Fear Factor

Recent increases in the number of food recalls beg the question: Can we make eating less hazardous to our health?

By Mat Thomas

Like most moms, Barbara Kowalcyk didn't think twice about feeding her two-year-old son Kevin a hamburger while the family was on vacation in 2001. But just days after returning home, the Kowalcyks were rushing their sick child to the emergency room with bloody diarrhea, which left him so dangerously dehydrated that he required admission to a hospital. There, doctors discerned that Kevin had been infected with E. coli O157:H7, a microscopic bacterium found in animal feces that is typically contracted by eating contaminated food. They could not stop their young patient's kidneys from failing.

Over the next week, the Kowalcyks watched helplessly as Kevin's condition deteriorated, and he was hooked up to a medical ventilator because he could no longer breathe with his own lungs. On August 11, Kevin suffered three heart attacks and endured two artificial resuscitations before he died—just 12 days after he innocently ate a hamburger.

The true tragedy of Kevin Kowalcyk's untimely death is that it could have been prevented. He might still be alive today if the processing plant that produced the burger had more stringent safety precautions against pathogen contamination in place, or if the company had recalled the poisoned beef sooner. Instead, the owners spent 25 days in private negotiations with government regulators before pulling their product from the market after finding that some of their meat was contaminated. Meanwhile, thousands of Americans get sick and die from foodborne illness every year—and not just from eating beef or other types of meat, but also an array of plant-based edibles.

Bad Beef

In 2008, a video shot by an undercover investigator at a California slaughterhouse showed workers forcing sick cattle to the kill floor by ramming them with forklifts and shocking them with electric prods. The video prompted the largest recall of beef in US history—an unprecedented 71,500 tons, four times more than the former record set in 1999. Though two workers were convicted of animal cruelty as a result of the video evidence, animal abuse wasn't the reason that the

FDA's Top 5 Riskiest Foods

# of outbreaks
363
# of reported illnesses
13,568

Leafy Greens

# of outbreaks
352
# of reported illnesses
11,163

Eggs

# of outbreaks
268
# of reported illnesses
2,341

Tuna

# of outbreaks
132
# of reported illnesses
3,409

Oysters

# of outbreaks
108
# of reported illnesses
3,659

Potatoes

US Department of Agriculture (USDA) ultimately shut the Westland/Hallmark Meat Company plant down and pressured the owners to comply with their recall request. Instead, it was because agency officials concluded that the immunity-compromised cattle's meat was more likely to harbor E. coli and salmonella, or even mad cow disease, making it "unfit for human consumption." As the second-largest supplier of beef to the national school lunch program (via the USDA's Commodity Procurement Branch), 150 school districts stopped buying Westland/Hallmark meat after the recall, though most of the recalled beef wound up being eaten before it could be reclaimed.

Putrid Peanuts

Malfeasance at a Peanut Corporation of America (PCA) plant in Georgia in 2009 shows how one tainted ingredient can contaminate hundreds of different foods. A Food and Drug Administration (FDA) investigation revealed that internal company lab tests conducted in 2007 and 2008 showed their products were salmonella-contaminated—and while PCA was legally obligated to destroy the poisoned food, they sold it anyway, after having it tested at another facility that yielded negative results for salmonella. The agents' onsite inspection also documented mold on the factory's ceiling and walls, dead insects near peanut stocks, and large holes in the building through which rodents could enter (and potentially spread salmonella to peanuts through their feces). The inspectors' report ultimately led to the recall of more than 1,800 separate products containing PCA foods, from Keebler Cookies to Special K Meal Bars, and FDA tests indicated that some foods already on the market were contaminated with salmonella. Despite the recall, some of these poisoned products still reached unsuspecting consumers, causing approximately 22,000 illnesses and nine deaths. PCA filed for bankruptcy due to the recall's fallout.

Rotten Eggs

It was the largest egg recall in American history, with more than half a billion contaminated eggs sold by 24 different brands removed from supermarket shelves—but not before they hatched the US's largest salmonella enteritidis outbreak ever, causing almost 2,400 people in several states to get sick. All 550 million tainted eggs were produced by just two Iowa factory farms, neither of which had ever been inspected by any major state or federal agencies. When FDA agents investigated the farms after the outbreak started, they not only found hens languishing in battery cages, but also maggot-ridden eight-foot-high manure piles in pits underneath laying houses, which were infested with rats and flies. A spokesman for one of the farms defended his company by insisting that these unsanitary conditions were consistent with accepted industry standards. Soon after the recall started, a new law went into effect requiring all farms with more than 50,000 birds to comply with salmonella prevention procedures, and giving FDA officials authority to conduct routine inspections. Had the rules been in place a few weeks earlier, this public health crisis might have been averted.

Farm to Table: Anatomy of a Recall

The recall is a measure of last resort: a reactive rather than proactive defense against foodborne illness that becomes necessary when prevention fails. Proven preventive procedures are vital to food safety because much of our food travels hundreds or even thousands of miles before it winds up on supermarket shelves or restaurant menus—and each leg of the journey comes with its own contamination dangers. While growing on farms, crops can become contaminated when sprayed with water tainted by animal feces, or when factory farm runoff seeps into agricultural fields. Transforming raw ingredients into food products in factories or plants offers the opportunity for contaminated water or ice used for washing, packing, or chilling to transfer pathogens to food; unsanitary factory conditions (such as workers not washing their hands) can also spread disease. Transporting food from producer to consumer via land, sea, or air leaves perishable food unrefrigerated in warm weather for several hours, which can allow a few bacteria to grow into millions. And finally, pathogens can coast from raw meat to veggies on the blade of an unwashed knife. Any step along the process of putting food on our tables offers the potential for contamination, but it's what happens when pathogens seize those opportunities that illustrates just how badly our system is flawed.

When the food safety system breaks down, real people start turning into statistics.

According to US government figures, about one in every six Americans will get ill from eating tainted food in 2011. Of those 48 million people, approximately 128,000 will be hospitalized and 3,000 will die from unknowingly consuming products contaminated with invisible but lethal pathogens. Most of those killed will be children under four years old—whose small size makes them more vulnerable to foodborne disease than most healthy adults—people over 50, and anyone with a weakened immune system.

This largely preventable epidemic of illness and tragic loss of life takes place in a country that often boasts of having one of the best food safety systems in the world. If that's really so, why are food recalls on the rise? And is that symptomatic of a sick system, or a sign that the system's immune response is simply defending us against foodborne threats?

The answer is, probably both. On one side of the coin, America's food system is massive, complex, and governed by a patchwork of under-enforced and often insufficient regulations riddled with legal loopholes that are exploited by powerful multinational corporations for profit. Recalls then become necessary to clean up messes that could and should have been avoided by following basic food safety procedures. On the flip side, rather than indicating higher incidences of contamination, more food recalls may mean that the system has simply gotten better at identifying dangerous products and removing them from circulation.

The Big Picture: Business as Usual

For Michele Simon, a public health attorney and author of *Appetite for Profit: How the Food Industry Undermines Our Health and How to Fight Back*, food safety is part of a wider economic-political context. According to Simon, "Foodborne disease outbreaks and recalls are indicative of much larger problems in our food system. Whether the issue is E. coli, heart disease, obesity, worker exploitation, or animal abuse, these are all symptoms of the same underlying cause." Simon maintains that most food safety problems—even with produce—can be traced directly to the intensified factory farming system that feeds America's insatiable appetite for animal products. "The meat and dairy industries are the primary drivers of our food system, and the pathogens that cause foodborne diseases originate on their factory farms then spread to produce from irrigation water that is contaminated with animal feces."

And what about food companies: Don't they care that their products harm their customers? Simon explains that many major food industry players view legal liability and government fines as a cost of doing business. "Consumer-end companies with household brand names are generally more concerned about being tarnished by highly publicized recalls, but the giant conglomerates working behind the scenes to produce most of our food just see the problem in bottom-line terms. It's a cost-benefit calculation: The cost of paying fines and settling lawsuits is less than instituting effective organization-wide safety measures in their production facilities."

Marion Nestle, professor of nutrition, food studies, and public health at New York University and author of numerous books on food safety, agrees that economic concerns are central to the food safety debate because "It costs food companies money to put preventive safety controls in place. Even though those amounts are trivial—pennies per pound or crate—the food industry works on tight margins, and when it comes to taking financial risk, nobody wants to go first."

According to Nestle, the most fundamental problem with our food safety system is that "we don't really have one." She continues, "What we do have is fragmented between the FDA and USDA, which operate under different rules and have vastly disproportionate resources. What we desperately need is a single food safety agency that governs the production of all foods, no exceptions, from farm to table. And taking a good hard look at imported foods might also help."

Indeed, Americans eat more imported food today than ever. About 15 percent of our food supply is brought into the US from 170 different nations around the world, including half of fresh fruits, 20 percent of fresh vegetables, and 80 percent of seafood. Health and safety

According to US government figures, about one in every six Americans will get ill from eating tainted food in 2011.

Potential Pathogen Entry Points

Much of our food travels hundreds or even thousands of miles before it winds up on supermarket shelves—and each leg of the journey comes with its own contamination dangers. Here are the main ways fruits and vegetables can be contaminated with pathogens during the different steps.

Production
Crops can become contaminated when sprayed with water tainted by animal feces (and therefore dangerous pathogens), or when factory farm runoff seeps into agricultural fields.

Processing
Contaminated water or ice used for washing, packing or chilling can transfer pathogens to food; unsanitary factory conditions (such as workers not washing their hands) can also spread disease.

Distribution
Leaving perishable food unrefrigerated in warm weather for several hours can allow a few bacteria to grow into millions.

Preparation
Using utensils (cutting boards, knives) for raw meat, then using them again, unwashed, to slice vegetables can contaminate produce with pathogens.

FDA vs USDA

The US has at least 35 separate food safety laws, which are administered by 15 agencies within six major governmental departments. The two main federal regulatory agencies responsible for food safety oversight are the FDA and USDA. But with so many cooks in the kitchen, it can be hard to tell who's actually minding the stove. Here are some examples that illustrate the odd overlaps in the regulatory system.

FDA Regulates	USDA Regulates
Hot dogs in rolls	Hot dogs in pastry dough
Closed-faced meat sandwiches	Open-faced meat sandwiches
Soups with less than 2% meat	Soups with more than 2% meat
Beans with pork	Beans with more than 2% bacon
Cheese pizza	Pizza with meat toppings

Notably, while the USDA regulates only about 20 percent of the US food supply, it receives more than three-quarters of the federal government's total food safety budget—a cool $1.7 billion a year (compared to the FDA's $283 million).

standards in foreign countries are often weaker than our own, and the FDA inspects less than one out of every million pounds of food crossing our borders.

An issue related to globalization is the increasing centralization of food production driven by economies of scale. In other words, as a company's production volume increases, their input cost per unit of product declines. This "get big or get out" principle is making our food supply increasingly consolidated, leaving it controlled by a shrinking number of food conglomerates. In the US today, there are 192 egg companies that own approximately 95 percent of all laying hens. There are now approximately 71,000 hog farms, down from more than 666,000 in 1980. Four dairy companies produce about 40 percent of all milk. A single corporation, Cargill, has cornered about 60 percent of the grain market.

In terms of food safety, the biggest problem with centralization is that a contagion at one farm or production plant can affect thousands of consumers across the country because these raw ingredients are used in processed foods made by many different companies. This makes tracking down all the tainted products during a recall more challenging.

Safer Steps

Partly in response to the recent wave of recalls, Congress passed the Food Safety Modernization Act (FSMA) just this year. While this new law represents the most extensive overhaul of the US food safety system since the Great Depression, it still applies only to the FDA and not to the USDA (which regulates meat, poultry, and processed egg products). Nevertheless, the Act gives the FDA broad new powers to prevent food from becoming contaminated and respond more effectively to foodborne outbreaks. The FDA is now required to inspect "high-risk" production facilities every three years and "low-risk" plants every five years. Production facilities must have written quality control plans and methods for monitoring their compliance with safety procedures. The FDA can now also make companies take corrective actions as needed. For the first time, the FDA is legally authorized to order mandatory food recalls. Prior to the FSMA, recalls were essentially voluntary, in that the agency could only request that companies recall products. Now the agency can respond more quickly to foodborne-illness

Three out of five food and beverage manufacturers report outsourcing part of production to lower costs.

DiseaseDetails

Salmonella and E. coli are almost always uttered in the same breath as contaminated food recalls, but what do these two pathogens actually do? Here's a quick look at what makes us sick:

E. coli The name E. coli refers to a wide variety of bacteria, many of which are completely harmless. The dangerous strains of E. coli have numerous effects on humans, including urinary tract infections, diarrhea, vomiting, respiratory problems, or pneumonia.

Salmonella Another bacteria, Salmonella causes acute diarrhea, which can last up to seven days. In severe cases, Salmonella can enter the bloodstream of those affected, which can be fatal if the infection is not treated with antibiotics.

outbreaks and avoid delays, saving lives by saving time.

In addition to the requirements already mentioned, companies must provide the FDA with sales and shipment records if there's reasonable doubt about the safety of their products, facilitating identification and reclamation of tainted food using a centralized electronic database that follows products through each link in the food chain. For the first time, food workers will be legally protected from retaliation by their employers for reporting safety violations. Foreign producers will be required to provide certification from third-party inspectors verifying that their food is safe to eat, and the FDA can now bar their products from entering the country for refusing US inspection. The FDA will develop a searchable website to help consumers identify recalled foods more easily. Supermarkets will also be required to post recall notices in "conspicuous locations" at point-of-purchase (and potentially provide phone, text, or email notifications after recalled products are purchased). Farms that sell less than $500,000 worth of food per year are not subject to most of the FSMA's regulations, sparing them the expense of operational compliance and paperwork.

While it will take several years to fully implement the FSMA, and many details are still being worked out, the new law is a step in the right direction toward improving food safety and reducing the need for recalls. Unfortunately, one thing it doesn't do is fix the problems with our food system at the source—the factory farms from which most of the pathogens that cause recalls originate. As long as the animal agriculture industry is allowed to continue selling the meat, dairy, and eggs of diseased animals and polluting the environment, the safety of our food supply will remain severely compromised.

Public Pressure

Facing the constant deluge of recalls, consumers trying to stay up-to-date can easily suffer from information overload and its close cousin, recall fatigue. The sheer volume of recalls can desensitize people to their danger, leading some to ignore warnings even after they've purchased a recalled product and eat it anyway. However, most people who ingest contaminated foods do so because they are unaware that they have been recalled.

Perhaps if people knew the story of Kevin Kowalcyk, and the thousands of others affected by foodborne disease, they would be more careful about what they choose to consume—and more adamant about demanding a safer food system. Barbara Kowalcyk certainly is: In the wake of her son's death, she founded the Center for Foodborne Illness Research and Prevention, a nonprofit that educates the public about food safety and advocates for change. As part of her mission to spare others from the unfathomably devastating loss of a child, Kowalcyk has spent years urging Congress to pass "Kevin's Law," which would give the USDA legal authority to shut down plants that repeatedly release pathogen-contaminated meat.

Odds are that your next meal won't make you sick, but consider that foodborne disease will strike more than 16 percent of Americans this year, and is responsible for approximately one out of every 500 US deaths annually. The FDA's official position on foodborne illnesses is that they are "largely preventable," but until factory farming is a thing of the past, government officials enforce the mandates meant to protect consumers, and consumers themselves demand better systems and safer options, the dangers of food contamination will continue to put our health at risk. VN

Mat Thomas *is a writer who shares an apartment in San Francisco with two scintillating cats and carefully washes all his produce. Read more of his work at animalrighter.org.*