

More must be done to fight 'superbugs': U.S. gov't report

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(HealthDay)—Antibiotic-resistant "superbugs" remain a major public

health threat, and only a multipronged attack can address the problem, a new U.S. government report warns.

The issue of antibiotic resistance isn't new, and experts have long called for measures to combat it. Still, more than 2 million Americans fall ill each year from infections that are resistant to antibiotics, and roughly 23,000 die, according to the U.S. National Institute of Allergy and Infectious Diseases (NIAID).

"We still face major challenges, and we still have a long way to go in addressing this problem," said NIAID director Dr. Anthony Fauci.

He and his colleagues explained the scope of the issue in the Sept. 20 *Journal of the American Medical Association*. The researchers also pointed to possible solutions—some of which are beginning to be implemented.

Scientists have long known that bacteria have ways of thwarting the drugs designed to kill them. But in recent decades, overuse and misuse of antibiotics have fueled a global spread of drug-resistant bugs, which include *Clostridium difficile*, or C-diff, and methicillin-resistant *Staphylococcus aureus*, or MRSA.

One issue, Fauci said, is the "clearly inappropriate use" of antibiotics to boost national food production: 80 percent of antibiotics consumed in the United States actually go to animals raised for food.

"And that's not to treat infections," Fauci said. "It's to promote the animals' growth."

In the past few years, the U.S. Food and Drug Administration has taken steps to address the issue, Fauci noted.

According to the FDA, once its new rules are fully implemented, it will be illegal for food producers to use "medically important" antibiotics to promote animal growth. That refers to antibiotics that are commonly used to treat human illnesses.

It's not clear how important that food-supply use has been in the rise of antibiotic-resistant infections in people, according to Fauci. But, he said, there is evidence that when food animals develop drug-resistant bacteria, those bugs can be passed on to consumers—through undercooked or improperly handled meat, for example.

And then there's humans' overuse and misuse of antibiotics. For years, experts have warned against using antibiotics for illnesses they cannot treat—including viral infections such as the common cold and the flu.

Fauci explained it like this: Each time someone uses an antibiotic, bacteria sensitive to the drug die (including "good" bacteria the body needs), while bacteria resistant to the drug have the chance to survive and thrive. So needless antibiotic use increases the chances of that happening, without any benefit.

According to the U.S. Centers for Disease Control and Prevention, up to half of antibiotic prescriptions in U.S. hospitals are unnecessary. And based on a CDC study published Sept. 19, little progress has been made in curtailing those prescriptions between 2006 and 2012.

Fauci didn't comment on that study directly, but said U.S. hospitals and providers need to rein in [antibiotic prescriptions](#).

And the public, he added, needs to stop asking for them.

"People can help by not putting pressure on their doctor for an antibiotic," Fauci said. "Doctors are human, and they'll often give in."

Dr. Stuart Levy is director of the Center for Adaptation Genetics and Drug Resistance at Tufts University in Boston. He agreed that public awareness is vital.

"Although there appears to be better awareness of the problem of antibiotic resistance among the public, recent surveys show that this knowledge has not yet translated into better antibiotic usage," Levy said.

"Better" use includes taking your antibiotic as directed, Fauci pointed out. Finish your full prescription—even if you're feeling better, he said. Stopping early can boost the odds that some bad bugs will survive, mutate and become resistant to the drug.

But "everyday citizens" can do only so much, Fauci pointed out. Drug companies need to develop [new antibiotics](#), he said, and researchers need to work on "novel" treatments and vaccines against major infections.

Historically, there's been little incentive for drug companies to invest in new antibiotics, Fauci's team pointed out.

But a U.S. law that, among other things, extended companies' patent exclusivity seems to have had some impact. Since 2010, six new antibiotics have come onto the market. And about three dozen are under development.

"It's too soon to tell what kind of impact [the new drugs] may be having," Fauci said.

"Development of new antibiotics must still be encouraged, even for a short-term solution," Levy said.

But, he added, older antibiotics that have fallen out of favor should not be forgotten. "We should consider optimizing older antibiotics and

obtaining the clinical data which would allow us to resurrect their use," Levy said.

The NIAID report comes during a week of renewed attention to the issue of [antibiotic resistance](#).

The topic will be discussed at the United Nations General Assembly. And on Tuesday, the nonprofit Center for Disease Dynamics, Economics and Policy is holding a meeting of health experts to highlight the global scope of the [antibiotics](#) issue.

In developed countries, the CDDEP says, overuse is the problem. In developing countries, however, many people have no access to the potentially lifesaving drugs.

More information: The CDC has a primer on [antibiotic resistance](#).

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