Commentary

Antibiotics are antimicrobial substances that work against bacteria. Antibiotic medications are commonly used in the treatment and prevention of bacterial infections since they are the most common form of antibacterial agent. Bacteria can be killed or inhibited by these substances. Antiprotozoal activity is found in a small number of antibiotics. Antibiotics are ineffective against viruses such as the common cold or influenza; antiviral drugs or antivirals, rather than antibiotics, are drugs that inhibit viruses. Antibiotics—literally "opposing existence," from the Greek roots v anti, "against," and o bios, "life"—are often used widely to apply to any drug used against bacteria, however antibiotics (such as penicillin) are those generated naturally in the body (by one microorganism fighting another). Antibacterials that aren't antibiotics (like sulfonamides and antiseptics) are fully synthetic. Both classes, however, have the same purpose of destroying or stopping microorganisms from growing, and both are used in antimicrobial chemotherapy. Antibacterials include antiseptics, antibacterial soaps, and chemical disinfectants, while antibiotics are a more basic type of antibacterial used in medicine and sometimes in livestock feed. Antibiotics have been around since the dawn of time. Moldy bread was applied topically by many cultures, with many references to its beneficial effects dating back to ancient Egypt, Nubia, China, Serbia, Greece, and Rome. John Parkinson was the first to explicitly record the use of moulds to treat infections. Antibiotics were a game-changer in medicine in the twentieth century. Alexander Fleming discovered modern-day penicillin, whose widespread use proved to be extremely beneficial during World War II. Antibiotics' efficacy and ease of use, however, have contributed to their overuse, and some bacteria have developed resistance to them. Antimicrobial resistance is a pervasive "significant threat [that] is no longer a forecast for the future; it is happening right now in every region of the world and has the potential to impact everyone, of any age, in any country," according to the World Health Organization. Antibiotic resistance has increased worldwide in bacterial pathogens leading to treatment failures in human and animal infectious diseases. Resistance against antibiotics by pathogenic bacteria is a major concern in the anti-infective therapy of both humans and animals. Antibiotics are powerful medicines that fight certain infections and can save lives when used properly. They either stop bacteria from reproducing or destroy them. Before bacteria can multiply and cause symptoms, the immune system can typically kill them. Antibiotics are important to treat infections and have saved countless lives. However, anytime antibiotics are used, they can cause side effects and contribute to antibiotic resistance, one of the most urgent threats to the public's health. Antibiotics are used to treat or prevent some types of bacterial infection. They work by killing bacteria or preventing them from reproducing and spreading. Antibiotics aren't effective against viral infections, such as the common cold, flu, most coughs and sore throats. Antibiotics can help treat minor infections, like urinary or respiratory tract infections; they can also help people who have sepsis, an entire body response to an infection. Infections are caused by microorganisms, such as viruses, fungi, parasites, and bacteria.

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