

Study: Residential washers may not kill hospital-acquired bacteria

October 3 2011

Residential washing machines may not always use hot enough water to eliminate dangerous bacteria like methicillin-resistant *Staphylococcus aureus* (MRSA) and *Acinetobacter*, a Gram-negative bacteria, from hospital uniforms, according to a study published in the November issue of *Infection Control and Hospital Epidemiology*, the journal of the Society for Healthcare Epidemiology of America.

The study, conducted by researchers from University College in London, was prompted by changes in Britain's National Health Service that led many hospitals in the UK to end in-house laundry services. The researchers investigated the effectiveness of residential washing machines' lower [water temperatures](#) in eliminating hospital-acquired bacteria.

Through a series of experiments, researchers found that washing uniforms in residential washing machines with detergent and water temperature of 60 degrees Celsius (140 [degrees Fahrenheit](#)) was enough to eliminate both MRSA and *Acinetobacter*. At 40 degrees Celsius (104 degrees Fahrenheit), MRSA was eliminated, but substantial amounts of *Acinetobacter* were detected. In the UK, energy-saving washers often operate at temperatures near 40 degrees.

However, the researchers found using a hot iron on fabric after a 40 degree Celsius wash did eliminate the *Acinetobacter*. The effect of tumble drying the uniforms was not tested.

"The results stress the importance of ironing hospital uniforms after washing them in a domestic washing machine that operates at less than 60 degrees Celsius," said Dr. John Holton, one of the study's authors. "We show that laundry and ironing in a domestic setting is effective in producing a uniform free of accumulated hospital bacteria safe to wear to work,"

The experiments were performed on nurses' uniforms worn during a work day, as well as swatches of fabric artificially contaminated with MRSA and Acinetobacter. The researchers studied the two bacteria because both are often associated with healthcare-acquired infections (HAIs), and represent two important bacterial types. [MRSA](#) is known as a Gram positive bacteria and Acinetobacter as Gram negative. The distinction involves differences in the walls of the bacterial cells. The researchers expect their results are applicable to other types of Gram negative and positive bacteria.

Researchers are planning additional studies to see if common HAI [bacteria](#) can remain and develop in residential washing machines after laundering hospital uniforms.

Provided by Society for Healthcare Epidemiology of America

Citation: Study: Residential washers may not kill hospital-acquired bacteria (2011, October 3) retrieved 25 April 2024 from <https://medicalxpress.com/news/2011-10-residential-washers-hospital-acquired-bacteria.html>

<p>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.</p>
--