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Antibiotics Used to Promote Growth in Chickens Increase Resistance to Medicine that Cures Food Poisoning In Humans

Non-Therapeutic Use of Antibiotics of Greater Concern than Therapeutic Use

Washington, D.C. – U.S. Department of Agriculture (USDA) researchers have shown that feeding chickens the antibiotic tylosin to promote growth – not to treat disease – greatly increases the number of erythromycin-resistant *Campylobacter* on chicken carcasses. Erythromycin, a drug vital for treating severe food poisoning in humans, is a close cousin of tylosin. *Campylobacter* is the second leading cause of bacterial food borne illness in the U.S., causing an estimated 1.5 million illnesses each year with children and the elderly most often infected.

The study also demonstrated that non-therapeutic use of antibiotics as growth promoters (a typically low dose over a long time) elicits more resistance than therapeutic antibiotic use (a typically high dose over a short time). Researchers found the highest levels of resistance – 10% – among bacteria on chickens given tylosin to speed growth, as opposed to 2% resistance among bacteria on chickens treated with therapeutic doses and zero resistance among bacteria on chickens not given antibiotics. The researchers also found that using antibiotics to promote growth did not reduce the levels of *Campylobacter* in chickens at slaughter age.

The U.S. Food and Drug Administration (FDA) considers erythromycin to be “critically important” in human medicine because of its importance in treating *Campylobacter* and other serious illnesses. Tylosin is the only drug in the critically important class that is allowed to be added in low doses to animal feed for growth promotion, a practice long recognized to increase antibiotic resistance.

“How many more studies does the FDA need before it acts to make sure that critically important human medicines like erythromycin stay effective?” asked Rich Wood, Executive Director of Food Animal Concerns Trust and Steering Committee Chair of the Keep Antibiotics Working Steering Committee. “If the FDA won’t step in to protect the public’s health, then Congress should.”

Proposed federal legislation, The Preservation of Antibiotics for Medical Treatment Act, sponsored by Senate Health Committee Chairman Edward Kennedy (D-MA) and Senators Olympia Snowe (R-ME), Susan Collins (R-ME), Sherrod Brown (D-OH) and Jack Reed (D-RI) in the Senate (S. 549) and Rep. Louise Slaughter (D-NY), the only microbiologist in Congress, and 30 other House members in the U.S. House of Representatives (H.R. 962), would phase out the use of antibiotics that are important in human medicine as animal feed additives within two years. The American Medical Association, the Infectious Disease Society of America, and the American Academy of Pediatrics are among the more than 350 health, agriculture and other groups nationwide that have endorsed this bill.

The full citation for the study is:

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Development of Macrolide-Resistant *Campylobacter* in Broilers Administered Subtherapeutic or Therapeutic Concentrations of Tylosin†

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