

## Study claims no link between real world use of antibacterial soaps and antibiotic resistance

October 5 2011

Newly published research says it reaffirms that the use of antibacterial wash products in the home environment does not contribute to antibiotic or antibacterial resistance, confirming previous research that showcased similar findings.

The study, published in the peer-reviewed *International Journal of Microbiology Research*, compared the use of over-the-counter antibacterial liquid hand and body cleansers and antibacterial bar soaps – containing the germ-killing ingredients triclosan and triclocarban – against the use of non-antibacterial cleansers.

Lead author Dr. Eugene Cole, who has spent more than 35 years in the field of environmental health research, says the study discounts claims that the use of antibacterial wash products have contributed to the selection and spread of drug-resistant bacteria on human skin.

## **Research Protocol**

From a pool of more than 450 individuals, 210 study participants were randomly selected, 70 for each of three groups: 1) those that frequently used liquid bath or shower products containing triclosan; 2) those that frequently used bar soaps containing triclocarban; and 3) those that did not use any antibacterial wash products and thus served as the control group.



A standard method for swabbing both forearms of all participants was used to collect samples of Staphylococcus bacteria, which were then tested against several different types of antibiotics that are commonly used to treat Staph infections.

The experimental results showed that there was no increase in the antibiotic resistance of the Staph strains isolated from either group that had been using antibacterial wash products, when compared to those isolates obtained from the control group. And those bacteria also showed no increased resistance to triclosan or triclocarban.

"There was no statistically significant difference in <u>antibiotic resistance</u> of Staphylococcus isolates obtained from the skin of regular antibacterial wash product users in comparison with non-antibacterial product users," said Dr. Cole, Professor of Environmental Health Sciences of Brigham Young University's Department of Health Science. "There was also a definitive lack of antibiotic and antibacterial cross resistance among those bacteria."

The research was supported by the American Cleaning Institute (ACI) and the Personal Care Products Council.

"Hygiene product manufacturers and ingredient suppliers continuously review and analyze research and fund new studies to ensure product and ingredient efficacy and safety. This is part of our industry's longstanding commitment to product stewardship," said Dr. Francis Kruszewski, ACI Director of Human Health and Safety. "After decades of use, antibacterial wash products continue to play a beneficial role in everyday hygiene routines for millions of people around the world."

**More information:** "Investigation of Antibiotic and Antibacterial Susceptibility and Resistance in Staphylococcus from the Skin of Users and Non-Users of Antibacterial Wash Products in Home Environments"



was authored by Dr. Eugene Cole, along with R.M. Addison, Duke University Medical Center, Clinical Microbiology/Infectious Diseases; P.D. Dulaney, Applied Environmental, Inc.; K.E. Leese, Applied Environmental, Inc.; H.M. Madanat, San Diego State University, Graduate School of Public Health; and A.M. Guffey, Applied Environmental, Inc.

## Provided by American Cleaning Institute

Citation: Study claims no link between real world use of antibacterial soaps and antibiotic resistance (2011, October 5) retrieved 20 April 2024 from <u>https://phys.org/news/2011-10-link-real-world-antibacterial-soaps.html</u>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.