

WHAT CAN YOU DO?

- Practice good hygiene to avoid infection in the first place.
- Wash your hands properly with regular soap to reduce the chance of getting sick and spreading infection.
- Wash fruits and vegetables thoroughly; avoid raw eggs and undercooked meat, especially in ground form. (The majority of food items which cause diseases are raw or undercooked foods of animal origin such as meat, milk, eggs, cheese, fish or shellfish.)
- Avoid eating meat, poultry, fish and dairy products that contain antibiotics.
- Maintain good health through exercise, a proper diet and sufficient sleep.
- Do not demand antibiotics from your healthcare provider.
- Never take an antibiotic for colds or the flu; instead, get plenty of rest and drink fluids.
- Take antibiotics only when necessary and when you do, do not stop antibiotic treatments early, take partial doses, or share leftover antibiotics.

Teleosis Institute would like to thank the Alliance for the Prudent Use of Antibiotics (www.apua.org) for this information, and for ongoing research into antibiotic resistance.



ABOUT TELEOSIS

The Teleosis Institute is devoted to effective, sustainable health services provided by professionals who serve as environmental stewards. The Institute has three major goals:



To educate health professionals about the principles and practices of Ecologically Sustainable Medicine (ESM)



To build a community-based network for professionals providing sustainable health services



To provide access to high quality, cost-effective, sustainable medical services benefiting underserved populations and the environment in which we live



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ANTIBIOTICS AND GLOBAL HEALTH

Antibiotic resistance thwarts the treatment of infectious diseases worldwide.



TELEOSIS



ANTIBIOTIC RESISTANCE

Antibiotics have been the mainstay of infectious disease therapy since the 1940s. When they were first introduced, antibiotics could eliminate 99% of bacterial infections. This is no longer the case.

Antibiotic resistance occurs when an antibiotic has lost its ability to effectively control or kill bacterial growth — in other words, the bacteria are “resistant” and continue to multiply in the presence of therapeutic levels of an antibiotic.

The current higher-levels of antibiotic-resistant bacteria are attributed to overuse and casual use of antibiotics for everything including the flu and the common cold — against which antibiotics are useless.

The misuse of antibiotics fuels new, stronger and more drug-resistant strains of bacteria in humans. Since we are left with nothing to combat these antibiotic-resistant strains, their infections can be fatal. Germs that cause pneumonia, ear infections, acne, gonorrhea, urinary tract infections, meningitis and tuberculosis can now resist commonly used antibiotic treatments.

Factors that contribute to antibiotic resistance

- misuse and overuse of antibiotics in humans, animals and agriculture
- demand for antibiotics when antibiotics are not appropriate
- failure to finish an antibiotic prescription
- availability of antibiotics without a prescription in some countries

ANTIBIOTIC RESISTANCE IS AN ECOLOGICAL ISSUE

Antibiotics are used in human and veterinary medicine to treat illnesses caused by bacteria and, in some cases, to prevent bacterial infections (prior to surgery, for example). Antibiotics are also used as pesticides to control bacterial infections in food crops and to increase growth in certain food animals. For example, the antibiotics penicillin, tetracycline, and bacitracin are routinely fed to healthy poultry and livestock. Many of them are sold over the counter, and do not require a veterinarian’s prescription.

When antibiotics are used in humans or animals, approximately 80 - 90% of the ingested antibiotics pass through the body intact and enter the environment as waste. Thus, they retain their ability to affect bacteria and promote antibiotic resistance even after they enter the soil or water as a waste product.



ANTIBACTERIALS — INTERFERING WITH BENEFICIAL BACTERIA

Antibacterials are most commonly used to disinfect surfaces and eliminate potentially harmful bacteria. Unlike antibiotics, they are not used as medicines for humans or animals, but are found in products such as soaps, detergents, health and skincare products and household cleaners.

Antibacterials pose dangers of their own. Experts believe that the use of antibacterial agents creates a false sense of security that may cause individuals to become lax in their hygiene habits. **Also, most bacteria are harmless and in many cases, even beneficial.** Very few bacteria actually cause disease. Antibacterials are not discriminating and an all-out attack on bacteria in general is unjustified. Constant use of disinfecting agents tends to disrupt the normal bacteria that act as barriers against invading pathogens. This may cause shifts in bacterial populations and create a “space” for disease-causing bacteria to enter and establish infection.

Antibacterial soaps containing triclosan have come under fire for creating an environment where triclosan-resistant bacteria can flourish. In addition, triclosan has been reported in surface waters, sewage treatment plants, the bile of fish, and breast milk.

Some scientists have gathered evidence showing that overly hygienic homes during early childhood may be linked to the appearance of allergies later in life. In this “hygiene hypothesis,” allergies develop because the childhood immune system fails to mature properly due to lack of contact with immune-stimulating bacteria.