

Antimicrobials in Consumer Products & Building Materials



Antimicrobials are often unnecessary and can do more harm than good.

In an effort to protect our health from microbes, antimicrobial chemicals are added to consumer products and building materials such as face masks, clothing, cutting boards, door handles, and countertops. They may be marketed as antimicrobial, antiviral, antibacterial, or anti-odor. However, for most of these uses, their effectiveness to reduce illness has not been demonstrated. The widespread use of antimicrobials can cause harm to humans and beneficial microorganisms, and contribute to antibiotic resistance. They can end up in places where they don't belong — like water, food, and human breast milk.



Questions to ask about health and efficacy claims.

- Is the product effective? What research demonstrates that it reduces the transmission of viruses or bacteria? How long does its effectiveness last?
- Is the product safe throughout its lifecycle (production, use, and disposal)?
- Is there adequate health data? Products claiming a health benefit must be registered with the US government for specific uses, which requires a demonstration of efficacy and safety. Ask for the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) registration.
- What about other claims? The US government allows marketing claims, such as for odor reduction, aesthetic benefits, or product preservation to be made with less verification.
- Are there alternatives that are effective and safe? Harmful antimicrobials can often be eliminated replaced by safer chemicals, materials, or designs.

Recommendations

Be wary of: antimicrobial, antiviral, or antibacterial health claims that lack supporting data

Ask about: product effectiveness and safety

Avoid: chlorinated antimicrobials, quaternary ammonium compounds, and nanometals



TRANSIT BARS



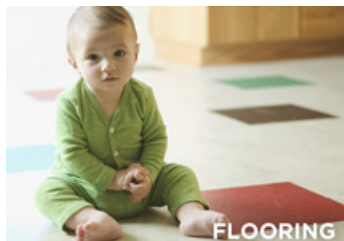
ELEVATOR BUTTONS



AIRPLANE SEATS



EXERCISE MATS



FLOORING



KITCHENWARE



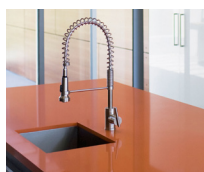
FOOD STORAGE CONTAINERS



SCHOOL SUPPLIES

Some examples of the many products that might contain antimicrobial chemicals of concern

Antimicrobial Chemicals to Avoid



Chlorinated antimicrobials (such as triclosan and triclocarban)

Chlorinated antimicrobials are persistent in the environment, can disrupt hormone functioning and cause adverse reproductive and developmental effects. In 2016, the FDA determined that 19 antimicrobials, including triclosan and triclocarban, should not be used in over-the-counter soaps and body washes due to their lack of proven benefit and potential for health harm. However, they continue to be used in numerous other products where their value and safety have not been demonstrated.



Quaternary ammonium compounds (quats or QACs)

QACs are persistent and can contribute to antimicrobial resistance, asthma, allergic skin irritation and sensitization, and adverse reproductive and developmental effects. They are used in consumer products and building materials as well as for cleaning and disinfection. Benzalkonium chloride and benzethonium chloride continue to be used in the US in over-the-counter soaps while under consideration for FDA regulation. This use of benzalkonium chloride is banned in the EU.



Nanometal antimicrobials (such as nanosilver)

Nanometals, due to their very small size, have unique physical and chemical properties that can enable them to enter and harm cells and tissues. Also, they may contribute to microbial resistance. Some hospital systems have already banned nanosilver, along with a number of other antimicrobials, due to their lack of benefit in preventing infection and potential health harm.

Go to www.SixClasses.org/Videos/Antimicrobial for this factsheet including references and also resources on safer cleaning and disinfection.