



Antibacterials in household products

APUA

For Consumers

A Quick Reference Sheet from the Alliance for the Prudent Use of Antibiotics

What exactly is an antibacterial? How is it different from an antibiotic?

In its broadest definition, an antibacterial is an agent that interferes with the growth and reproduction of bacteria. While antibiotics and antibacterials both attack bacteria, these terms have evolved over the years to mean two different things. Antibacterials are now most commonly described as agents 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.



How do antibacterials work?

- ◆ Antibacterials may be divided into two groups: some attack a special, important piece of a germ, and destroy it that way, while others destroy multiple cell components at once.
- ◆ The first group contains those that act rapidly to destroy bacteria, but quickly disappear (by evaporation or breakdown) and leave no active residue behind (referred to as *non-residue-producing*). Examples of this type are the alcohols, chlorine (bleach), peroxides, and aldehydes.
- ◆ The second group consists mostly of newer compounds that leave long-acting residues on the surface to be disinfected and thus have a prolonged action (referred to as *residue-producing*). Common examples of this group are triclosan, triclocarban, and benzalkonium chloride.

Did you know that over 1000 commercial products contain triclosan or other biocide agents?



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Are there any risks associated with triclosan-containing antibacterials?

- ◆ *Skin irritation:* Some people can be sensitive to triclosan and find that it irritates their skin.
- ◆ *Build-up in the environment:* Triclosan is slow to degrade and residue build-up has resulted in detectable contamination of the environment—the consequences of which are not yet fully understood. It has been recovered from lake sediment, rivers, streams, wastewater, seawater, and has been found in fish bile, aquatic biota, human breast milk, and blood plasma.
- ◆ *Antibacterial resistance:* Residue-producing antibacterials, most notably triclosan, have been shown to contribute to the development of antimicrobial resistance in the laboratory environment. Some bacteria are naturally resistant to triclosan.
- ◆ *Immune response:* There is some evidence that infants and children who grow up in a biocide-laden environment may not develop as strong an immune response as they otherwise would.

Studies comparing families who used antibacterial soap to families who did not have found no reduced risk of colds, flu, or stomach infections for the families who used antibacterial products.

Does APUA recommend using antibacterials in my home?

Triclosan and other biocides are best reserved for use in homes in which there are persons with depleted immune systems who are more vulnerable to infection.

For most purposes, washing with regular soap and rinsing with running water, followed by thorough drying, is still considered the most important method of preventing disease transmission.

For home cleaning, including kitchen surfaces, use a 70% solution of ethyl or isopropyl alcohol, household bleach (3% solution), or hydrogen peroxide. These agents are effective against a wide range of disease-causing organisms and do not leave residues.

For more information on the use of antibacterials in the home, please see: The International Scientific Forum on Home Hygiene website:
<http://www.ifh-homehygiene.org/>



Established in 1981, the Alliance for the Prudent Use of Antibiotics (APUA) is an international non-governmental organization dedicated to preserving the effectiveness of antibiotics and other antimicrobials.

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