, publishing more stories on its alleged adverse health risks is both irresponsible and distressing since this distracts attention from real public health threats such as smoking,

5. NYC Health Department of Health Scares 2010 Edition

The (Unfounded) Scare: *The New York City Health Department launched a Pouring on the Pounds advertising campaign against the harmful health effects of drinking soda, claiming that increased consumption of sugary-sweetened beverages is directly associated with a rise in obesity. Images portraying soda poured into a glass upon which it turns into a glob of fat were plastered all over city subways and public transportation systems. Other scares emanating from the NYC Department of Health include a campaign against trans-fats in 2005.*

Origin of the Scare: Over the summer, New York City Health Commissioner Dr. Thomas Farley spearheaded a media campaign linking soda consumption to obesity.

Media Coverage: An October article in *The New York Times* exposed Dr. Farley's anti-soda campaign as a sham, citing a series of emails between Dr. Farley and Sabira Taher, a campaign manager for health marketing for the department. In the emails, Ms. Taher expresses her reservations about the campaign's scientific validity, or rather lack thereof. I think Dr. Farley really wants to say something about gaining 15 pounds of fat in a year, but we know gaining and losing weight isn't that cut and dry some people can drink and eat whatever they want and still maintain their weight without doing an incredible amount of exercise to burn off the extra calories. I think going this route would raise a lot of skepticism within the public about our message.

In spite of this, at the behest of Dr. Farley, the campaign was implemented. Other public health officials also voiced their hesitations with the ad's message by pointing out that physical inactivity, more so than soda, is an important cause of obesity.

Concerns over the negative impact that soda may have on weight gain became even more

common throughout the country when various public school districts began instituting bans against the sale of sugar-sweetened beverages in school cafeterias and vending machines.

ACSH Perspective: The message here is when the NYC Department of Health wants to get their message out, they will do so no matter what scientific manipulation has to be committed, points out Dr. Ross.

Even though the health department claims that the sugar found in sweetened beverages is the leading source of calorie intake amongst Americans, that very same health department also found that the number of people drinking one or more sugar-rich beverages decreased by 12 percent between 2007 and 2009, yet three out of every five New Yorkers remains overweight or obese. Contradictory? Yes, ACSH thinks so too.

Soda is not the culprit, reminds us Dr. Ross. [The] campaign exempts sugary, naturally sweetened fruit juices, such as orange juice. How many calories per gram is added sugar versus naturally occurring sugar? They're equally caloric!

Bottom Line: Using a ban on soda as a silver bullet for solving the obesity epidemic is an overly simplistic solution to a complex problem. In order to really curb obesity, public health officials need to focus on a more widespread approach while avoiding scare campaigns such as the one implemented by the NYC Health Department.

6. Cosmetics

The (Unfounded) Scare: *Cosmetics, and more specifically the parabens found in many types, can mimic the hormone estrogen within the body and lead to an increased risk of cancer, especially breast cancer.*

Origin of the Scare: Activists have complained that cosmetics are largely under-regulated and require greater federal oversight. Pandering to these activist pleas, over the summer Congress introduced the Safe Cosmetics Act in the House of Representatives. Sponsored largely by the Campaign for Safe Cosmetics (CSC) a splinter group borne from the EWG dedicated to scaring the public about the so-called carcinogens they find in cosmetics the bill calls for cosmetic companies to supply the FDA with more product information than is currently required. This includes more details about the ingredients used and extra safety data assessments. In addition, CSC is requesting a database that classifies cosmetics into three categories based on ingredients: prohibited, restricted and safe without limits.

Media Coverage: In July, Siobhan O Connor and Alexandra Sprunt published the book *No More Dirty Looks: The Truth About Your Beauty Products and the Ultimate Guide to Safe and Clean Cosmetics*, which is chock-full of inaccurate data. The authors frequently cite the notorious EWG for insight even though our research found only one member of the EWG board possesses scientific credentials.

Lawrence Meyers rebukes O Connor's and Sprunt's novel and aptly spots the many gaps in their anti-cosmetic claims in a September op-ed for *Big Journalism*: When it comes to the alleged toxicity of perfumes and fragrances, there's nothing worse than non-scientists eschewing readily-available scientific research in favor of village idiocy found on the internet, publishing their findings

in a book, and metastasizing their contaminated thinking across millions of viewers via a network morning show.

Soon enough, actress Fran Drescher publicly sponsored the Campaign for Safe Cosmetics, and launched her own line of beauty products called FranBrand. Ms. Drescher believes her ointments are non-toxic, yet they contain ingredients like retinyl plamate and phenoxyethanol all classified as carcinogens on EWG's Skin Deep website.

ACSH Perspective: If the system is inadequate, why have [80 fragrance ingredients been prohibited](#) ^[3] from being put into any product, and [83 restricted](#) ^[4]? asks Mr. Meyers as he criticizes the need for greater oversight in a system that is already adequate. "[T]hey insist on their toxicity by saying the system in place, doesn't guarantee your safety. Of course it doesn't! No system guarantees our safety! Cars aren't safe. Neither are planes. Neither is fast food. Nor are open umbrellas waved around in lightning storms, Mr. Meyers contends in opposing the dubious health claims made by Ms. O'Connor and Ms. Sprunt in their book.

In an October 18 *Dispatch*, Dr. Ross notes, They fail to understand that we are all made of chemicals, and our food is made of chemicals. Further, no one has ever shown any actual risk of harm from the regular use of cosmetics. EWG and their various lists of dangers are meant solely to scare us and gain adherents for their anti-chemical, anti-business agenda.

In a July op-ed for the *Montreal Gazette*, Dr. Joseph A. Schwarcz, director of McGill's Office for Science and Society, debunks one of EWG's widely promoted myths that retinyl palmitate, a common sunscreen additive, causes cancer. EWG does have some expert consultants, but its greatest expertise lies in garnering publicity for its pronouncements about toxins in our environment. The group also has expertise in the construction business, at least when it comes to making mountains out of molehills.

The Bottom Line: The appropriate level of regulatory supervision has already been instituted to ensure the safety of cosmetics, and greater control in this arena is unnecessary and unwarranted. The trace levels of so-called carcinogens found in cosmetics that activist groups attack are not associated with actual adverse health effects in humans.

7. High-Fructose Corn Syrup

The (Unfounded) Scare: *When rats had access to high-fructose corn syrup (HFCS), they gained significantly more weight than those rats with access to regular table sugar; so said a research team from Princeton in March. HFCS has been linked to obesity for many years, and its presence in soda beverages has also been the recent target of the NYC Health Department's anti-obesity ad campaigns.*

Origin of the Scare: A study published in 2003 found that in the period between 1970 and 2000, there was an increase in the consumption of HFCS with a concurrent rise in obesity. Ever since this research was conducted, the media ran wild with the story and began labeling HFCS as unnatural, even though most nutrition experts agree that the sweetener is metabolically equivalent to regular cane sugar.

Media Coverage: A study published January 13 in the *Journal of the American Medical Association*

found that contrary to popular belief, obesity rates have actually stabilized in the U.S. since the late 1990s. This fact has received surprisingly little media attention.

Even Dr. Marion Nestle, professor in the Department of Nutrition, Food Studies and Public Health at New York University and notorious food industry critic, lambasted the Princeton study and agrees with the Corn Refiners Association when she states on her blog Food Politics, I don't think the study produces convincing evidence of a difference between the effects of HFCS and sucrose on the body weight of rats.

According to a new study released in October, researchers at the University of Southern California's Keck School of Medicine found that the HFCS in sodas can contain up to 55 percent fructose by content, as opposed to the standard 50 percent found in cane sugar. But ACSH's Dr. Josh Bloom reminds us that the five percent discrepancy in the amount of fructose found in certain sodas presents no clear adverse health risk: Sucrose (cane sugar) is broken down to fructose and glucose in the stomach. Fructose is then metabolized into glucose by the liver, so all sugar is broken down into glucose in the end.

In order to set the record straight, the Corn Refiners Association asked the FDA permission to change the name high-fructose corn syrup to just simply corn sugar. This would more effectively relay the message to the average consumer that HFCS is not any markedly different than table sugar, which is also refined.

ACSH Perspective: Dr. Nestle empathizes with the Corn Refiners Association and even told *The New York Times* on September 14 that high-fructose corn syrup is the new trans-fat. Everyone thinks it's poison, and food companies are getting rid of it as fast as they can.

In a September 8 *Dispatch*, Dr. Ross emphasizes that high-fructose corn syrup has the same caloric content as sucrose. There's nothing special about it calorically or metabolically, he says. There's no reason to impugn it as a cause of obesity.

Bottom Line: HFCS has been wrongfully accused as the main culprit in the obesity epidemic, yet it's not corn syrup by itself that is to blame. It comes down to a simple game of numbers, and as long as the number of calories ingested is greater than the number of calories expended, people will start to gain weight regardless of whether those calories are derived from HFCS or other sources. Unfortunately, the media has touted HFCS as an evil product forced upon us by the Corn Refiners Association, when in reality, HFCS is no more or less unhealthy than any other kind of sugar.

8. Genetically-Modified Salmon

The (Unfounded) Scare: *Genetically-modified (GM) crops, often dubbed Frankenfoods, have long been vilified by environmental organizations that promote organic foods as the acme of safety and healthfulness. The gene technologies used to yield GM crops have been accused of becoming a detriment to the environment as well as causing increased risks of cancer, immune dysfunctions, and other health catastrophes. AquaBounty, a biotech company that has created the first genetically engineered animal for public consumption Atlantic salmon has faced considerable heat this year from opponents who claim that the GM fish consume contaminated feed, will cause allergies in consumers, and pose an environmental risk by out-competing wild fish for food or mates.*

Origin of the Scare: The battle against GM foods has endured over the past few decades. The so-called deleterious effects of biotech crops on human health and the environment, perpetuated by various activist organizations, has provoked governmental regulatory bodies worldwide especially in the European Union to ban its use. The introduction of AquaBounty GM Atlantic salmon received an equally disdainful reaction from uninformed activist groups who insisted that the product be distinguished from conventional salmon through specific product labeling.

Yet studies of the GM salmon have shown no difference between AquaBounty salmon and conventional salmon. Even the FDA declared that no labeling is required for GM food products that are essentially the same as unmodified foods.

Finally, on September 3, the FDA concluded that the GM fish is safe for both consumers and the environment. The agency allayed fears that the AquaBounty salmon poses a risk to wild fish since only sterile females would be bred.

ACSH s Perspective: The AquaBounty salmon are produced by inserting a gene from another fish species that causes the unusual secretion of growth hormones year round, resulting in a GM species of salmon that can grow more quickly. Activists opposed the GM fish claiming the new gene may lead to allergies in some consumers. Dr. Ross responds to this in a September 7 *Dispatch* in which he notes that there has not been a single documented adverse health effect caused by biotech agricultural products, which have been on the market for 15-plus years. Anyone can have an allergic reaction from food. However, there s no reason why insertion of this gene to promote growth will cause more allergies than any other food.

In the 2007 ACSH publication *Studies Indicate GM Crops are Safer and Healthier*, Dr. L. Andrew Staehelin, professor emeritus of Molecular, Cellular & Developmental Biology at University of Colorado-Boulder and Dr. David A. Christopher, professor of Molecular Biosciences and Vice-Chair of the Institutional Biosafety Committee at the University of Hawaii-Manoa, insist that claims that GM foods are dangerous to public health have little merit.

The Bottom Line: Research published in *Science* in 2003 showed that the use of genetically modified Bt cotton in India increased yields by 60 percent between 1998 and 2001. GM farming is an innovation that has allowed millions of people globally to gain access to food who might have otherwise starved, thus this technology has improved the population s health while also increasing agricultural yields. Despite incessant attacks from extremist environmental groups, countries around the globe continue to reap the benefits of GM crops, which for many, has allowed them to stave off famine and malnutrition. So what s for dinner? Some AquaBounty GM Atlantic salmon please.

9. Vaccines & Autism

The (Unfounded) Scare: *Parents prevent their children from getting vaccinated against a slew of illnesses fearing that the inoculations may lead to autism.*

Origin of the Scare: The hysteria took off after Dr. Andrew Wakefield published a study in *The Lancet* in 1998 linking the MMR vaccine to autism. Dr. Wakefield s study has since been retracted by the publication and repudiated by numerous scientific studies, yet celebrities like Jenny

McCarthy, Robert F. Kennedy Jr., and Bill Maher continue to use their fame to advance these inaccuracies in the media and scare parents into avoiding vaccines. Much of the anti-vaccine attacks have focused on the mercury-containing preservative thiomersal. These attacks have gone on unabated even though the CDC mandated the removal of thiomersal from children's vaccines in 2002.

Media Coverage: In 2010, California experienced an unprecedented pertussis, or whooping cough, epidemic the largest outbreak since 1958. This claimed the lives of 10 people, including nine infants. While the state faced approximately 7,297 cases of pertussis, not enough adults and children were getting vaccinated due to a California law allowing people to opt out of the vaccine for philosophical exemptions.

Furthermore, data from the 2009 National Health Interview Survey revealed that vaccination rates among U.S. adults are low overall, and a *Consumer Reports* survey indicated that 28 percent of health care workers did not plan on getting a seasonal flu shot this year. In a November 12 *New York Times* article, reporter Ariel Kaminar conducted a science-based discussion on the safety of vaccines, and reminded readers that young adults, pregnant women and the elderly are the most vulnerable to the flu virus, and therefore should be the first ones in line to receive the shot.

As the evidence against the link between autism and vaccinations mounts, yet another study published in October's *Pediatrics* conclusively showed that vaccines are safe.

ACSH's Perspective: In the op-ed *Vaccines: Do your homework* published on August 4 in the *San Diego Union-Tribune*, Dr. Ross and ACSH advisor Dr. Jack Fisher write that fears over vaccines could have spurred the most recent California pertussis epidemic. There's no reason to fear vaccines. In fact, they've increased life expectancy and quality of life immensely. At the beginning of the last century, 16 out of every 100 children died of highly contagious diseases like polio, diphtheria and whooping cough before their fifth birthdays.

By improving the vaccination rate among adults, America's leaders can stem the rise of costly, completely preventable diseases, improve public health, and even help revive the economy, adds Dr. Whelan in a June 5 op-ed for the *Contra Costa Times*.

Bottom Line: Vaccines have had a profound beneficial effect on public health by drastically reducing the amount of death and disability from infectious diseases. As Dr. Wakefield's research has demonstrated, the vast majority of reports that link vaccines to serious health maladies do not meet the scientific criteria necessary to attribute causality. In order to protect yourself, your family and your community from the devastating effects that a preventable infection may have, get immunized as soon as possible.

10. Mercury in Fish

The (Unfounded) Scare: Pregnant mothers have been warned time and again to avoid ingesting mercury since its consumption has been associated with a negative impact on children's brain development and other health worries. The EPA has established a reference dose for mercury levels in human blood as well as a list of seafood women who are or may become pregnant as well as young children should avoid eating in order to limit their exposure to the toxic metal.

Origin of the Scare: Articles warning against the dangers of mercury consumption from fish make their way into print on a consistent basis. For example, in July 2006, a *Consumer Reports* magazine article advised pregnant women to avoid eating canned tuna for fear that they might expose themselves and their unborn fetus to unsafe levels of mercury.

Media Coverage: Nearly four years later, *Consumer Reports* magazine published yet another article in 2010 claiming that women and children should still avoid eating canned tuna because it may contain higher levels of mercury. Higher than what you ask? Well, we asked the same question and are still trying to come up with an answer.

In an October 12 op-ed for *The Daily Caller*, Dr. Ross points out that Americans' fear of mercury hasn't subsided, and that on average, Americans eat fewer than eight cans of tuna a year.

In a January 2009 risk/benefit analysis of fish consumption and mercury, the FDA found that consuming greater quantities of fish actually boosts infants' brain development during and after pregnancy and provides protective benefits for the heart as people mature and age.

In addition, the government committee responsible for issuing the Dietary Guidelines for Americans recommends that it is wise to eat at least two servings of seafood a week for women who are pregnant, breastfeeding or who may become pregnant.

ACSH's Perspective: In a December 9 *Dispatch*, Dr. Ross points out that tuna isn't on the most recent EPA list of the four types of fish with possibly elevated mercury levels that consumers should be aware of. What's more, the study cited by *Consumer Reports* didn't find that the canned tuna they tested rose above levels that the FDA or EPA said were of concern and those levels were based upon the risks posed by consuming tuna every day for seventy years, not occasionally. Tuna is the only fish many Americans eat, and it's reasonably inexpensive.

As Paracelsus wisely once said, the dose makes the poison, and a fear of mercury poisoning from seafood stems directly from the inability to properly digest this information. Though mercury in high quantities can indeed be toxic, the trace level amounts found in conventional seafood causes no harm in humans.

Bottom Line: The nutritional benefits of eating the recommended amount of fish servings far outweighs any potential health risks that canned tuna may pose. Adequate fish consumption is important for the health of developing fetuses and growing children. Therefore, avoid the metal-phobia mania that has consumed the pages of *Consumer Reports* and other such publications over the past few years, and crack open a fresh tin of some wholesome tuna fish.

Source URL: <https://www.acsh.org/news/2010/12/29/the-top-ten-unfounded-health-scares-of-2010>

Links

[1] <http://www.acsh.org/acsh-tobacco-harm-reduction-presentation-at-esof-conclave-italy>

[2] <http://dailycaller.com/2010/10/16/whats-so-ridiculous-about-katherine-heigls-e-cigarette-habit/>

[3] http://www.ifraorg.org/public/index_ps/parentid/1/childid/12/leafid/72

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