

## The danger of antibiotic overuse



Antibiotic resistance is a fairly new catchphrase that has made its way into medical language during the past few years, and experts say it's due to misuse and overuse. Are antibiotics still the lifesaver we've come to trust when serious illness strikes?

### Which illnesses do antibiotics treat?

Antibiotics, of which penicillin is best known and most commonly prescribed, are a group of medicines capable of destroying or inhibiting the growth of bacteria.

They should only be prescribed to treat suspected or proven bacterial infections.

They are not effective against viral infections and should not even be taken

in all cases of bacterial infections, such as ear infections, strep throat and urinary tract infections, but only where the body's natural defences need help to overcome the infection.

They are also not effective against viruses, such as the common cold, viral pneumonia or influenza virus.

### The dangers of inappropriate antibiotics use

Multidrug-resistant (MDR) bacteria are germs that have developed resistance to at least three different types of antibiotics. Antibiotic resistance is accelerated by the misuse and overuse of antibiotics, as well as poor infection prevention and control. Bacteria evolve constantly and produce different strains or versions of

themselves. Each new strain differs slightly in genetic makeup, which enables it to develop resistance to the antibiotics we rely on to treat bacterial infections.

Patients often demand or expect that their doctors prescribe antibiotics for minor bacterial or even viral infections. As a result, antibiotic resistance has risen to dangerously high levels in many parts of

the world and has therefore become a global concern.

Common infectious illnesses such as bacterial pneumonia, tuberculosis and gonorrhoea are becoming more difficult to treat because the antibiotics used to treat them are becoming less effective.

As a result, certain medical procedures such as organ transplants, hip replacements and caesarean sections and treatments such as chemotherapy will become increasingly risky in terms of controlling post treatment infection.

According to a study by Wits University and the London School of Economics during March 2019, overprescribing of antibiotics is a growing concern in South Africa. The study found that 78% of patients who visited a public clinic and 67% of patients who visited a private general practitioner (GP) in South Africa were prescribed antibiotics unnecessarily. Antibiotic resistance is a critical concern for South Africa, as we have one of the highest rates of resistance in the world.

**Are probiotics really necessary?**

When you take antibiotics to kill disease-causing bacteria, the beneficial bacteria that keep your gut healthy also suffer temporary damage or depletion. Probiotics are “good” bacteria that help maintain digestive health and boost the immune system. You can however also take

probiotics in a dietary supplement or get them from food sources such as yogurt, vegetables, fruit and wholegrains.

**Are generic antibiotics as good as the original medicine?**

Most antibiotics have two names – the trade or brand name created by the pharmaceutical company who developed the medicine and a generic name, based on the antibiotic’s chemical structure or drug classification. Legislation requires that an approved generic alternative of any medicine must have the same active ingredients, dosage and strength as the original version, and that the manufacturing process must adhere to strict regulations.

When pharmaceutical companies introduce a new medicine, they have to prove that they have done extensive research and testing and have followed the legally prescribed approval process to register the medicine. This process is costly and the company then registers a patent right to sell the medicine exclusively in order to recover some of the development cost. When this patent right expires, any registered pharmaceutical company may produce the medicine. As they don’t have to recover development costs, they can produce the product at a much lower cost. Generic medicine, including antibiotics, is therefore exactly the same as the original. The only difference is the cost.

**Side-effects**

Antibiotics may cause side effects such as hypersensitivity to some ingredients, as well as renal and/or liver dysfunction. Allergic reactions to penicillin can be fatal and if you are allergic to penicillin, you should ensure that your doctor and pharmacist are aware of your allergy. You should also wear a medical alert bracelet or necklace with your allergy information.

Taking antibiotics with other medicine and/or alcohol can trigger adverse side effects. Ensure that your doctor knows about any other medicine – chronic or acute – that you’ll be taking with the antibiotics and never drink alcohol while you are taking antibiotics.

Side effects most commonly associated with antibiotics are lack of appetite, nausea, vomiting and diarrhoea, skin rash, discoloration of teeth and colitis.

**Tips for effective antibiotics use**

- Follow your doctor’s advice and take your antibiotics exactly as professionally prescribed. Do not skip any doses and complete the course. Do not save or share leftover antibiotics.
- Some experts believe that if you stop taking antibiotics partway through a course, the bacteria you’re trying to get rid of can become resistant to the medication. Always complete the full course of antibiotics, even if the

symptoms improve, as the infection may still be present in your body.

- To prevent bacterial infection, practise good hygiene such as washing hands and keeping vaccinations updated. Prepare food hygienically by keeping raw and cooked food separate, cooking food thoroughly and avoiding food that has been produced with the use of antibiotics. €

**Sources:**

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