

*Scientific Studies****Antibacterial Soap Harmful***

**“Washing
hands with an
antibacterial
soap is no
more
effective.”**

Researchers at the University of Michigan say antibacterial soaps has no health benefits and may, in fact, be more harmful than regular soap.

Allison Aiello her colleagues found that washing hands with an antibacterial soap is no more effective in preventing infectious disease. In addition, antibacterial soaps do not remove any more bacteria during washing than regular soap.

Triclosan, a biphenyl antibacterial disinfectant and an active ingredient in many antibacterial soaps, may cause some bacteria to become resistant to common antibiotics, thus causing harm. E-coli bacteria showed resistance when exposed to as much as 0.1 percent wt/vol of triclosan in soap.

Triclosan allows bacteria to keep their cell wall intact by targeting a biochemical pathway. Mutations may happen at the targeted site as a result of the way triclosan kills bacteria. In a press release by the University of Michigan, Aiello says a mutation could mean that the triclosan can no longer get to the target site to kill the bacteria because the bacteria and the pathway have changed form.

Aiello summarizes that further evaluation of antibacterial product claims and advertising is needed. What this demonstrates is that community members need to be more aware of the ingredients in consumer products, and even take a step forward to demand

better labeling of ingredients.

Triclosan form chloroform gas when combined with chlorine in tap water (Rule, 2005). Triclosan also acts as an endocrine disruptor (Veldhoen et al, 2006). In the presence of sunlight, triclosan remaining after waste treatment may also break down and form dioxin and dichlorophenol in river water (Latch, 2005).

Plain soap, on the other hand, does not contain triclosan and may be safer for the environment and do just an effective job as antibacterial soap at cleaning hands. The price of antibacterial soap is not worth the hype! Indeed, it comes at a much larger price to health and the environment.

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References:

Latch DE, Packer JL, Stender BL, VanOverbeke J, Arnold WA, McNeill K. Aqueous photochemistry of triclosan: formation of 2,4-dichlorophenol, 2,8-dichlorodibenzo-p-dioxin, and oligomerization products. *Environ Toxicol Chem.* 2005 Mar;24(3):517-25.

Rule KL, Ebbett VR, Vikesland PJ. Formation of chloroform and chlorinated organics by free-chlorine-mediated oxidation of triclosan. *Environ Sci Technol.* 2005 May 1;39(9):3176-85.

Veldhoen et al. The bactericidal agent triclosan modulates thyroid hormone-associated gene expression and disrupts postembryonic anuran development. *Aquatic Toxicology* 2006 Dec;80 (3): 217-227.

