

Junk Science Week: Lipstick, apples & sperm counts

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Activists dodge good science to maintain scaremongering — and donations

By Terence Corcoran

Apples contaminated by pesticides. Lipstick filled with heavy metals. Carcinogens in the water. Sperm counts that don't add up. Welcome to our 13th annual Junk Science Week event, dedicated to exposing the scientists, NGOs, activists, politicians, journalists, media outlets, cranks and quacks who manipulate science data to achieve their objectives. Our standard definition is that junk science occurs when scientific facts are distorted, risk is exaggerated and the science adapted and warped by politics and ideology to serve another agenda.

We could make junk science a daily feature, given the frequency with which the media makes a killing off scientists and activists who claim that one thing or another may be killing us. On Monday, the big-name news organizations quickly spread a public relations release from the Washington-based Environmental Working Group (EWG) portraying apples as a health risk: "Apples top list for pesticide contamination," said CBS News in a typical headline.

The EWG is a professional scaremongering outfit that runs a number of lucrative fundraising campaigns (cosmetics, food, energy, resources) that spread alarm and then ask for donations to keep up the fight.

The apple warning came in the context of a regular EWG feature, the "Dirty Dozen" of fruits and vegetables produced in the United States — and sold in Canada. This year, based on U.S. Department of Agriculture findings, apples jumped to the top of the list. "According to USDA, pesticides showed up on 98% of the more than 700 apple samples tested," said the Environmental Working Group in a news release.

The pesticide detections are minuscule and pose no health risk, as the USDA points out. Indeed, they help keep fruits and vegetables fresh and safe. But the EWG wraps up its news release with warnings. "Pesticides can be extremely toxic to human health and the environment. U.S. and international government agencies alike have linked pesticides to nervous system toxicity, cancer, hormone system disruption and IQ deficits among children."

The EWG's notoriety as a purveyor of junk science has not deterred the media from regurgitating its claims. The group's work spreading false alarms about chemicals in cosmetics earned it praise from Joseph Schwarcz, head of McGill University's Office for Science and Society. "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."

EWG also appears to be a model for Canada's Environmental Defence, where Rick Smith runs the country's pre-eminent practitioner of junk science. Mr. Smith is known for his book, *Slow Death by Rubber Duck*, in which he claims the chemical bisphenol A (BPA) — used in plastic products such as water bottles and baby bottles — cause everything from breast and prostate cancer to learning disabilities.



Environmental Defence

Illustration from Environmental Defence report on face makeup.

No science supports such claims, as a recent comprehensive German review found after examining more than 5,000 research papers on BPA. “Available evidence indicates that BPA exposure represents no noteworthy risk to the health of the human population, including newborns and babies.” We’ll have more on the real BPA science — and on the EWG apple scare — later in our Junk Science Week series.

At Environmental Defence (ED), meanwhile, it has taken up cosmetics as another lucrative cause. Many Canadian media fell headlong into ED’s alarming claims in a report last month titled *Heavy Metal Hazard: The Health Risks of Hidden Heavy Metals in Face Makeup*. Trace amounts of cadmium, lead, nickel and other metals were found in lipsticks and other makeup products. Such metals, it said, are known to cause cancer, reproductive and developmental disorders, immune system, kidney and scores of other problems.

The levels found in cosmetics were barely detectable, and of no risk to lipstick and makeup users. But being barely detectable or even non-detectable (“there could be something too small to measure”) isn’t good enough. Environmental Defense promotes fear and uncertainty. “How safe are the personal products we use on our bodies? The answer: nobody knows. The cosmetic business is a deregulated Wild West.”

This is completely false, as regulations abound concerning the use of chemicals in cosmetic products. But no matter. ED moves on to its main objective: “We here at Environmental Defence believe that Canadians deserve to be kept informed and safe from toxic substances in the cosmetics that we buy. It’s time that our laws got a serious makeover.” Below this line is a bright red box that says “Donate.”

At ED, apparently, Mr. Smith feels donations trump science. His group did not report on a new study on sperm counts. In *Slow Death by Rubber Duck*, for example, Mr. Smith reported claims that bisphenol-A caused “decreased sperm counts.” Others claim sperm counts have declined by up to 50% over the last 50 years. But a new Danish study, rushed to publication by the science journal *Epidemiology*, found no such decline. “On the face of it,” wrote the editor, “the results are striking; there is no evidence of a decline in sperm counts in Denmark over the last 15 years.”

That’s just one of many instances in which scary science claims have been overturned.

Environmental Defence, by the way, has received at least \$300,000 from Tides Canada and the U.S. Tides Foundation to mount a campaign against Canada’s oil sands. It joins other activists and scientists who — [as reported by Vivian Krause as part of Junk Science Week](#) — have successfully used the media to their advantage.

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