

# When Food is Dangerous: a primer on foodborne illness

by Dr. Delia Chiramonte, [Baltimore Health Examiner](#)



Salmonella bacteria. Yet again, yuck.

It seems to happen a lot lately – tomatoes with salmonella, spinach with E. coli... What is happening to our food?

According to the CDC, an estimated 76 million cases of foodborne disease occur annually in the U.S. Most are mild, but over 300,000 people end up in the hospital and 5,000 of them actually die. It is usually the very young, the very old and those with other serious illnesses who suffer the worst fate. There are more than 250 discrete illnesses, but just a few infectious agents cause most of the trouble. The most common offenders are Campylobacter, Salmonella, and E. coli O157:H7, all of which are bacteria, and a group of viruses known as Norwalk-like viruses. Information on other causes of food borne illness is available on the [CDC's website](#).

How does our food become contaminated, anyway? Some of the infectious agents are naturally present in the intestines of farm animals, which can contaminate our meat during slaughter. And fruits and vegetables that are irrigated with contaminated water can be similarly tainted. Once human food handlers get involved, new pathways for contamination emerge. Shigella, Hepatitis A and Norwalk virus can all be transmitted by the unwashed hands of infected workers. Yuck.

The way food is handled after it is contaminated can also determine if it leads to a clinical illness. Minimally contaminated food that has been refrigerated may cause no symptoms

at all since most bacteria cannot reproduce at low temperatures. However, that same food left on the counter over night may be a diarrhea-causing bomb by morning. In the right conditions, one bacterium can create 17 million offspring in 12 hours. Again, yuck.

Unfortunately, unless you grow all of your own food, you cannot entirely eliminate your risk of exposure to foodborne illness. If you are reasonably healthy, an infection is not likely to cause more than a few miserable days spent alternating between your bed and your bathroom. However, there are some things that you can do to minimize the risk.

- **COOK MEAT, POULTRY and EGGS** thoroughly. A ground beef patty can contain pooled meat from hundreds of different cows, which clearly increases the chance that it will be contaminated. So no snacking on raw meat. Eggs can be contaminated with Salmonella, which is killed by cooking -- no licking the bowl after making cookies! (I let my kids taste cookie batter before I add the eggs).
- **DON'T CROSS CONTAMINATE.** Don't use the same utensil to transfer the chicken into and out of the pan. On its way in it may be contaminated, so once it is cooked you need to use a clean fork or spatula to get it out. The same goes for cutting boards and plates. Anything that touches raw meat or poultry should go right into the sink. I actually prepare raw meats and poultry on paper plates so I can just toss them when I'm done.
- **REFRIGERATE.** If you won't be eating your food for 4 hours or more, put it in the fridge. If you eat from a food bar, be sure that the food is either kept hot or cold – eating room temperature meat or produce (unless you can wash or peel it) is asking for trouble. And those cut lemons that sit out at room temperature for hours? Steer clear.
- **CLEAN.** Rinse your fresh fruits and veggies well in running water and discard the outer leaves of lettuce and cabbage.

The Baltimore Health Department posts a list of eating establishments that have been closed for safety concerns. [Check it out](#) and look for your favorite haunts!

And no tomatoes for now unless they came from your garden. Eat safely.

-Dr. C

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