

Forbes.com (November 27, 2003)

Turkey, Stuffing And Antibiotics

By Penelope Patsuris

NEW YORK - Worried about the damage that Thanksgiving dinner will do to your waistline? Putting on a few pounds may be the least of your worries after sitting down to a giant turkey dinner with all the trimmings.

No, we're not just talking about the so-called turkey coma, which is produced by a naturally occurring amino acid in turkey skin. There is increasing evidence that the antibiotics used in the U.S. to raise chickens and turkeys--not to mention cows and pigs--pose a growing health risk for humans.

The trouble is twofold. When humans eat farm animals that have been fed antibiotics, they can develop immunity to those antibiotics, so that the drugs may not work when they are prescribed to treat illness. This has been a public, controversial matter since the 1970s. But more recently, health officials have discovered that poultry and livestock that get antibiotics can in turn carry strains of bacteria like salmonella that are very resistant to those drugs. If those bacteria infect humans, who may eat undercooked or mishandled meat, it can prove very difficult to treat.

"There is a huge problem with antibiotic resistance that costs the U.S. economy \$30 billion a year," says Kimberly Thompson, who has a PhD in veterinary science and is an associate professor at Harvard's School of Public Health. She also authored the book *Overkill: How Our Nation's Abuse of Antibiotics and Other Germ Killers Is Hurting Your Health and What You Can Do About It*, which was published in April by Rodale Press.

The problem certainly can't be blamed solely on antibiotic-laden poultry and meat. Thompson's work focuses a great deal on the fact that antibiotics are often over prescribed by healthcare professionals and misused by patients. And while U.S. turkey consumption, at 17.5 pounds per person for 2001, has doubled since 1970, it remains a small part of the U.S. diet.

Antibiotics have been used on farm animals since the mid-1950s. Now over 25 million pounds are fed to livestock in the U.S. each year, according to the book *The Killers Within*, which was written by Michael Shnayerson and Mark J. Plotkin and published this year by Little, Brown. Often the drugs, which are manufactured by pharmaceutical companies, including Bayer, Eli Lilly and Pharmacia, are used on healthy animals to prevent disease or promote growth, a practice that is approved by the U.S. Food and Drug Administration.

"But the issue of antibiotic-fed animals has become more of a problem recently because there are an increasing number of drugs used in animals that are very similar in their formulation to human drugs," says Thompson. "So there is more of a concern about resistant bacteria infecting humans."

A study published in the *New England Journal of Medicine* in October 2001 examined these issues and concluded: "The emergence of [antibiotic]-resistant salmonella is associated with the use of antibiotics in animals raised for food; resistant bacteria can be transmitted to humans through foods, particularly those of animal origin."

The study, which was lead by Dr. Jianghong Meng, a veterinarian and an associate professor in the University of Maryland's food science department, found that 20% of 200 meat samples contained salmonella. Of those contaminated samples, 84% were resistant to one antibiotic, and a whopping 53% of them were resistant to at least three kinds of the drug.

Meng is in the process of publishing a related poultry study, which found that 70% of the raw chicken sampled, and 15% of the raw turkey sampled were contaminated with the nasty illness-causing Campylobacteria. "That's high," says Meng. Much worse: "Many of the bacteria we recovered were resistant to antibiotics, including those commonly used to treat human infections such as Erythromycin and Cipro." About half the bacteria were resistant to the former, and 35% of them were resistant to Cipro.

Not surprisingly, Meng and scientists like him advocate more prudent use of antibiotics in food animals, and turkey producers assert that their use is appropriate.

"We are committed to producing the safest, highest quality products for consumers and prudent use of antibiotics for flock health is a part of that," says a spokeswoman for ConAgra, which owns Butterball Turkey. "We are certainly monitoring the issue and always looking for effective alternatives to antibiotics."

A spokeswoman for National Turkey Federation adds: "A withdrawal period is required between the time the antibiotic is administered and before the turkey is processed," and assures consumers, "The USDA monitors the administration of antibiotics and randomly tests flocks of turkeys for antibiotics and reports that 99.9% of turkeys are residue free."

Nevertheless, the FDA, which approves animal drugs, is working on curbing their use. Until recently the regulator examined only the effects of the antibiotic residue in animals. Then the late 1990s saw an increase in antibiotic-resistant bacteria. "We now try to judge whether [a drug will cause] resistant bacteria to develop and what would happen if it were transferred to humans," says Linda Tollefson, a doctor of veterinary medicine and deputy director of the FDA's Center for Veterinary Medicine.

Two years ago, the agency began to try to rescind the approval of Fluoroquinolone antibiotics in poultry, after it was determined that the drugs were creating resistant bacteria that made people sick. Abbott Laboratories subsequently withdrew its Fluoroquinolone drug, and producers, including privately held Perdue Farms and Tyson Foods, have said they will no longer use the product. Fast-food companies like McDonald's, Wendy's and AFC Enterprises-owned Popeye's Chicken have also said they won't buy birds that are fed the drug.

One holdout: Bayer which has been fighting to keep its own Fluoroquinolone product, Baytril 50, in use. The company says its research shows the drug is not harmful.

Whatever risk the use of antibiotics in farm animals may ultimately pose, there is one point upon which the pro- and anti-drug camps agree. Says Thompson: "The biggest risk with a turkey is still undercooking it and cross-contamination due to poor handling in the kitchen.

Archived on-line at:

<http://www.forbes.com/2002/11/27/cx_pp_1127turkey.html>