

Antimicrobial resistance remains high, says EU report

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Bacteria found in humans, animals and food continue to show resistance to widely used antimicrobials, says the latest report on antimicrobial resistance (AMR) in bacteria by the European Food Safety Authority (EFSA) and the European Centre for Disease Prevention and Control (ECDC). The findings underline that AMR poses a serious threat to public and animal health. Infections caused by bacteria that are resistant to antimicrobials lead to about 25,000 deaths in the EU every year.

Vytienis Andriukaitis, EU Commissioner for Health and Food Safety, said: "Antimicrobial resistance is an alarming threat putting human and animal health in danger. We have put substantial efforts to stop its rise, but this is not enough. We must be quicker, stronger and act on several fronts. This is why the Commission will launch a new Action Plan this summer that will give a new framework for future coordinated actions to reduce the spread of [antimicrobial resistance](#)."

The report shows that in general multi-drug resistance in Salmonella bacteria is high across the EU. However, experts note that resistance to critically important antimicrobials used to treat severe human cases of Salmonella infection remains low. Salmonellosis, the disease caused by these bacteria, is the second most commonly reported foodborne disease in the EU.

Mike Catchpole, Chief Scientist at ECDC, said: "It is of particular concern that some common types of Salmonella in humans, such as monophasic Salmonella Typhimurium, exhibit extremely high multi-

drug resistance. Prudent use of antibiotics in human and veterinary medicine is extremely important to address the challenge posed by antimicrobial resistance. We all have a responsibility to ensure that antibiotics keep working."

The report also highlights that antimicrobial resistance levels in Europe continue to vary by geographical region, with countries in Northern and Western Europe generally having lower resistance levels than those in Southern and Eastern Europe. Marta Hugas, Head of EFSA's Biological Hazards and Contaminants unit, said: "These geographic variations are most likely related to differences in antimicrobial use across the EU. For example, countries where actions have been taken to reduce, replace and re-think the use of antimicrobials in animals show lower levels of antimicrobial resistance and decreasing trends."

This year, the publication of the report is accompanied by a data visualisation tool, which displays data by country on antimicrobial resistance levels of some bacteria found in foods, animals and humans.

The report also includes the following findings that may have a public health impact:

- Resistance to carbapenem antibiotics has been detected for the first time as part of EU-wide annual monitoring in animals and food. Carbapenems are usually the last remaining treatment option for patients infected with multidrug resistant bacteria to other available antibiotics. Very low levels of resistance were observed in *E. coli* bacteria found in pigs and meat from pigs.
- Extended-spectrum beta-lactamase (ESBL)-producing *E. coli* has been detected in beef, pork, pigs and calves. Bacteria that produce ESBL enzymes show multi-drug resistance to β -lactam antibiotics, which include penicillin derivatives and cephalosporins. The prevalence of ESBL-producing *E. coli*

varied across countries, from low to very high (find out more from our data visualisation tool).

- Resistance to colistin has been found at very low levels in *Salmonella* and *E. coli* in pigs and cattle. Colistin may be commonly used in some countries for the control of infections in animals, especially in pigs. In some circumstances it may be used as a last-resort antibiotic in humans.
- More than 10% of the tested *Campylobacter coli* [bacteria](#) in humans showed resistance to two critically important antimicrobials (fluoroquinolones and macrolides), which are used to treat severe cases of *Campylobacter* infections in humans. *Campylobacteriosis* is the most commonly reported foodborne disease in the EU.

More information: Antimicrobial resistance in Europe:
www.efsa.europa.eu/en/interact...ages/AMR_Report_2015

Provided by EFSA

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