

***E. COLI* SUPERBUG ON THE VERGE OF BEING UNTREATABLE¹**

Leah Zerbe[©]

There are hundreds of strains of *E. coli* bacteria, and most of them are harmless. At the worst, they cause a few days of digestive discomfort. However, new research has revealed that an emerging strain, known as ST131, is on its way to becoming a drug-resistant superbug that leaves doctors with few treatment options. Most drug-resistant strains in the past fortunately didn't cause a lot of problems. Not so with ST131. This strain is both virulent *and* largely unresponsive to antibiotics.

THE DETAILS: In the study, carried out by U.S. infectious-disease experts and published online in *Clinical Infectious Diseases*, researchers analyzed data from patients hospitalized with *E. coli* infections around the country in 2007. The strain responsible for the majority of these infections? ST131. Currently, the pathogen is already resistant to certain antibiotics, but researchers believe that if it adds one more resistance gene, it will be virtually untreatable. This means our immune systems will be our only weapon against it, which is particularly concerning for the young, old, and those with already suppressed immunity.

WHAT IT MEANS: In the past, *E. coli* outbreaks have prompted recalls of everything from lettuce and beef to cookie dough. And while most *E. coli* cases result in a few hours of uncomfortable stomach cramps and more frequent trips to the bathroom, the emergence of more virulent strains is proving to be more serious. In worst-case scenarios, it's fatal. Food-borne illnesses are also incredibly costly. A report released earlier this year found that these illnesses are costing the U.S. \$150 billion a year.

The authors of this latest study say that more research is needed to determine where this strain is coming from, but other scientists have linked virulent *E. coli* strains, such as O157:H7, to concentrated animal-feeding operations—in other words, factory farms.

Here are some ways to protect yourself against food- and water-borne illnesses:

- **Buy organic.** Feedlot and other industrial farming systems that provide the majority of supermarket meat rely on heavy antibiotic use to speed the animals' growth and prevent disease in their filthy conditions. But scientists say exposing harmful microorganisms to all these drugs is actually accelerating their ability to build resistance to many of the drugs we use. Organic certification means antibiotics are not used. Therefore, the more we support this type of agriculture, the fewer virulent, resistant pathogens will end up in our food supply. To save money on organic food, try growing your own.
- **Keep your mouth closed.** The U.S. Centers for Disease Control and Prevention cautions against swallowing water when you're swimming in pools and lakes, as this increases your risk of *E. coli* poisoning.

¹ Rodale News, August 04, 2010

- **Cook meat thoroughly.** When cooking meat, be sure you hit high enough temperatures to kill all pathogens. Use a meat thermometer and a chart of safe meat temperatures (see below) to guide you.
- **Get your water tested.** Most of the country's drinking water is treated using chlorine, ozone, or UV rays at municipal filtration plants. However, if you drink from a well, it's a good idea to have your water tested for coliform bacteria.

INTERNAL TEMPERATURE REFERENCE CHART FOR MEATS & POULTRY²

Meat	Fahrenheit	Celsius
Beef:		
Rare	120° - 125°	45° - 50°
Medium-Rare	130° - 135°	55° - 60°
Medium	140° - 145°	60° - 65°
Medium-Well	150° - 155°	65° - 70°
Well Done	160° and above	70° and above
Lamb:		
Rare	135°	60°
Medium-rare	140° - 150°	60° - 65°
Medium	160°	70°
Well done	165° and above	75° and above
Poultry:		
Chicken	165° - 175°	75° - 80°
Turkey	165° - 175°	75° - 80°
Pork:		
Fresh Pork	160° - 170°	65° - 70°
Ham (Fully-Cooked)	140°	60°
Ham (Uncooked)	160°	70°

² ©CooksRecipes.com (www.cooksrecipes.com/tips/meat-cooking-temperature-chart.html)