

Antibiotic resistance & prevention

Munirah Ali Alqahtani

King Saud University, Saudi Arabia

Abstract

Resistance to antibiotics is currently the greatest risk in the field of infectious diseases, owing to its significant epidemiological and economic effects. According to WHO statistics, it kills over 700,000 people per year and will kill 10 million by 2050 unless appropriate interventions are taken. In only one year, almost 25,000 people died in Europe, costing nearly € 1.5 billion in health and productivity losses. Antibiotic resistance is rapidly spreading, posing a danger to the enormous health gains that antibiotics have provided. Pharmaceutical corporations are struggling to achieve the task of developing new treatments to treat microbiological diseases, while antibiotics are still being abused and misused across the world, turning the problem of antibiotic resistance into a worldwide health disaster. This dilemma is not only a health risk and a major challenge for the pharmaceutical and healthcare industries, but it is also a financial burden for both developed and developing countries. As a result of chromosomal alterations or the exchange of genetic material via plasmid, bacteria have developed resistance to antimicrobial treatments. All of the earlier antibiotics are no longer effective against *Streptococcus pneumoniae*, *Streptococcus pyogenicus*, and staphylococci. Antibiotic resistance is multifactorial, but overdosage and self-medication are the major reasons responsible for the antibiotic resistance crisis. People seek advice from a local pharmacist or engage in self-medication rather than seeking advice from a certified medical professional due to factors such as limited health education, poverty, and lack of access to a doctor. To address this problem, the government must develop new policies. To tackle the situation, more coordinated research initiatives are required. The general public's involvement as a contributor to the antibiotic resistance dilemma must be addressed through adequate public awareness campaigns. The calls for new drug development in this field should not be dismissed.

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Biography

Munirah Ali Alqahtani, Saudi Nationality, Awarded Bachelor's degree in Microbiology from King Saud University in Riyadh in 2021. Rank number 1 in the 57th batch in the second semester. Medical laboratory intern at King Saud Medical City in Riyadh. Science content writer. Interested in research related to immunity and infection.