

Name _____

The Battle of Antibiotics: How Bacteria Develop Resistance

Open-Ended Response Answer Key

1. One consequence of antibiotic resistance for public health is the increased difficulty in treating bacterial infections, leading to prolonged illness, higher healthcare costs, and an increased risk of complications and mortality.
2. Responsible antibiotic use is crucial in combating antibiotic resistance because it helps to preserve the effectiveness of antibiotics for future generations, reduce the spread of resistant bacteria, and minimize the development of new resistant strains.
3. Developing new antibiotics alone is not sufficient to address the problem of antibiotic resistance because resistance can develop rapidly against new antibiotics, and the development of new drugs is time-consuming and costly. Therefore, a comprehensive approach that includes promoting responsible antibiotic use, implementing infection control measures, and investing in alternative treatment strategies is needed.
4. One strategy to reduce the overuse of antibiotics in healthcare settings is to implement antimicrobial stewardship programs, which involve educating healthcare providers about appropriate antibiotic prescribing practices, monitoring antibiotic use, and implementing guidelines for antibiotic use based on local resistance patterns and clinical evidence.

