

Electric hand dryers in public toilets pose health risk

by S. C.

Scientists at the University of Westminster discovered the shocking findings during a study in which they compared the numbers of bacteria on subjects' hands before and after they had washed them and then dried them in a public washroom using either paper towels, a traditional warm air dryer or a new-style jet air dryer.

During their research, they discovered that:

- after washing and drying hands with the warm air dryer, the total number of bacteria was found to increase on average on the finger pads by 194% and on the palms by 254%
- drying with the jet air dryer resulted in an increase on average of the total number of bacteria on the finger pads by 42% and on the palms by 15%
- after washing and drying hands with a paper towel, the total number of bacteria was reduced on average on the finger pads by up to 76% and on the palms by up to 77%.

The scientists also carried out tests to establish whether there was the potential for cross contamination of other washroom users and the washroom environment as a result of each type of drying method.

They found that:

- the jet air dryer, which blows air out of the unit at claimed speeds of 400 mph, was capable of blowing micro-organisms from the hands and the unit and potentially contaminating other washroom users and the washroom environment up to 2 metres away
- use of a warm air hand dryer spread micro-organisms up to 0.25 metres from the dryer
- paper towels showed no significant spread of micro-organisms.

The results will come as a surprise to many people. Consumers, healthcare institutions and businesses such as restaurants have often been told over the years that electric hand dryers are the most hygienic way to dry the hands after washing them. It's a message which seems to have sunk in: a recent consumer survey found 58% of people in the UK thought electric hand dryers were more hygienic than both textile-based towels and paper towels (1).

The reality, however, could not be more different, with the University of Westminster research results suggesting people could even be putting themselves at increased risk of illness by using dryers.

Keith Redway, a Senior Academic in the Department of Biomedical Sciences at the University of Westminster, said: "The results of all parts of this study suggest that the use of warm air dryers and jet air dryers should be carefully considered in locations where hygiene is of paramount importance, such as hospitals, clinics, schools, nurseries, care homes, kitchens and other food preparation areas."

"In addition, paper hand towel use is highly beneficial for improved hygiene in any other facilities open to the public, such as factories, offices, bars and restaurants."

He added: "Using paper towels results in a significant decrease in the numbers of bacteria on the hands, a clear advantage compared with the increases observed for both types of electric hand dryer tested in this study. In addition, paper towels are far less likely to