

**Date:** February 9, 2011

**Docket ID number:** EPA-HQ-OPP-2010-0548

**Re: Petition for a Ban on Triclosan**

**Submitted by:** Physicians for Social Responsibility, 1875 Connecticut Avenue, NW, Suite 1012, Washington, D.C., 20009

## **Introduction**

Physicians for Social Responsibility (PSR) is a national organization representing 50,000 health professionals, concerned citizens, and e-activists in 31 chapters, and over 60 medical student chapters, throughout the United States. PSR and its members are devoted to the prevention of nuclear war; to slowing, stopping, and reversing global warming; and to promoting better health through environmental protection. It is in this context that we submit our comments on a petition for a ban on triclosan.

PSR calls on the EPA to ban triclosan, an endocrine disrupting chemical for which there are safer alternatives that are equally effective. The EPA should take account of the potential health impact of this avoidable chemical and move to protect the American people from an avoidable health risk. PSR is a signatory to the petition under review by EPA that calls on the agency to regulate triclosan. We put forth in these comments the reasons PSR supports a ban on triclosan.

## **Triclosan Not Needed in Consumer Products**

Triclosan is used as a synthetic broad-spectrum antimicrobial agent in hundreds of products such as toothpaste, antibacterial soaps, cosmetics, fabrics, deodorants, and plastics. Originally introduced into

hospital settings in the 1970s, the pesticide triclosan has become widely used for its antimicrobial, antifungal, and antiviral properties. Although triclosan is not considered hazardous to humans by the Food and Drug Administration, some studies suggest triclosan may be associated with serious health impacts. Triclosan is lipophilic, which means it accumulates in fatty tissues and breast milk. Its role in creating a more sterile environment is believed to contribute to the increase in allergies and asthmatic conditions in children; the American Medical Association said in 2000 that “there is little evidence to support the use of antimicrobials in consumer products” and that given the risk of antimicrobial resistance, “it may be prudent to avoid the use of antimicrobial agents in consumer products.”<sup>1</sup>

The effectiveness of triclosan in hospital settings is controversial. The Food and Drug Administration has found no health benefits of its use in a household setting, explaining that it is no better than soap and water at reducing germs.<sup>2</sup> In a hospital setting, doctors, nurses, and other healthcare workers may be exposed to triclosan at high levels through hand washing many times each day. That many of these health workers are women of childbearing age increases our concern over the use of triclosan, which is an endocrine disruptor that can harm the developing fetus. The impact of high use exposures among health workers is an occupational hazard that is unacceptable, given safe and effective alternatives to triclosan.

### **Triclosan in the Bodies of Americans and Healthcare Professionals**

Triclosan is ubiquitous in the environment and in our bodies. The CDC found measurable levels of triclosan in 75% of the samples collected for the National Health and Nutrition Examination Survey (NHANES) between 2003 and 2004, proving the ubiquity of this compound in the environment and in the population. As healthcare professionals, we note that triclosan is also widely used in the healthcare setting as a hand-sterilizer. The healthcare workforce is therefore likely to experience significant occupational exposure to triclosan.

In 2009, PSR released the results of the first biomonitoring investigation of health care professionals.<sup>3</sup> This report is also mentioned in the petition under review. Twelve doctors and eight nurses, two in each of 10 states (Alaska, California, Connecticut, Maine, Massachusetts, Michigan, Minnesota, New York, Oregon and Washington) agreed to be tested for the presence in their bodies of chemicals that are associated with health problems and are ubiquitous in our environment. PSR tested their blood and urine for six chemicals

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<sup>1</sup> [Summaries and Recommendations of Council on Scientific Affairs Reports 2000 AMA Annual Meeting](#). Use of Antimicrobials in Consumer Products (CSA Rep. 2, A-00). American Medical Association resolution.

<sup>2</sup> “Triclosan: What Consumers Should Know” (2011). Food and Drug Administration. From <http://www.fda.gov/ForConsumers/ConsumerUpdates/ucm205999.htm>.

<sup>3</sup> Report: Hazardous Chemicals In Health Care, Physicians for Social Responsibility, 2009. From <http://www.psr.org/assets/pdfs/hazardous-chemicals-in-health-care.pdf>

or chemical groups (62 chemicals in all): bisphenol A (BPA), mercury, perfluorinated compounds (PFCs), phthalates, polybrominated diphenyl ethers (PBDEs) and triclosan. These chemicals were specifically identified because they are emerging or known chemicals of concern, are known to be used in the health care setting, may be endocrine disruptors, and have been reported in peer reviewed literature as associated with certain diseases, the incidences of which are on the rise. PSR submits the Hazardous Chemicals in Health Care report (2009) as an attachment into the Docket EPA-HQ-OPP-2010-0548 for formal consideration while EPA considers the hazard triclosan poses to public health.

In addition, we summarize the results of our report here: Each participant had at least 24 individual chemicals in their body, and two participants had a high of 39 chemicals detected. In general, our results showed ubiquitous industrial chemical exposure among the healthcare professionals tested.

- Eighteen chemicals were detected in every single participant.
- All 20 participants had at least five of the six kinds of chemicals for which we tested, and thirteen of our participants had all six.
- All participants had bisphenol A, and some form of phthalates, PBDEs and PFCs.
- Thirteen participants had dimethyl phthalate metabolites, with nine above CDC's 95th percentile.

The results of the triclosan tests were consistent with this overall picture. Fifteen out of the 20 participants had triclosan in their bodies, which mirrors the findings of the Centers for Disease Control and Prevention that 75% of 2003-2004 samples contained triclosan. Our project median of 31.5 µg/L was roughly three times higher than CDC's 9.2 µg/L. Due to the sampling method, it is not possible to generalize based on these findings, but the research did show that among some healthcare professionals, triclosan exposure is a common reality, along with exposure to a host of other industrial chemicals.

PSR's major health concerns focus on the fact that triclosan can be converted to dioxin in sunlight or when heated.<sup>4</sup> Dioxin is a potent carcinogen. Additionally, triclosan is stable over long periods of time and bioaccumulates in human breast milk. It can disrupt thyroid function<sup>5</sup> and can alter some hormone functions in humans, though the health implications of this are still being explored.<sup>6</sup> Because healthcare

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<sup>4</sup> Kanetoshi, A, H Ogawa, E Katsura and H Kaneshima (1987). Chlorination of Irgasan DP300 and formation of dioxins from its chlorinated derivatives. *Journal of Chromatography*; 389:139-153.

<sup>5</sup> Zorrilla, LM, EK Gibson, SC Jeffay, KM Crofton, WR Setzer, RL Cooper and TE Stoker (2008). The effects of triclosan on puberty and thyroid hormones in male wistar rats. *Toxicological Sciences*; doi:10.1093/toxsci/kfn225.

<sup>6</sup> Calafat, A, et al (2008 March). Urinary Concentrations of Triclosan in the U.S. Population: 2003–2004.

professionals may be disproportionately exposed to triclosan, and because the health professional workforce includes many women of childbearing age, PSR also has concerns about fetal exposure to triclosan.

### **Applying Recommendations of the National Conversation on Public Health and Chemical Exposures to the Case of Triclosan**

PSR participated in the National Conversation on Public Health and Chemical Exposures, a collaborative project supported by the Centers for Disease Control and Prevention and the Agency for Toxic Substances and Disease Registry. As part of the Policy and Practices workgroup, PSR worked with other stakeholders to develop recommendations suggesting actions that will prevent harmful chemical exposures and spur the development and use of safer alternatives. Among the principles of the Policy and Practices workgroup was the following: “Promote prevention and institutionalize safety first to eliminate and reduce harm from chemical exposures.”<sup>7</sup> We think that this principle is relevant to triclosan and we encourage the EPA to integrate this principle into its decision-making about triclosan.

The Policy and Practices workgroup provided guidance for action to protect Americans from potentially hazardous chemicals. Its primary recommendation for action is to: “Integrate a prevention focus into chemical regulation and practices at all levels of government to ensure the phase-out of hazardous chemicals and processes where viable, safer alternative technologies and approaches exist or could be developed.”<sup>8</sup> We urge you to do just that with triclosan. It is viable and important to phase out triclosan, a hazardous chemical, from the consumer products where it is so readily found and where viable safer alternatives abound.

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Environmental Health Perspectives; 116(3):303-7. From <http://www.ehponline.org/members/2007/10768/10768.pdf>

<sup>7</sup> Policies and Practices Work Group, National Conversation on Public Health and Chemical Exposures. Final Report. November 2010. From [http://www.resolv.org/nationalconversation/reports/Policies\\_and\\_Practices\\_Final\\_Report.pdf](http://www.resolv.org/nationalconversation/reports/Policies_and_Practices_Final_Report.pdf)

<sup>8</sup> Policies and Practices Work Group, National Conversation on Public Health and Chemical Exposures. Final Report. November 2010. From [http://www.resolv.org/nationalconversation/reports/Policies\\_and\\_Practices\\_Final\\_Report.pdf](http://www.resolv.org/nationalconversation/reports/Policies_and_Practices_Final_Report.pdf)