

Three swipes effective in cleaning plastics

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News Staff

Simply wiping an object three times with some salt water can be just as effective at cleaning plastic surfaces as using disinfectants, alcohols, or bleach, according to a University of Alberta researcher.

Andrea Berendt, a fourth-year medical student, along with her supervisor Dr. Sarah Forgie, looked at how well different kinds of disinfectant wipes that are used in hospitals or households can be used to clean bacteria off of plastic objects. The wipes from the grocery store were bleach-based and the wipes from the hospital had different types of disinfectants. They also used a tissue with saline, which is water with a 0.9 per cent sodium chloride concentration.

The different wipes were then used to clean artificially contaminated plastic petri dishes. The plates were swiped once, three times, or five times. More than 1,000 petri dishes were wiped, and the researchers discovered to their surprise that the disinfecting wipes didn't perform particularly well.

"At one swipe, the disinfecting wipes all performed equally well, which wasn't a big shock and the saline on the tissue didn't do very well. But at three swipes, even the saline on the tissue did just as well as the disinfecting wipes, which was the big surprise," Forgie said.

Forgie and Berendt think that these results suggest that probably the mechanical action of wiping the plastic removes the bulk of the

bacteria, rather than the type of disinfectant used. Therefore, both of them hope this could possibly lead to a change in how disinfectants are used in the community as well as in the hospital.

"We hope what this means is that the mechanical removal of bacteria, the actual rubbing, is the more important factor rather than the actual disinfectant ingredient. So that might mean we could stop using so many disinfectant ingredients which are expensive, which are sometimes harmful to the environment, and which can cause antimicrobial resistance among bacteria [...] and use much more readily available things like saline or perhaps tap water," Berendt said.

A major issue with disinfectants being used in the community is the possibility of bacteria becoming resistant to the antimicrobial agents that are in many disinfectant products.

"There is very good data to show that disinfectants at home are not necessary and they are not helpful. [Researchers have] looked at family settings out in the community and having disinfectants there is not helpful. It can actually be harmful if we get resistance, so that's a big worry with using it in the community," Forgie said.

Forgie hopes that the next phase of the project will look at actual plastic devices, such as pagers and cell phones, which are commonly used in the community as well as the hospital.

Their paper was published at the beginning of February in the *American Journal of Infection Control*.



DAN MCKECHNIE

SQUEAKY CLEAN A U of A study shows that the wiping motion could trump disinfectant use.

Watson shows competence in puns, medicine

WATSON • CONTINUED FROM PAGE 1

Watson's performance also dipped when obscure question forms were used, such as when the clue was simply the name of an actor, with the task to name a film that actor has also directed.

However, just like human contestants, Watson can learn about the nature of categories during questions with little dollar value, making him better prepared for more valuable challenges. Watson is also fitted with an algorithm for "pun detection" which improves performance, but doesn't always catch a quip.

Fifty-five games of *Jeopardy!* were played before the television showdown, of which Watson won 71 per cent, and came second the rest of the time.

The advances that the DeepQA project has made opens the way for a variety of important real-life applications, including business intelligence, technical support, and health care.

"There's a team of people working on the applications for the medical domain. There's a set of questions people wrote in the form of *Jeopardy!* clues on medical issues, for residents and interns. We took that set of questions and read them directly [and] for medical diagnosis, he surprisingly answered quite many questions," Fan said.

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