



The Antibiotic-Resistant Bacteria - MRSA

Methicillin-resistant *Staphylococcus aureus* is an antibiotic-resistant bacterium that is well known in hospitals and other health care settings as a common cause of infections that can be especially dangerous to those with compromised immune systems.

According to Dr. Monina Klevens of the Centers for Disease Control and Prevention (CDC), "94,360 invasive MRSA infections occurred in the United States in 2005; these infections were associated with death in 18,650 cases."ⁱ For comparison, HIV/AIDS killed roughly 17,000 people that year.ⁱⁱ

Determining Cases of MRSA in the U.S. and Abroad

Recently, a strain known as ST398, which is more common to factory farmed pigs, infected three British patients who had no close association with farm animals, raising the possibility that it had entered the food supply. While ST398 is not more potent than common hospital strains, it requires a different course of treatment. Thus, its presence makes it harder for doctors to select effective medications quickly, and the resulting delay could have serious consequences for infected patients.

MRSA has also been detected in other animals in Europe, including horses, cattle and chickens.ⁱⁱⁱ

A 2007 article from a journal series published by the CDC, noted that *S. aureus* is "known to be one of the most common causes of bovine mastitis," a painful infection of the udders commonly afflicting dairy cattle. The bacteria is also known to be transmissible between cows and humans with whom they are in close contact.^{iv}

Whether the result of direct transmission or independent development, its existence *has been confirmed* in domestic pigs in the U.S. by independent research; a University of Iowa team of scientists tested 209 hogs on 10 farms in Iowa and Illinois and found MRSA in 70%.^v The similarity of conditions between industrial animal farms in Europe and those in the U.S. may allow for the independent emergence of the bacteria.

In March 2008, Canadian researchers announced they had discovered MRSA in nearly 10% of retail pork products they sampled.^{vi} As with the testing of live animals, neither the USDA nor any government agency has conducted tests of domestic animal products.

Protecting Against MRSA

While MRSA is destroyed by proper cooking, poor handling of raw meat products could pose a serious threat to public health. In fact, more than 325,000 people are hospitalized in the U.S. every year as a result of food borne illness^{vii}—illness caused by pathogens which should have been destroyed by proper cooking or isolated by proper handling.

U.S. Government and Industry Response

Seattle Post-Intelligencer's senior correspondent Andrew Schneider summarized the U.S. pork industry's response on June 4, 2008: *The National Pork Producers Council in Washington is sure there's no problem. They told me "there is nothing to worry about; MRSA (in pigs) has not been found this side of the border" and "USDA and CDC have given our pigs a clean bill of health." A CDC spokeswoman told me that she could find "no indication we made that statement." Interestingly, the pork lobbyists have said their industry would oppose any attempt to test all livestock for MRSA, calling the testing "unnecessary to protect public health."*^{viii}

The USDA does not test any pigs or pork products for MRSA, nor has it announced any plans to do so.

ⁱ http://seattlepi.nwsourc.com/local/366301_pigmrsa09.html

ⁱⁱ <http://www.medicalnewstoday.com/articles/90525.php>

ⁱⁱⁱ <http://www.soilassociation.org/web/sa/saweb.nsf/89d058cc4d8eb16d80256a73005a2866/5cae3a9c3b4da4b880257305002daadf?OpenDocument>

^{iv} Juhász-Kaszanyitzky E, Jánosi S, Somogyi P, Dán A, van der Graaf-van Bloois L, van Duijkeren E, et al. MRSA transmission between cows and humans. *Emerg Infect Dis* [serial on the Internet]. 2007 Apr [date cited]. Available from <http://www.cdc.gov/EID/content/13/4/06-0833.htm>

^v <http://blog.seattlepi.nwsourc.com/secretingredients/archives/140336.asp>

^{vi} <http://www.thestar.com/News/Canada/article/347865>

^{vii} http://www.cdc.gov/ncidod/dbmd/diseaseinfo/foodborneinfections_g.htm#howmanycases

^{viii} <http://blog.seattlepi.nwsourc.com/secretingredients/archives/140336.asp>