

Chipotle or Shark Attack? You're Safer with Sharks



By Alex Berezow, PhD — July 19, 2017



Eat at Chipotle? Are you crazy?!

(Credit: Wikipedia) [1]

Americans like to say, "When you're in Mexico, don't drink the water." Mexicans will soon have a maxim of their own: "When you're in America, don't eat the Chipotle."

They would be right, too. It's difficult to think of any other food establishment that has been hit by *E. coli*, *Salmonella*, and Norovirus outbreaks, all [within the span of a few months](#) [2]. The latest [Norovirus outbreak at a Chipotle restaurant](#) [3] in Virginia sickened at least 13 people.

How likely are you to get sick from eating at a Chipotle restaurant? We can answer that question with a quick, back-of-the-envelope calculation. Chipotle's annual report for 2015 ([PDF](#) [4], page 33) says that the company had 1,971 restaurants in the U.S. According to one [source](#) [5], each Chipotle restaurant serves about 700 customers per day. Therefore, in 2015, Chipotle served (1971 x 700 x 365) nearly 504 million meals.

2015 was a bad year for Chipotle. That year, *Food Safety News* [says](#) [6] that multiple outbreaks resulted in at least 491 food poisonings. To calculate the risk of food poisoning at Chipotle, divide 491 by 504 million, which yields 9.7 food poisonings for every 10 million meals served at Chipotle. Admittedly, that's a small number, and it's safe to eat at Chipotle.

But since they made such a big deal about how healthy and safe their food was because they no longer use GMOs, let's compare Chipotle's safety record to another favorite American pastime: Going to the beach and trying not to get bitten by a shark.

According to the [American Shore & Beach Preservation Association](#) [7], "Americans annually make 2 billion visits to ocean, gulf and inland beaches." Obviously, inland beaches (e.g., those found on lakes) don't have sharks, and not every person who goes to the beach dips a toe in the ocean. To

be conservative, let's cut the number in half, and estimate 1 billion trips to beaches that have the possibility of a shark attack.

In 2015, there were [59 shark attacks](#) [8] in the U.S. To calculate the risk of a shark attack, divide 59 by 1 billion, which yields 0.6 shark attacks per 10 million beach visits.

In other words, our rough estimate shows that, *in 2015, you were 16 times likelier to get food poisoning from Chipotle than you were to be attacked by a shark.* We can't remove all the sharks out of the ocean, but we can remove pathogens from our food. Chipotle should have focused on that, instead of GMOs.

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Links

[1] [https://commons.wikimedia.org/wiki/File:US_Navy_110901-N-HZ247-](https://commons.wikimedia.org/wiki/File:US_Navy_110901-N-HZ247-083_Master_Chief_Navy_Diver_Joe_Howard,_right,_answers_questions_while_swimming_with_the_sharks_at_the_N)

[083_Master_Chief_Navy_Diver_Joe_Howard,_right,_answers_questions_while_swimming_with_the_sharks_at_the_N](https://commons.wikimedia.org/wiki/File:US_Navy_110901-N-HZ247-083_Master_Chief_Navy_Diver_Joe_Howard,_right,_answers_questions_while_swimming_with_the_sharks_at_the_N)

[2] <http://www.prweek.com/article/1419873/timeline-crisis-when-chipotles-new-crisis-met-its-old-one>

[3] <https://www.reuters.com/article/us-chipotle-health-idUSKBN1A41NB>

[4] http://www.annualreports.com/HostedData/AnnualReportArchive/c/NYSE_CMG_2015.PDF

[5] <https://sites.google.com/site/chipotlesim/data-collection>

[6] http://www.foodsafetynews.com/2015/12/a-timeline-of-chipotles-five-outbreaks/#.WW_fs9PyvVo

[7] http://www.asbpa.org/news/Beach_News/080814Houston.pdf

[8] <http://edition.cnn.com/2016/02/09/world/shark-attacks/index.html>