The More, the Merrier Within Our Clan

I'm a Gram-negative organism and part of a bacterial clan with many, many relatives, so you can just imagine how crazy our family reunions tend to get! We'll pitch a tent in the human intestines and party for days, weeks and longer, unless someone does something to kick us out. Most of us are relatively harmless and contribute to a healthy human intestinal tract. However, some of us are mean son-of-a-guns and are pathogenic, with one goal in life — causing the host as much misery as possible through illness and severe diarrhea. One of our brethren is even classified as a Category B bioterrorism agent, so you'd better take us seriously.

We are a diverse group, with the harmless members of our family keeping our distance from the pathogenic members of our family, which are classified into a number of pathotypes. Gee, how do you like that? I'm starting to sound like those folks in the clinical lab! The really bad actors produce a toxin — which shall remain nameless since that will give us away instantly — which triggers symptoms that vary for each person. This toxin can cause severe stomach cramps, diarrhea (often bloody), and vomiting, and some people may have a fever, which usually is not very high. Most people get better within five to seven days, but don't let that lull you into complacency about us; while some infections are very mild, others are critical or even life-threatening. Most people who have succumbed to our toxin will start feeling sick three to four days after ingesting something that we have contaminated, however, illnesses can start anywhere from one to 10 days after exposure.

We can create all kinds of havoc in the body, causing everything from urinary tract infections to septicemia, to five major gastrointestinal infections — I get dizzy just thinking about all of the delightful mayhem we can create. The thing is, people, we're most often transmitted by contact and — I know you hate to think about this — the fecal-oral route. That's right, take a good, hard look at those 10 digits of yours; I bet we're crawling around on your hands even as we speak!

We are responsible for many cases of food poisoning, and the folks who are at especially high risk of contracting the illness we cause — pregnant women, newborns, children, older adults, and those with weak immune systems — should take great care to practice proper hygiene, especially good handwashing. We shouldn't have to remind you, but here goes just in case: Wash your hands thoroughly after using the bathroom and changing diapers. Wash your hands thoroughly before and after preparing or eating food. If soap and water aren't available, use an alcohol-based hand sanitizer with at least 60 percent alcohol (check the product label to be sure). These alcohol-based products can quickly reduce the number of us on hands in some situations, but they are not a substitute for washing with soap and running water.

You silly clinicians always want to prescribe a course of antibiotics, but actually, they are not recommended for patients with suspected infections caused by our toxin until complete diagnostic testing can be performed and infection by us and our toxin is ruled out. Until then, keep those hands washed and cook your food thoroughly.

Who am I?

Escherichia coli (E. coli)