

# Scientists find alcohol-free antiseptic solution works

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Human skin structure. Credit: Wikipedia

A James Cook University scientist has made a discovery that will make life easier for surgery patients and their surgeon.

Antiseptic solutions are routinely applied to clean the skin prior to surgery. They kill or prevent the growth of microorganisms and prevent

[wound infections](#). One of the most common antiseptic solutions is chlorhexidine, which can be dissolved in water or alcohol before being applied to the skin.

Professor Clare Heal, who undertook the project with Honours medical student Dr Dan Charles, says the problem with alcohol-based solutions is that they are more likely to irritate the skin and eyes, and remove markings drawn on the skin to guide the surgeon.

"Despite this, we thought alcoholic chlorhexidine might be a better antiseptic than a water-based solution, as alcohol is an antiseptic in its own right. But we felt it was important to confirm that it really was better," she said.

The scientists studied 916 patients who were randomly allocated either alcohol or water-based antiseptic before minor skin surgery. They measured the rate of [wound infections](#), as well as the rates of any [adverse effects](#), such as [skin irritation](#).

"We found that, although the infection rate was slightly lower with the alcohol-based solution (5.8%) than in the water-based solution (6.8%), the difference was not significant, and it would require 100 patients to be treated with alcoholic solution to prevent one extra infection."

Professor Heal said there was no difference in the rates of [adverse outcomes](#) ([skin irritation](#), etc) in either group.

She said the implications for doctors and surgeons were that non-alcoholic antiseptics can be used safely and effectively for minor surgical procedures.

Provided by James Cook University

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