IE·006/10-12

1st

The Kid Who Ruined Thanksgiving

My family goes on a scenic trip every two years for Thanksgiving. We rent two cabins in Broken Bow, OK, and our extended family gathers to celebrate. I would never dream of ruining the trip, but here is how I singlehandedly destroyed everyone's Thanksgiving last year.

It all started the day before Thanksgiving on the drive to the cabins. I started feeling some mild gut pain. Because I'm somewhat gluten intolerant, we didn't think much of it. I get stomach cramps when I eat too much bread. Once we arrived at the cabins that afternoon, my brother and I immediately made use of the ping-pong table out on the porch. As we were playing, I got another, more severe, cramp. I paused, let it pass, and continued our game. From there it only got worse. I was soon in the fetal position. Because my gluten reaction can be pretty painful, we still thought that's all it was. Usually, the cramps last up to thirty minutes. This one didn't. By bedtime, I doubted I would be able to go to sleep. Painkillers weren't very effective. I was in for a rough night. I slept about three hours. By morning I hadn't gotten any better. In fact, it had become excruciating. Being in the middle of Broken Bow, there weren't any hospitals or emergency rooms nearby. The nearest one was 45 minutes away. We didn't have much of a choice. Something was obviously extremely wrong. It was Thanksgiving Day, and I would spend it in the ER. Darn. When we arrived, they ordered a CAT scan to see what was going on in me. The results showed that my colon was horribly inflamed. They told me to not eat any solid foods as those would irritate my gut more. No problem. I didn't have much of an appetite anyway. They also gave us the option to come back and get a

Medivac to a better equipped hospital if it got worse. They were ready to get me a prop-plane if I needed it. So, we drove back to the cabin to try to just let the inflammation blow itself out. Unsurprisingly, the cramping maintained its ferocity and new, worse symptoms began! As we drove back to the ER, (Sorry Mom and Dad! No relaxing Thanksgiving for you!) I couldn't help but feel rather embarrassed. I had such a bad stomach ache I had to be flown to OU Children's Hospital! Yikes. Once we made it back to the ER, they started an IV, a needle-like port where they could drip fluid directly into my bloodstream. At that point, I couldn't care less about getting poked. I was very grateful for Morphine in that moment. I hope I never need it again, but it was helpful at the time. Thank you, Lord Jesus! The hospital had also contacted Medivac and they were on the way! An ambulance raced to my location and carted me on a stretcher to the local airport. My mom went with me while my dad began a late-night drive to OKC to meet us. I felt fabulous due to the painkiller, and I chatted with the paramedics on the way. As I entered my airborne chariot, I reflected on the day. This was by far the lousiest Thanksgiving I had ever had. I missed the food! I needed a redo. I buckled in for a 45-minute flight to Oklahoma City and longed for a nap. I hadn't slept in about 32 hours. The journey was actually fairly enjoyable, thanks to the Morphine. When not in excruciating pain, a plane ride is kind of fun!

When we arrived at Oklahoma City, the Morphine had begun to wear off. The cramps started again. The doctors at OU Children's Hospital ran a couple tests and revealed that I had been infected with *E. coli*, a potentially dangerous bacterium. Shiga toxin-producing *Escherichia coli* to be precise. It hospitalizes about 1,000 people per year. I was one of the unlucky few. So, my family and I settled in for a week at the hospital since they wanted to monitor me for a possible side effect called HUS. Trust me, you do not want to know what that stands for. It's about fifteen syllables long*! HUS is a serious condition that can eventually lead to kidney failure. The treatment to prevent

it was basically getting pumped full of fluid. And drinking tons of water. During my time at OU Children's, I learned a LOT about *E. coli* infections. *E. coli* is classified as a gram-negative bacterium, meaning that they have a plasma membrane surrounding the bacterial cell. Gram-negative bacteria are generally more difficult to treat. *E coli* is an opportunistic pathogen, which means that it does not usually target humans and infect them. Some strains of *E. coli* have even adapted to antibiotics! a bacterium gains antibiotic resistance through DNA or RNA that prevents the antibiotic from effecting the pathogen, or it possesses an anti-antibiotic measure, if you will. This could be an efflux pump, antibiotic-altering enzymes, or antibiotic-degrading enzymes. An efflux pump is a molecular structure that basically grabs the antibiotic, and ejects it right back out of the cell. Antibiotic-altering enzymes wrap the antibiotics in a bubble that neutralizes the treatment. Antibiotic-degrading enzymes break the chemical down until it disperses. These little guys are generally defeated by your immune system though, so you shouldn't have to worry. Regular *E. coli* strains are commonly found in healthy microbiomes. *E. coli* isn't bad necessarily, just there are a few types that can cause significant pain. Normal strains in the gut are helpful, because they help you break down and digest food you normally wouldn't be able to. You actually need types of *E. coli* and other beneficial bacteria to fully digest food. It's a symbiotic relationship. You provide the bacteria with space to live, and they break down food for you. Regular *E. coli* really does more good than harm. Unfortunately, the one I got was not your average *E. coli* cell. It's crazy how something a few micrometers across can cause so much discomfort. Thankfully, the treatment worked, I never developed HUS*, and am only dealing with lingering fatigue at this point. So, all in all, it turned out pretty well. And boy, do I have a story to tell now! I survived Thanksgiving, and my family even made a repeat Thanksgiving meal for me over Christmas Break!

*For those of you who do want to know, HUS stands for Hemolytic-Uremic Syndrome.