



C O R N U C O P I A
I N S T I T U T E

September 14, 2016

Dr. Robert M. Califf, MD
Commissioner
U.S. Food & Drugs Administration

Re: Triclosan in toothpaste

Dear Commissioner Califf:

On behalf of The Cornucopia Institute, I am writing to request that the FDA bans the use of the triclosan in toothpaste.

The Cornucopia Institute applauds the move by the FDA to ban triclosan in some antiseptic wash products. However, there are many personal care products in which triclosan is still allowed, among them toothpaste, specifically Colgate Total toothpaste.

Triclosan should be banned from toothpaste for several reasons;

- Triclosan is an endocrine disruptor. Specifically, it disrupts thyroid, testosterone, and estrogen regulation, which can result in a host of issues including early puberty, poor sperm quality, infertility, obesity, and cancer.¹²³
- Triclosan was approved by the FDA in 1997 as safe and effective for treating gingivitis. However, the problem is that the concerns about triclosan's impacts on hormones, among its many other potential adverse health effects, have since come to light.
- Other studies have also shown that exposure can lead to impaired learning and memory, exacerbate allergies, and weaken muscle function. The impacts of prolonged exposure during fetal development, infancy, and childhood can be particularly severe, resulting in permanent damage.⁴
- Expectant mothers and their fetuses are widely exposed to triclosan. This is greatly concerning because hormones are critical to the proper development of fetuses and young

¹ Crofton KM et al. Short-term in vivo exposure to the water contaminant triclosan: Evidence for disruption of thyroxine. *Environ Toxicol Pharmacol* 24 (2007) 194-197.

² Chen, J. et al. Triclocarban Enhances Testosterone Action: A New Type of Endocrine Disruptor? *Endocrinology*. 149(2008) 1173-1179.

³ Kumar, V. et al. Alteration of testicular steroidogenesis and histopathology of reproductive system in male rats treated with triclosan. *Reproductive Toxicology* 27 (2009) 177-185

⁴ <https://www.nrdc.org/stories/dirt-antibacterial-soaps>

children.⁵

- A large body of peer-reviewed research has established that the overuse of antimicrobial chemicals like triclosan might also be contributing to antibiotic resistance in bacteria, a major public health concern. At least two million people in the United States fall sick — and about 23,000 die — from antibiotic-resistant infections every year.⁶⁷
- Triclosan is an environmentally persistent chemical, which after use and washed down the drain, enters the waterways and is then transported widely throughout the environment. It is the most frequently detected chemical in stream across the U.S. Triclosan is found at high concentrations in treated sewage that is often applied to agricultural fields as fertilizer and may end up in the food supply.⁸
- In the environment, under naturally occurring conditions in freshwater streams and rivers, triclosan can transform into highly toxic dioxin compounds. Dioxins are very persistent and some are known human carcinogens and considered among the most toxic chemicals on earth.⁹

In light of all the existing evidences against the use of triclosan, it would make sense for the FDA to extend the ban of triclosan to toothpaste.

While Colgate Total toothpaste might be effective, and perhaps even recommended for very extreme cases of gingivitis, it is arguably more dangerous than hand soap because of the mouth mucosa's greater ability to absorb toxins than skin. This was demonstrated in a recent study of hospital workers at two different hospitals. One hospital used triclosan-containing soap, the other did not. Not surprisingly, the study shows that people who washed their hands with the triclosan-containing soap had higher levels of triclosan in their urine.

However, the really interesting segment of the study revealed that the numbers were strongly skewed when Colgate Total toothpaste was used. As it turns out, **people who brushed their teeth with Colgate Total had more than five times as much triclosan in their urine as people who didn't use it.**¹⁰

Please, do not let industry interests affect FDA's common sense and its decision-making ability and ban the use of triclosan in toothpaste.

Sincerely,

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⁵ <http://www.cbsnews.com/news/common-antibacterials-may-affect-growth-of-fetus-study/>

⁶ <http://www.ncbi.nlm.nih.gov/pubmed/16922622>

⁷ <http://www.cdc.gov/drugresistance/threat-report-2013/index.html>

⁸ McClellan, K. and R. U. Halden (2010). "Pharmaceuticals and personal care products in archived U.S. biosolids from the 2001 EPA national sewage sludge survey." Water Research 44(2): 658-668.

⁹ <https://www.nrdc.org/sites/default/files/antimicrobials.pdf>

¹⁰ http://www.sixclasses.org/wp-content/uploads/2015/02/Health_Care_Worker_Exposures_to_Triclosan_MacIsaac.pdf