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FOOD

Save Antibiotics For Medicine, Not Factory Farms

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Antibiotics are critical tools for human medicine, yet far more antibiotics are given to food animals than to sick people, and this practice is putting all of us at risk. Agriculture accounts for 80 percent of antibiotics sold in the United States, using drugs from every major class of antibiotics used in human medicine.[1] The way that most antibiotics are used on livestock, such as chickens, pigs and cattle, has been linked to the rise of antibiotic-resistant (AR) bacteria. This means that the bacteria can survive exposure to antibiotic drugs that had previously been effective in killing them.

How Factory Farming Drives Antibiotic Resistance

In the 1950s, researchers discovered that a small, constant dose of antibiotics helped food animals grow slightly faster. Livestock producers began using feed with antibiotics mixed in, both to promote faster growth and as an attempt to prevent infections in densely packed and unsanitary factory farms.[2] These "subtherapeutic" doses are just a fraction of the amounts typically used to treat infections.

Treatment of sick animals requires just a few animals to receive medicine for a short time and is less likely to contribute to resistance. Subtherapeutic uses mean an entire herd or flock of animals receives small doses for an extended period of time. This practice kills bacteria that are susceptible to the drug, leaving resistant bacteria to survive and reproduce. The use of even one antibiotic can select for resistance to multiple classes of antibiotics because the genetic trait that allows bacteria to survive exposure to one antibiotic is often linked to traits allowing it to survive others.[3] Even worse, AR bacteria can transfer genetic resistance traits to other bacteria in animals and the environment.[4]

Imagine including a low dose of antibiotics in your food every day. Does that make sense given the advice we hear from doctors to take the full course of antibiotics and to take antibiotics only when needed to treat bacterial infections? Yet

that's essentially what happens in modern livestock production. And once AR bacteria develop on factory farms, they can spread to farmers, workers and neighbors, through food produced from animals raised there, and when contaminated waste enters the environment.

These risks to human health aren't theoretical. In 2011, antibiotic-resistant *Salmonella* caused the recall of 36 million pounds of ground turkey from one plant, the third largest meat recall in U.S. history.[5][6] That meat sickened at least 136 people, causing 37 hospitalizations and one death.[7] Research-

ers have found strong evidence that a strain of methicillin-resistant *Staphylococcus aureus*, commonly known as MRSA, originated in humans, migrated to pigs where it acquired antibiotic resistance, and now is infecting humans again.[8]

More Antibiotic-Resistant Bacteria = More Sick People

Antibiotic resistance has become a serious problem in human medicine. There are few or no treatment options for some infections from AR bacteria, and pharmaceutical companies are not producing new treatments fast enough to replace drugs that become ineffective.[9] People get sicker from resistant infections, as it takes multiple rounds of increasingly stronger antibiotics to stop the infection.[10] Researchers estimate the national medical and social costs of AR infections to be in the billions.[11]

Medical authorities are calling the rise of antibiotic-resistant bacteria a public health crisis. The American Public Health Association, American Medical Association, American Academy of Pediatrics, Infectious Disease Society of America and World Health Organization have all issued statements calling for restrictions on subtherapeutic uses of antibiotics in livestock.[12]

Take Action to Protect Lifesaving Antibiotics!

Despite the urgent need to address this growing public health threat, neither Congress nor the Food and Drug Administration (FDA) have done enough to stop the overuse of antibiotics in food production. The FDA relies primarily on voluntary suggestions to industry, rather than withdrawing the approval of subtherapeutic use of these important drugs.

Congress needs to step in to end the use of medically important antibiotics for subtherapeutic purposes in livestock production. Contact your members of Congress and tell them to support the Preservation of Antibiotics for Medical Treatment Act (PAMTA) in the House and the Prevention of Antibiotic Resistance Act (PARA) in the Senate.

Contact your members of Congress and ask them to protect antibiotics today!

www.foodandwaterwatch.org/food/antibiotics.

Endnotes

1 Meister, Karen. Supervisory Congressional Affairs Specialist. U.S. Department of Health and Human Services, U.S. Food and Drug Administration (FDA). Letter to Representative Louise Slaughter. April 19, 2011; Office of Congresswoman Louise Slaughter. [Press Release]. "FDA Reports to Slaughter: Over 70 Percent of Antibiotics Administered to Animals In Feed." May 13, 2011; Silbergeld, Graham et al. "Industrial food animal production, antimicrobial resistance, and human health." *Annual Review of Public Health*. Vol. 29. 2008 at 151.

2 Marshall, Bonnie and Stuart Levy. "Food animals and antimicrobials: impacts on human health." *Clinical Microbiology Reviews*. Vol. 24, iss. 4. 2011 at 718.

3 *Ibid*. at 719.

4 Silbergeld et al. 2008 at 156; Smith, David L. et al. "Agricultural antibiotics and human health: Does antibiotic use in agriculture have a greater impact than hospital use?" *PLoS Medicine*. Vol. 2, iss. 8. 2005 at 731.

5 U.S. Centers for Disease Control and Prevention (CDC). "Investigation Update: Multistate Outbreak of Human *Salmonella* Heidelberg Infections Linked to Ground Turkey." November 10, 2011. Available at http://www.cdc.gov/salmonella/heidelberg/111011/index.html. Accessed January 9, 2012.

6 Stein, Rob. "Officials warn consumers about contaminated turkey." *The Washington Post*. August 4, 2011.

7 CDC. November 10, 2011.

8 Price, Lance et al. "Staphylococcus aureus CC398: Host Adaptation and Emergence of Methicillin Resistance in Livestock." *mBio*. Vol. 3, iss. 1. January/February 2012 at 1.

9 Boucher, Helen et al. "Bad Bugs, No Drugs: No ESKAPE! An Update from the Infectious Diseases Society of America." *Clinical Infectious Diseases*. Vol. 48, iss. 1. 2009 at 1.

10 Johnson, James. University of Minnesota School of Medicine. Testimony on "The Science Is Clear: Inappropriate Use of Antibiotics in Animal Agriculture Threatens Public Health." Congressional Hearing sponsored by Center for Science in the Public Interest and Johns Hopkins University Center for a Livable Future. March 8, 2012.

11 Roberts, Rebecca et al. "Hospital and societal costs of antimicrobial-resistant infections in a Chicago teaching hospital: implications for antibiotic stewardship." *Clinical Infectious Diseases*. Vol. 49. 2009 at 1182; Alliance for the Prudent Use of Antibiotics and Cook County (Stroger) Hospital. [Press Release]. "Antibiotic-Resistant Infections Cost the U.S. Healthcare System in Excess of $20 Billion Annually." October 19, 2009.

12 American Public Health Association. "Policy Statement: Helping Preserve Antibiotic Effectiveness by Stimulating Demand for Meats Produced Without Excessive Antibiotics." Policy Number 2004-13. November 9, 2004. Available at http://www.apha.org/advocacy/policy/policysearch/default.htm?id=1299. Accessed March 5, 2012; American Medical Association House of Delegates. "Report of Reference Committee E." 2008 at 21; Bradley, John. American Academy of Pediatrics. Testimony on "Antibiotic Resistance and the Impact on the Health of Children: The Need for More Safe and Effective Antibiotics and Better Antimicrobial Stewardship." Subcommittee on Health. Committee on Energy and Commerce. U.S. House of Representatives. June 9, 2010; Infectious Disease Society of America. "Summary of Existing Policy on the Use of Antimicrobial Drugs in Food Animals." November 1, 2009; World Health Organization. "WHO Global Strategy for Containment of Antimicrobial Resistance." 2001 at 37. Available at http://www.who.int/csr/resources/publications/drugresist/en/EGlobal_Strat.pdf. Accessed March 5, 2012.

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