

## Three swipes are the charm

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If you have time to quickly swipe your pager or cell phone three times, that would be your best bet to get rid of most of the bacteria. And a simple tissue moistened with saline would do the trick. But if you only have time for a single swipe of a 'dirty' phone – you'd be better off reaching for a disinfectant wipe.

Those are the highlights of a recently published research study that appeared online in *PubMed*, with the discoveries having been made by a team of researchers in the Faculty of Medicine & Dentistry at the University of Alberta.

"It was the mechanical removal, not the actual act of the disinfectant that was key," says Dr. Sarah Forgie, a Pediatric Infectious Diseases Specialist in the Department of Pediatrics.

Medical student Andrea Berendt, who was working with Forgie at the time, liked the idea so Berendt came up with the protocol and conducted all the experiments in a lab over two months. The duo worked with Dr. Robert Rennie, a Professor in Laboratory Medicine and Pathology, Pediatric Epidemiologist Donald Spady and technologist LeeAnn Turnbull.

Three types of bacteria – *Staphylococcus aureus* (MRSA), *Enterococci* (VRE) and *Pseudomonas aeruginosa* – were each prepared in a mixture and streaked onto sterile plastic Petri dishes, then allowed to dry. Numerous bacteria contaminated plates were prepared throughout the summer – all in the same manner – so each type of bacteria could be

tested with five different types of wipes and then again with varying amounts of swipes – one swipe, three swipes and five swipes.

Each 10 cm diameter plate was wiped for one second and in a manner that the entire surface was swiped, using a flat baton. The plates were then allowed to dry for 10 minutes. Afterwards, bacteria samples were put onto special lab plates, incubated for at least 24 hours at 35C and then the bacteria colonies were counted.

Research results demonstrated that bacterial counts dropped significantly the more often a plate was swiped – regardless of the type of wipe used. Swiping the contaminated plates 3x decreased the bacterial load by 88% on average, compared to just swiping a plate once. Swiping a plate 5x vs. 3x didn't result in an additionally significant decrease in bacteria. And a simple saline wipe appeared to be just as effective as disinfectant wipes when the plates were swiped 3x or more. However, if the plate was swiped just once – disinfectant wipes were better at reducing [bacteria](#) than simple saline wipes.

Provided by University of Alberta Faculty of Medicine & Dentistry

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