

# Global Burden of Bacterial Antimicrobial Resistance: Analysis and Forecasts 2050

- Antimicrobial Resistance (AMR) happens when bacteria develops or acquires a way to prevent the antibiotic from killing it
- When AMR develops, infections that were treatable can become fatal
- Overuse and misuse of antimicrobials are the main drivers of AMR

According to a new landmark study in the Lancet, antimicrobial resistant pathogens will kill **more than 39 million people by 2050**<sup>1,3</sup>

Study also predicts **169 million deaths** associated with drug resistant infections/year<sup>1</sup>



Adults over **70 years** of age experienced over **80% increase in deaths** due to AMR from 1990-2021<sup>1</sup>

## What can you do?

1. **Avoid antibiotics** when bacterial infection is unlikely
2. Limit antibiotic **spectrum** and **duration**
3. Prevent infections by staying up to date on vaccinations and washing your hands

**Prevention is better than treatment!**

25 % of outpatient antibiotic prescriptions are not needed<sup>4</sup>

**We need your help!**

Visit [ADSP.NM.ORG](https://www.adsp.nm.org)

**References:** 1. Global burden of bacterial antimicrobial resistance 1990–2021: a systematic analysis with forecasts to 2050. Naghavi, Mohsen et al. The Lancet, Volume 404, Issue 10459, 1199 – 1226.

2) World Health Organization. [wwwAntimicrobial resistance \(who.int\)](https://www.who.int/antimicrobial-resistance)

3) Superbugs Could Kill 39 Million People by 2050, Study Says | TIME. 4. BMJ 2019;364:k5092 | doi: 10.1136/bmj.k5092

# The Impact of Antibiotic Resistance

Antimicrobial & Diagnostic Stewardship Program  
Northwestern Medicine

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Estimated antibiotic resistance global attributable deaths/yr by 2050:

**10 million**

Predicted to overtake cancer deaths by 2050

Estimated global GDP loss attributable to antibiotic resistance between 2014-2050:

**\$100 Trillion**

For each patient:

**Each additional day** of broad antibiotics was associated with a **4%** increased chance of new resistance development

What can you do?

1. **Avoid antibiotics** when bacterial infection is unlikely
2. Limit antibiotic **spectrum** and **duration**
3. Visit

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**We need your help!**

References: 1. [18\\_AMR-Infographic-V4 \(biomerieuxconnection.com\)](http://18_AMR-Infographic-V4(biomerieuxconnection.com))  
2. 2014 UK Office of the Prime Minister, "Antimicrobial Resistance Tackling a Crisis for the Health and Wealth of Nations."

3. Pharmacotherapy. 2019;39(3):261-70.