

Lettuce Try Not to Panic

Will a tragic overreaction topple Caesar and lead to the decline of the romaine empire?

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By

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ILLUSTRATION: PHIL FOSTER

The Centers for Disease Control and Prevention urged before Thanksgiving that “U.S. consumers not eat any romaine lettuce, and retailers and restaurants not serve or sell any” until the current E. coli outbreak is resolved. This effectively closed down the romaine industry, producing tens of millions of dollars in losses of the

highly perishable crop. The advisory remains in effect for romaine from the Central Coastal growing regions of Northern and Central California.

The waste is worth it, right? It seems straightforward that no one should eat romaine when the lettuce is making people sick. But it isn't so clear when you look at the numbers.

The way the CDC identifies a food-safety outbreak is by interviewing sick people and healthy people. If there is a big difference in their answers, the CDC zeroes in on a cause. There are 43 people known to be infected with the outbreak strain of E. coli 0157:H7. The CDC interviewed 25 of them. Eighty-eight percent of those 25 people, as opposed to 47% of the general population, said they ate romaine lettuce in the week before they got sick.

So it probably was romaine that got those people sick—16 severely enough to be hospitalized. But what rational people should do with this information is much less certain.

The U.S. population is about 326 million. If 47% of the population eats romaine each week, that's about 153 million people. We know of 43 people who have been infected with E. coli from romaine lettuce. According to the CDC, illness start dates range from Oct. 8 to Oct. 31—a period of about three weeks. If we assume, conservatively, that each of those 153 million people eats one serving of romaine each week, then we can figure there were 459 million servings consumed during the three weeks the infection was being transmitted.

This means the odds that eating a serving of romaine will make you sick are about 1 in 11 million, and the odds it will put you in the hospital are less than 1 in 28 million.

To put this in perspective, the probability of getting a royal flush in poker is dozens of times as great, at 1 in 649,740, and the probability of an amateur hitting a hole-in-one in golf is hundreds of times as great, at 1 in 12,000. If you are that risk-averse, you should stay away from dogs—the lifetime odds of getting killed by a dog attack

are about 1 in 112,000. Even the odds of getting struck by lightning in a particular year are higher than 1 in a million.

To put it another way: If this outbreak were active every day, and you ate one salad a day, on average you would be hospitalized for E. coli once every 77,000 years.

And this likely overstates the problem. In past food-related E. coli outbreaks, the people hospitalized tended to be those with weakened immune systems such as the very old, the very young, and patients undergoing stem-cell transplants or chemotherapy. These groups are often advised by their doctors to avoid eating foods that may contain pathogens anyway. The odds of otherwise healthy people facing hospitalization is even lower than this infinitesimal amount. The CDC never actually discloses the risks it so fervently advises avoiding, perhaps because it would be laughed at if it did.

Commissioner Scott Gottlieb tweeted that the Food and Drug Administration's goal is to "withdraw the product that's at risk of being contaminated from the market and then re-stock the market." He said the agency is "working with growers and distributors on labeling produce" that is "post-purge." This implies that after this outbreak passes, the romaine will be safe. But "post-purge" romaine will have an infinitesimal risk of disease as well. The truth is that fresh fruits and vegetables are typically grown outdoors, where pathogens can reach them via animals running through the fields, people working in the fields, birds flying above them, water, wind, insects and in many other ways.

Even so, by any practical definition, produce is exceedingly safe. Farmers feed it to their children and take all reasonable steps to minimize danger. They test water frequently, deploy animal traps, make field workers wear hairnets, and so on. They also aim to keep produce affordable. Would we prefer that romaine be grown in a high-tech safe room and sold for \$50 a head?

Farmers—like car and airplane manufacturers—can't guarantee total safety. Yet we recognize that people should have the freedom to judge the risks for themselves

when they decide whether to drive or fly. Shouldn't they also be able to decide when to have a salad?

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