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## Antibacterial cleaning products

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### Summary

- Evidence suggests that the use of antibacterial and antimicrobial cleaning products – particularly in combination with the over-prescription of antibiotics – may produce strains of multi-resistant organisms.
  - Antibacterial and antimicrobial cleaning products are no better at eliminating bacteria than cheaper plain soaps, detergents and warm water.
  - Avoid using antibacterial and antimicrobial cleaning products unless you have a specific medical reason and have been advised to do so by your doctor.
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The overuse of antibacterial cleaning products, including disinfectants in the home, may be producing strains of bacteria that are resistant to multiple antibiotics. Bacteria that are resistant to many antibiotics are known as multi-resistant organisms (MROs).

As a marketing strategy, media advertisements suggest that bacteria in the home are harmful and must be eliminated by using any number of the antibacterial or antimicrobial products available.

These cleaning products are no more effective at preventing infection in the home than good personal and household hygiene using ordinary soap, warm water and plain detergent.

Avoid using antibacterial or antimicrobial products unless you have a specific medical reason to do so.

### Household products containing antibacterial agents

Household products that are labelled as antibacterial, antiseptic or antimicrobial include:

- soaps and detergents
- hand lotions
- disinfectants
- window cleaners
- cleaning cloths
- surface sprays
- mouthwashes
- toothpastes
- garbage bags and plastic wrap
- textiles and carpet underlay.

Many of these products contain antibacterial agents such as triclosan. These ingredients are valuable in hospitals and other healthcare settings, but their effectiveness could be compromised by unnecessary domestic use. Their widespread use in the home could make some bacteria resistant to these antibacterial substances.

### Cleaning products may contribute to antibiotic resistance

There is evidence that the use of antibacterial and antimicrobial cleaning products – combined with the over-prescription of antibiotics – may produce strains of bacteria that are resistant to disinfectants and antibiotics. There are several issues involved:

- There may not be enough of the antibacterial or antimicrobial agent in these cleaning products to destroy bacteria completely.
  - When exposed to antibacterial or antimicrobial cleaning products, most bacteria will die, but some may
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survive and multiply. These strains can become resistant to antibiotics and disinfectants.

- Resistant strains of bacteria can lead to increased infection risk in the community, and in hospitals and other healthcare settings.

Disinfectants are often not used correctly. For example, they are not mixed according to the manufacturer's instructions (more is not better).

Antibacterials such as triclosan can enter the environment and accumulate over time, leading to antibiotic resistance. The World Health Organization refers to antimicrobial resistance as "a looming crisis in which common and treatable infections are becoming life threatening".

In response to this, the Australian Government has produced **Australia's first national antimicrobial resistance strategy 2015–2019 – Responding to the threat of antimicrobial resistance** to outline areas for activity and actions being undertaken.

### **Most bacteria are beneficial**

Most bacteria actually help humans. For example, intestinal bacteria help us to digest food. The 'good' bacteria that naturally live on and inside our bodies help us stay healthy by keeping the numbers of 'bad', disease-causing bacteria under control.

When you use antibacterial or antimicrobial cleaning products, good bacteria are also killed. This could be harmful if the ratio of good to bad bacteria is disturbed, and bad bacteria get the upper hand.

### **Soap and water is just as effective as antibacterial cleaning products**

Healthy households do not need antibacterial cleaning products. Effective hand washing with soap, and household cleaning using warm water and a plain detergent, is the cheapest way to get rid of germs.

Avoid antibacterial or antimicrobial products – they are more expensive, no more effective at cleaning and their widespread use may pose a wider health risk.

### **Antibacterial cleaning products and allergies**

Researchers have suggested that the modern obsession with cleanliness may be partly responsible for the increase in allergic asthma and conditions such as **hay fever** (allergic rhinitis).

It has also been suggested that some exposure to certain microbes may actually help regulate the immune system. This exposure may reduce the body's tendency to develop an allergic reaction against common allergens.

This is based on the observations that growing up in a large family, being in child care from a young age and living with household pets seem to reduce the chances of developing allergic disease.

More research into this area is needed, but current understanding seems to suggest that the immune systems of children may need some exposure to bacteria and other microbes in order to function at their best.

In other words, a little dirt never hurt anyone. We should target our hygiene practices to the areas of greatest risk, such as washing hands after going to the toilet and before handling food.

### **Reducing the effects of harmful bacteria**

Food poisoning is a major health risk. Around 11,500 Australians are affected by food poisoning every day. This is caused by poor food storage, preparation and handling. To reduce this risk:

- Wash and dry your hands after going to the toilet, blowing your nose and before handling food – especially between handling raw and cooked food.
- Use disposable paper towels to dry your hands rather than cloth towels.
- Keep cold food cold (below 5°C) and hot food hot (above 60°C) to discourage the growth of bacteria.
- Store raw foods below cooked foods in the refrigerator.

- Use separate utensils for raw and cooked foods.
- Clean the toilet and bathroom regularly, especially the toilet seat, door handles and taps.
- Clean surfaces of baby change tables every day or more often if they are dirty.

#### **Where to get help**

- Your GP (doctor)
- Local government (council) health department

#### **This page has been produced in consultation with and approved by:**

Department of Health and Human Services - RHP&R - Health Protection - Communicable Disease Prevention and Control Unit

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