Technological Advances

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I’m completing a two-part series on suggestions for effective cleaning, especially those which promote good health and hygiene (see Technical Topics in the March 2007 issue of C&R). These follow the first two parts by Dr. Michael Berry on basics of public health management and effective cleaning for health (see the January and February 2007 issues of C&R). My approach is to raise practical examples, queries and issues that relate to cleaning regimens and beliefs so as to interest one further in thinking about high performance and effective cleaning for health.

Do You Wash Your Hands Properly for 20 Seconds or More?

In hospitals, health care or food service facilities, I recall advice to scrub and wash one’s hands thoroughly (i.e., for 20 seconds or more). With many of us being in a rush, how often do we follow this advice? Do consider it, however, as a prescription if faced with a serious flu outbreak this season or next. Even better, be certain to take advantage of the alcohol gel sanitizers increasingly present in hospitals, nursing and health care facilities. I’ve visited family members in the hospital and told others to never enter a hospital room, and touch or kiss the patient, without first sanitizing their hands with the available alcohol gel. Still, some people don’t listen and do it or just don’t care. I do care.

The alcohol gel sanitizers are now appearing at gasoline station pump kiosks. Again, I use them to both sanitize my hands from the high contact pump handle, as well as to minimize hand odor from the gasoline vapor. I know several people who carry alcohol sanitizers or disinfecting wipes while traveling, using them scrupulously and immediately before eating meals.

What of the Doctor’s Tie Hanging Loose During Hospital Rounds?

In last month’s column, I spoke of people using items of clothing as way to avoid contacting restroom or toilet door handles, taxi door handles, etc. But think further on your clothing and its contact with high touch surfaces. Even if your doctor scrupulously washes, scrubs or uses alcohol sanitizer before seeing each hospital patient, what about that favorite tie he’s often wearing? It too can harbor microbes after having come into inadvertent contact with highly infectious patients or contaminated hard surfaces. Better to visit patients in hospital scrubs — or perhaps you should select a medical practitioner who does not wear ties or scarves!

Which are Among the Most Contaminated Microbial Surfaces in Your Kitchen?

It may not be the flatware, pots or pans, glasses or utensils. It may, however, be your cleaning sponge or dish rag that is known to harbor high counts of bacteria and microbes. So what to do? Throw away your dirty old wash rag or sponge, and exchange them frequently for clean, new ones. It’s an inexpensive regimen for a healthy kitchen and enhanced cleanliness.

Antimicrobial Soaps, Toothbrushes, Pens and Molded Plastics: Effective or Not?

One can find significant research data that appear to support sanitary values in the use of antimicrobial soaps, enormously popular as they are. But take the same triclosan or equivalent antimicrobial ingredients and mold them into plastic utensils, pens or toothbrushes? This too is becoming popular in a range of consumer and institutional products. I believe, however, that the results are still “out” on whether or not they are really effective in these other applications. The science will tell, in time.

Quats and Germicides Need Residence Time to be Really Effective

Carefully read the instructions accompanying your use of quaternary...
ammonium compounds ("quats") and other sanitizers or germicides. Often they will prescribe a contact or residence time of up to ten minutes before rinsing out or removal during cleaning or restoration. The foaming germicide cleanser I apply on reusable HVAC filters requires at least ten minutes of contact time for maximum effectiveness. I follow this advice.

Too often when cleaners or restorers are busy, they don’t read instructions, which then may not allow for sufficient wetness and contact time for the product to be effective on its target microbes. In some cases, each additional minute of intimate surface contact can affect a logarithmic or tenfold increase in microbial death rate. Take the time to read product directions and allow sufficient time for this or any cleaning product to work.

**Technology and Research on Hard Surface Cleaning and Hygiene Advances**

Among the science and research papers at the 2007 CIRI research symposium will be scientific evaluation of newer approaches, cleaning methods and decontamination on both hard surfaces such as floors, restroom grout lines, and on carpet soiling plus cleaning effectiveness measured by soil removal using X-ray fluorescence and other means (see page 42 in this month’s News Briefs to learn more). One’s thinking on carpet and upholstery cleaning has advanced markedly in the last decade and is the subject of lively debate over the most effective carpet cleaning method(s). The issue is which carpet and rug cleaning methods maximize soil removal and promote better hygienic cleaning in the cleaned and restored product?

So too has technology advanced on hard floor and wall cleaning, as well as restroom cleaning with water and sanitizer flush plus extraction and rapid drying. Similarly, microfiber mops are all the rage now in janitorial, institutional and residential usage. A new analytical tool/field method uses a target colorimetric sensor to determine the presence of urine residues in restroom surface and grout lines. I’ve suggested that this might be applied to identification of pet urine residues in carpet, rugs and textile furnishings.

Science ultimately determines what works, what is effective or not — and the research to support that science is what drives my thinking and learning. These bring together two common interests:

1. a 33-year career in university research, teaching and scientific discovery, and

2. outreach and applied thinking with the cleaning and restoration industries exemplified by the Restoration Industry Association, the Cleaning Industry Research Institute, plus presentations at ISSA/InterClean shows and others of our great industry.

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