It’s Time to Dry Out

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Abstract

The importance of handwashing in preventing the spread of disease has been hailed as the single most effective way to prevent the spread of disease (CDC, 2018) and handwashing protocols have been established and measured in critical workplaces, like healthcare and foodservice. A critical step in the handwashing process is hand drying, and yet this step gets little attention. Missing this step can undo all of the good that the handwashing process is meant to contribute to the infection prevention effort. In this article, the need for proper and thorough hand drying is finally given the attention it deserves.

Main Article

Much has been written about the importance of handwashing to prevent infection, especially in healthcare settings. While the fight to protect our fellow humans, the environment and our own health has not yet been won, progress has been made. A crucial part of handwashing for infection prevention is hand drying, and yet this part of the discussion is often overlooked. Beyond some limited research on the efficacy of different methods of hand drying (i.e., air dryers, paper towels, etc.), there exists a strange imbalance in publicity for the role this vital final phase of hand care plays in curbing the spread of disease.

Today’s heathcare facilities are legally required to post signs reminding employees that they must wash their hands before returning to work, but there are no such mandates covering hand drying. Restroom users may be willing to spend the suggested 15-20 seconds (or one average singer’s verse of ‘Happy Birthday’) to wash their hands, only to flee the restroom waving their hands in the air, or worse, wiping them on their own less-than-hygienic clothing.

Inefficient Blow Dryers And Nonabsorbent Paper Toweling

There are real reasons for these behaviours, such as inefficient blow dryers and nonabsorbent paper toweling. For busy staff in healthcare settings, it can come down to the fast pace of patient care, and even fatigue. A study published in the *Journal of Applied Psychology* found hospital and healthcare workers wash their hands less frequently near the end of their shifts compared to earlier in the workday. In fact, the study found worker compliance with hand-washing protocols fell 8.7 percent on average from the beginning to the end of a typical 12-hour shift. (Snelling 2010)

Often, the reason for poor drying habits can be explained by simple human impatience, coupled with a lack of understanding regarding how important hand drying is to infection prevention.

Dry Research

Research supports the fact that hand drying is just as vital to maintaining good hand hygiene as handwashing.

A University of Bradford study found that leaving hands wet after washing increases the spread of bacteria through both the transfer of moisture droplets themselves, and through maintaining the bacteria in a physiological state that is more conducive to survival of the bacteria in the new environment. (Snelling 2010)

In addition, hands that remain moist due to ineffective hand drying may lead to skin damage, which can lead to higher populations of bacteria colonizing the skin. In healthcare workers who must wash their hands multiple times throughout the day, this has been shown to cause an increase in Gram-negative bacteria and yeasts; *Staphylococcus aureus* can become established as part of their normal skin flora. (Larson 1998)

Although thorough hand drying after proper washing is recognized an integral step in handwashing protocols to decrease microbial counts at the skin surface (Collins 2005), few of those protocols provide hand drying methods or details, like how long to dry the hands. (Huang 2012)

Paper Rules

Hand drying efficacy encompasses drying speed, degree of dryness, effective removal of bacteria and prevention of cross-contamination. (Huang 2012)

In terms of speed, the average time to achieve 95 percent dryness is 12 seconds with a paper towel versus 43 seconds with hot air dryers (Snelling 2010). Jet air dryers were found to be as efficient as paper towels in terms of speed, but paper towels also have the added advantage of removing additional bacteria through the friction of rubbing against the paper, reducing bacterial counts by an average of 58%. (Huang 2012)

For this reason, absorbent paper towels are recommended over air dryers in critical areas like healthcare and food preparation settings; few people use hot air dryers long enough to ensure more than 55 to 65 percent dryness. (Huang 2012)

Selecting the proper towel dispenser is also important. Hands-free towel dispensing prevents cross-contamination by eliminating the need to touch handles, cranks, dials, buttons and other dispenser parts that can be germ-laden and thereby defeat all the good that handwashing has done by immediately recontaminating the skin.

Role Of Hand Drying Should Not Be Ignored

Much has been studied and discussed on the importance of proper handwashing, and well it should be, but the role of hand drying in infection prevention should not be ignored. Employees who understand that handwashing plays an integral role in preventing the spread of disease must also be made aware that their efforts are less effective if their hands are not thoroughly dried as the final step in the process.

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