NRDC

FACT SHEET

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EVERY YEAR IN THE UNITED STATES:

AT LEAST
2 MILLION
PEOPLE CONTRACT INFECTIONS RESISTANT TO MULTIPLE ANTIBIOTICS.[1]

UP TO
162,000
PEOPLE DIE AS A RESULT OF THE INFECTIONS.[2]

AT LEAST
$55 BILLION
LOST DUE TO EXCESS HOSPITAL COSTS AND LOST PRODUCTIVITY.[1]

ANTIBIOTIC RESISTANCE: FROM THE FARM TO YOU

Antibiotic resistance is one of our most serious health threats. Antibiotic use in both humans and animals contributes to that threat. Antibiotic-resistant bacteria from poultry and livestock production contribute to rising rates of antibiotic resistance in humans in a number of ways.

"Scientists around the world have provided strong evidence that antibiotic use in food-producing animals can harm public health."[1] – Centers for Disease Control and Prevention (CDC)

"Stop using antibiotics in healthy animals to prevent the spread of antibiotic resistance."[3] – World Health Organization (WHO)

RESISTANT BACTERIA ON FOOD THREATEN OUR HEALTH

Scientists and governmental agencies routinely find antibiotic-resistant bacteria on animals at slaughter[4] and on raw meat[5] in grocery stores. Up to 162,044 deaths per year[6] are now estimated to result from bacterial infections resistant to multiple antibiotics—more than 7 times as many as previous CDC estimates, about as many as accidental deaths, and more than double the deaths due to opioids.[7]

The World Health Organization (WHO) and the CDC have implicated antibiotic use in food animals as a contributor to the emerging threat of antibiotic-resistant infections and have deemed antibiotic-resistant infections from food pathogens a serious threat.[8] Preliminary research indicates that poultry may be contaminated with resistant bacteria that cause urinary tract infections.[9]

RESISTANT BACTERIA FROM ANIMAL FACILITIES SPREAD THROUGH AIR, WATER, AND SOIL

Resistant bacteria can travel via air[10] or water[11] and can wind up in the soil when manure is applied to crops,[12] allowing them to end up on fruits and vegetables.[13] Even insects[14] and rats[15] can carry resistant bacteria away from farms.

RESISTANT BACTERIA SPREAD TO AND THREATEN WORKERS AND THEIR COMMUNITIES

People who work in the meat industry are more likely to carry resistant bacteria on their bodies and into their communities.[16] In addition, they are more likely to get sick from bacterial infections than the general public,[17] putting them at higher risk from antibiotic-resistant bacteria.[18] Similarly, communities near livestock facilities or fields treated with livestock manure, are more likely to be exposed to and infected by Methicillin-resistant *Staphylococcus aureus* (MRSA), an antibiotic-resistant bacterium.[19]

RESISTANT BACTERIA CAN PASS ON RESISTANCE TRAITS TO OTHER BACTERIA

Resistant bacteria can pass their resistance genes onto other bacteria.[20] Some of these genes can confer resistance to other antibiotics that were not used on the animals.[21] Researchers have shown that resistance genes can be passed from bacteria in soil (including manure) to pathogenic bacteria in the community,[22] and that ingested resistant bacteria can share resistance genes with other bacteria inside the human gut.[23] More than ever scientists refer to a growing "reservoir" of antibiotic resistance in our communities and environment.[24]

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ENDNOTES

◆ Cattle production ◆ Broiler production ◆ Pork production

Selected publications that illustrate the contribution of animal agriculture as a whole to the threat of antibiotic resistance.

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