



Consumer Focus

by the American Council on Science and Health

Year's top 10 unfounded scares

Americans are constantly bombarded with alarming news about the dangers of the everyday products they encounter as consumers. In order to shine light on the health fear frenzy portrayed by the media, the American Council on Science and Health (ACSH) has published *The Top Ten Unfounded Health Scares of 2007, a roundup of the most frightening and prominent — but groundless — health scares in the media this year.*

Be aware

“There are too many instances of preliminary studies being reported as if they are the final word, but studies must be replicated before we can have confidence in their results,” says Ruth Kava, director of nutrition for ACSH.

“ACSH hopes this list of health scares — and the science which shows they are bogus — will alert consumers to be wary of the health scares that will inevitably be launched in 2008,” states ACSH president Elizabeth Whelan. “Bogus health scares distract our attention from the real threats around us — so beware,” she continues.

Since its founding in 1978, ACSH has been dedicated to providing scientifically sound health information to American consumers. A large part of that mission has been to help the public assess health risks and reduce fears about the many exaggerated or unscientific health scares often presented in the media.

Here we look at two of the scares that involved products from the beef industry.

Unfounded scare No. 3

Red meat and processed meat, such as bacon or hot dogs, increase risk of colorectal cancer and women's risk for breast cancer.

Origin of the scare. The breast cancer scare was based on two studies — one published in the April issue of the *British Journal of Cancer* and the other published in the November issue of the *Archives of Internal Medicine*. The studies claimed that women who ate red and processed meat regularly were at an elevated risk for breast cancer.

The scare linking red meat to colorectal cancer was the product of a report, released in October 2007, by the World Cancer Research Fund and the American Institute for Cancer Research (AICR) examining diet and cancer. The report specified that high

consumption of red meat and processed meat was dangerous and increased cancer risk.

Media Coverage. *British Broadcasting Corp. (BBC) News* and *Reuters* both covered stories linking red meat and processed meat to breast cancer under headlines such as “Red Meat Ups Breast Cancer Risk” and “Red and Processed Meat Linked to Breast Cancer.” The *Washington Post* also covered this story under the headline “Breast Cancer Risk Linked to Red Meat.”

Ritva Butrunm, a science advisor of AICR, said, “This new study offers further confirmation of AICR’s standing recommendation to limit intake of red meat to less than three ounces per day.” The *Washington Post* also said research suggests that “substances produced by cooking meat may be carcinogenic, naturally occurring substances in meat may mimic the action of hormones, or growth hormones that farmers feed cows could fuel breast cancer in women who consume meat from the animals.” They did not cite any evidence that this has been demonstrated in humans.

Media coverage of the report linking red meat and processed meat to colorectal cancer was widespread. Headlines such as *USA Today*’s “Put Down the Bacon! Report Emphasizes Cancer-Fat Links” and the *Boston Globe*’s “Report Ties Meat, Body Fat to Cancer” were meant to scare the public about their diet.

The bottom line. Red meat and processed meat often have a high fat content. Therefore, someone who indulges in red meat and processed meat too often could become obese — which has been shown to be a risk factor for several cancers, including breast cancer and colorectal cancer.

The AICR is an organization devoted to finding links between diet and cancer. Every 10 years, it reviews the published literature about how diet and physical activity affect

cancer risk. It starts that review with the assumption that a diet-cancer risk exists and then picks research that supports this notion. That being the case, it is imperative that the public examines the report with a keen eye.

It is not the consumption of large amounts of red meat and processed meat that causes cancer, only that there is a weak association between the two due to obesity. A more accurate report would focus on how obesity as a whole can increase risk for cancer. As Steven Milloy said in his op-ed piece, *Junk Science: Food Nannies' Halloween Cancer Scare*: “The latest food scare was announced, appropriately enough, on Halloween. But the science behind the scare is about as believable as are ghosts and goblins.” Milloy’s article is available online at foxnews.com.

Unfounded scare No. 5

People who eat the most sodium-nitrite-containing meats, such as hot dogs or bacon, are more likely to have chronic obstructive pulmonary disease (COPD) compared to those who eat none or very little.

COPD is the fourth-leading cause of death in the U.S. It is characterized by inflammation and blockage of the airways leading to a reduction in breathing capacity. The leading cause of COPD is smoking, and 15%-20% of long-term smokers develop the condition. Salt and spices have been used to preserve foods and “cure” meat since the beginning of civilization. By the late 19th century, scientists had identified sodium nitrate as a substance that acted as a preservative in meat and provided the meat with a nice color and flavor. Sodium nitrate was approved as a food additive in 1906, under the earliest federal food safety laws.

In the 1920s it was discovered that sodium nitrite, a breakdown product of sodium nitrate, performed the same function more effectively, and the U.S. Department of Agriculture (USDA) approved it as a direct additive. By the 1950s, scientific studies had also shown that nitrite prevented germination of the bacterial spores that cause deadly botulism in canned goods and other foods stored under airtight conditions.

Origin of the scare. In 1970, a paper in the journal *Nature* concluded that nitrites

CONTINUED ON PAGE 272

True risk assessment online

Americans are bombarded almost daily with warnings about new health risks and advice on how to avoid premature disease and death. Too often, this flurry of advice and warnings blurs the true distinction between real and hypothetical health risks — and between large and tiny chances of death.

A new web site, *riskometer.org*, from the American Council on Science and Health (ACSH), attempts to put these dangers in context, offering a realistic and scientifically sound picture of the most important causes of death — and the leading risk factors for death — in the United States.

Based on a peer-reviewed paper by John Morgan, cancer epidemiologist at Loma Linda University, and his colleagues, the colorful site uses dynamic graphics to demonstrate the relative importance of the top 15 leading causes of death, as well as the major fatal exposures in America. Both the actual numbers of deaths from these causes (on the Riskometer part of the site) and the odds of dying from each (on the Risk Rings section) are presented. Accompanying text explains the source of the statistics and presentation. There are links to other web sites to provide interested users with additional information.

“With this web site,” explains Elizabeth Whelan, ACSH president, “we provide a reality check to counter the multiple health scares so common in the popular media today. On our new site, users can compare the enormous risk of death posed by smoking, for example, to the extremely small risk of dying from exposure to



traces of various chemicals in the environment.”

“I find it more and more disturbing that the American public and popular media are distracted from real health risks by repeated airing of alarms over inconsequential health ‘scares,’” notes Gilbert Ross, ACSH medical and executive director. “I hope that our new web site helps allay such unrealistic fears and impresses users with the importance of the real threats to life and health in 21st century America.”

reacted in the body with other agents in food to form nitrosamines — substances known to be animal carcinogens. The following year Congress held hearings, and in August 1972 a Congressional committee released a report declaring “nitrites and nitrates pose a potential danger to public health.” Rodent studies have shown a link between nitrite consumption and reduced lung function.

In April 2007, a new study in the *American Journal of Respiratory and Critical Care Medicine* concluded that eating cured meat was directly linked to an increased risk for COPD. Critics of the study highlighted that cured meat no longer contained the levels of nitrite that were present 10 or 20 years ago, citing the fact that only 5% of nitrite consumption comes from cured meat.

Media coverage. Despite the fact that the data in this study does not represent nitrite levels in cured meat today, headlines such as “Is Bacon ‘To Die For?’” and “Hot Dogs and Bacon Cause Increased Risk of Lung Disease” were widespread. The study’s author, Rui Jang of Columbia University, acknowledged that the study’s design did not allow her to state definitively that the nitrites caused lung disease.

The bottom line. Nitrites have been used to cure meat for almost a century with no evidence of any risk to human health. Studies showing nitrites to be harmful have been done in high-dose animal experiments that are not comparable to the small amounts that we are exposed to as humans. In addition to this, cured meats have lower nitrites today than they did in the past. Since the 1970s, nitrite levels have dropped by 80%. Most importantly, vitamin C is now added to cured meat to prevent formation of the supposedly harmful nitrosamines.

For the full list of the *Top 10 Unfounded Health Scares of 2007*, visit www.acsh.org/publications/pubid.1649/pub_detail.asp.



Editor’s Note: The American Council on Science and Health, which provided this article, is an independent, nonprofit consumer education organization concerned with issues related to food, nutrition, chemicals, pharmaceuticals, lifestyle, the environment and health.