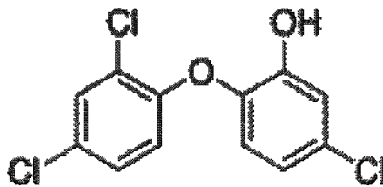


An antibacterial chemical in consumer products called triclosan may be a health risk to children. There is widespread exposure yet no known benefit to children. Recent studies suggest triclosan may increase a child's risk of allergy. It is also an endocrine disruptor. It is wise for parents to make sure that personal care products purchased for use by children are free of triclosan. This includes toothpaste, mouthwash, hand soap, shampoo, lotions, crèmes and deodorant. Adults who do not have a medical or dental need for antibacterial products should also avoid triclosan. Several manufacturers are phasing out triclosan but it is still present in many products.

Key Terms:

Antibacterial - chemical that kills germs

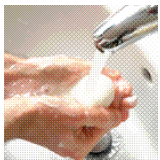
Endocrine disruptor - chemical that changes the way your hormones work



What is Triclosan?

Triclosan is an antibacterial agent that has been used in hospitals for many years to keep surfaces germ-free. In recent years its use in consumer products has increased as there has been a desire to decrease human contact with bacteria. It can be found in detergents, soaps, skin cleansers, deodorants, lotions, creams, toothpaste, mouthwash, and dishwashing liquids. Triclosan is also in cutting boards, clothing, and plastics that go into furniture and toys.

Necessary or Not?



Triclosan has had an important role in hospitals where dangerous bacteria are common and there are many susceptible patients. However, the widespread use of triclosan in soaps and other consumer products does not have a proven benefit. For example, there is no evidence that triclosan provides any benefit over washing hands with normal soap and water.¹

Concerns in the medical community have been raised about triclosan promoting the growth of resistant bacteria. As early as 2000 the American Medical Association stated that it may be wise to avoid triclosan and similar antibacterials in consumer products.² The Mayo Clinic has expressed concern that triclosan cutting boards do not prevent the spread of harmful bacteria and thus do not take the place of separate cutting boards when handling high bacteria foods (e.g., raw meat).³ The one consumer use for which a

benefit has been identified is in adult toothpaste where triclosan can slow bacterial decay and help prevent gum disease. However, this is not needed in children as gum disease is not typical at this age. Further, it may be wise for adults to check with their dentists about their own need for antibacterial toothpaste.

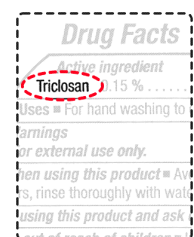
Why is Triclosan a Health Concern to Children?

Triclosan is classified as an endocrine disruptor because of its ability to interfere with the estrogen (female hormone), androgen (male hormone) and thyroid systems of the body.⁴⁻⁶ Emerging evidence indicates a link between triclosan and allergy in children.⁷ Children in the highest category of triclosan exposure had double the risk of being allergic to common allergens. Studies in mice support an allergy effect of triclosan as exposure on the skin (simulating a lotion or deodorant) increased the animal's reaction to an allergen placed into its lungs.⁸ Other studies in mice showed an effect on heart function even at relatively low dose.⁹ A more general screen of triclosan effects in cell culture found that it was one of the few compounds tested which produced effects on cells at dose levels below those experienced by the general public.¹⁰ In spite of these findings triclosan is not cancer-causing or highly toxic in traditional studies.¹¹ While more research is needed, these different lines of evidence add up to a potential concern at levels that are common in most people. Children's exposures may be greater.

Biomonitoring studies show a wide range in children's exposure with some children receiving 1000 times more triclosan than others.^{7,12} This broad range suggests that it is possible to decrease exposure in those children at the high end. These studies have not included very young children. Concern for that group is focused on the fact that 2 year olds swallow much more toothpaste than adults;¹³ this could be a health concern if they are using triclosan-containing toothpaste. Triclosan also gets across the skin when used in lotions, deodorant and crèmes. Children have a larger skin surface area than adults (per body weight) and so may receive a greater dose across the skin. Finally, triclosan has been found in house dust¹⁴. Because children spend so much time on the floor, they are more exposed to house dust.

Is Triclosan on the Label?

Yes, products with triclosan must include it on the label. This is an important ingredient to watch out for when buying products that children will use.



Have other Authorities Reviewed Triclosan?

Yes. The US Food and Drug Administration (FDA) reviewed triclosan in August, 2012 and stated that while it is not known to be hazardous to human health, there are concerns about endocrine disruption and the possibility of resistant bacteria.¹ New rules proposed by FDA will require makers of triclosan products to prove its safety. Similarly, USEPA has determined that more research is needed on the safety of triclosan due to its endocrine effects. The Agency is undertaking a comprehensive review of triclosan beginning in 2013.¹⁵ The European Union has determined that the use of triclosan in individual cosmetic and personal care products is not a risk but that the overall effect from multiple products can be a health concern.¹⁶ This assessment was primarily for adults and did not consider young children's exposure. The European Union passed a ban on triclosan in materials intended for food contact but that ban did not pass a legal challenge in 2011. A review by the Canadian government did not consider triclosan in consumer products to be a health concern.¹⁷

Recent actions by manufacturers and hospitals indicate concern over triclosan health and environmental effects. These actions also demonstrate that triclosan is not necessary in many cases. Johnson & Johnson and Procter and Gamble have announced phase-outs of triclosan from their personal care products by 2014-2015.^{18,19} Kaiser Permanente has phased triclosan out of its network of 37 hospitals, using alcohol-based disinfectants instead.

Summary: What Should You Do to Keep Children Safe?

Triclosan does not have a proven benefit in preventing infections around the home or in personal care products. Its toxic effects are still being studied but concerns have been raised regarding endocrine disruption and allergies; these effects may be possible within the range of current human exposure. Thus, it's wise for parents to take a careful approach and avoid triclosan-containing products for their children. This includes:

Make sure I am triclosan-free.



- Triclosan-containing toothpaste: this type is not marketed to children but they may use it if within reach. Make sure that children only have access to triclosan-free toothpaste.
- Triclosan-containing soap, mouthwash, shampoo, lotion, crème and deodorant. It should be easier to avoid triclosan in the future as more manufacturers phase it out. But for now, look for it on the label and seek out triclosan-free products.
- Triclosan-containing cutting boards: do not consider these to be bacteria-safe.

Also refer to the DPH [Triclosan Consumer Fact Sheet](#) .

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