

# Myths & facts

## about infection prevention

*Ignorance about harmful contaminants is anything but bliss.*

By: Nicole Kenny



Nicole Kenny holds an Associate Chemist designation from the Association of Chartered Chemists of Ontario. In March 2003, Kenny joined Virox Technologies Inc., a company with a patented technology in cleaning, disinfection, and sterilization. As the director of professional and technical services, Kenny is responsible for infection control education, technical support, and clinical studies. For more information, please visit [www.virox.com](http://www.virox.com).

### for more info

Visit [www.cmmonline.com](http://www.cmmonline.com) and type in search keyword: **Disinfectant**.

For more information on related products, visit [www.cmmonline.com](http://www.cmmonline.com), select SUPPLIER SEARCH from the main navigation bar, and enter keyword: **Disinfectant**.

**A**n article published in 1998 by the Centers for Disease Control and Prevention (CDC) stated that in 1995, 88,000 deaths — one death every six minutes — could be attributed to hospital-acquired infections.

Today, news of cross-contamination and outbreaks is everywhere.

Furthermore, there is a daily list of toxic chemicals that should be avoided, such as bisphenol A in plastic bottles or the linings inside of tin cans or butyl cellosolve, a solvent commonly used in commercial and industrial cleaning and disinfecting products.

The following list of myths and facts will highlight why the cleaning industry needs to spend more time focusing on infection control and disinfectant product selection.

### Myth

Only nurses, doctors, microbiologists, or other

science-minded individuals can be infection control experts.

### Fact

Anyone with the ability to wash his/her hands and cover his/her mouth should be considered an expert in the field of infection control.

Infection control is everyone's business and washing our hands is one of the single most important things we can do; and, best of all, it doesn't cost us a thing.

After restroom use, hands should be cleaned with soap and water or alcohol-based hand sanitizers.

Wash your hands after you sneeze or cough.

Lastly, and most importantly for your own health, wash your hands before you eat.

Surfaces that look clean can in fact be harboring millions of germs.

By teaching the importance of hand hygiene to our children, friends, colleagues and employees, we can all be successful infection control professionals.

### Myth

Basic microbiology or disease transmission training is only needed for nursing or public health specialists.

### Fact

Everyone can benefit from a basic understanding of what bacteria are, what a virus is, how they may be transmitted, and what you can do to protect yourself.

The media, while a wonderful tool for education, can frighten millions of people with misleading headlines and reporting.



*Know what you are putting into the environment.*

The truth is that while MRSA, norovirus, avian influenza, and *Clostridium difficile* can be deadly to those with weak immune systems, the majority of the public — if we wash our hands when we should — have minimal risk of getting sick.

A recent study compared the cleaning effectiveness in a hospital between a regular patient room and an isolation patient room.

The results were staggering.

Housekeeping staff cleaning the standard patient room effectively removed the invisible UV markers by 80 to 90 percent, while staff responsible for cleaning isolation rooms removed only up to 20 percent of the markers, and in many cases neglected to clean certain areas entirely.

What can we learn from this?

Regardless of the market segment, we need to educate our employees about germs, such as MRSA, norovirus or *Clostridium difficile*.

### Myth

All disinfectants are created equal.

### Fact

There are currently more than 8,000 registered disinfectant products for sale in Canada and the United States.

Fifty percent are used for infection control products in health care, schools and other institutions, and these products may be formulated using 300 different types of chemistries.

Five of those chemistries have historically been the most commonly used: Quaternary ammonium compounds, phenols, alcohols, chlorine-based chemicals, and aldehydes.

Today, non-halogen-based oxidizers, such as hydrogen peroxide, are emerging as the sixth chemistry.

There are numerous publications that provide information on the advantages and disadvantages of the different chemistries.

But remember, knowledge equals power, and as a decision-maker, it is up to you to choose the best products for your facility.

Look at the product effectiveness; what does it kill?

However, the product with the longest list should not be used as the decision criteria.

Look at what germs are relevant to your

facility and what germs can actually be transmitted from touching surfaces.

Next, you should consider the method of testing the disinfectant used to obtain registration.

Truly understand how the product must be used in order to be effective; make sure your staff understands how to use them.

If you are using a product that has not been tested in the presence of soil challenges, then you need to understand these products need to be used in a true two-step process.

First, clean using a detergent, and second, apply the disinfectant.

If you are using a product that has been tested in the presence of a soil challenge, and has been approved as a one-step product, the process may be simplified.

But, you must still take into consideration the contact time.

A one-step cleaner-disinfectant product with a 10-minute contact time means you can use one product for cleaning and disinfecting, but you still need to adhere to the contact time to achieve disinfection.

In general, most products that are primarily water-based and free of alcohols or solvents will dry within three to four minutes.

This will require multiple applications in order to achieve disinfection, and remember, products with alcohol or solvents dry even faster.

Contact time is mandatory to achieve disinfection, and contact time implies that the surface must be kept wet for the duration listed on the labels.

### Myth

If a product kills most germs, it has to be toxic.

### Fact

Historically, this was a true statement, and certainly the occupational health profile of the product needs to be thoroughly reviewed.

Products that contain chemicals that are known carcinogens, known respiratory irritants or skin sensitizers, known volatile organic compound releasing chemicals (chemicals that lead to poor air quality), or chemicals that contain nonylphenol ethoxylates (hormone-mimicking agents), should be avoided.

Many of the products on the market today are comprised of one or a combination of the above listed categories.

Material Safety Data Sheets (MSDS) need to be reviewed scrupulously, and there is nothing wrong with listing the chemicals or attributes that are unacceptable in the products you choose to use.

### Myth

EPA-registered disinfectants can be green-certified.

### Fact

For general purpose or multi-purpose cleaning products, this is reasonably easy.

We can look for products that have been certified by third-party organizations.

However, when choosing disinfectants, this can become more problematic.

The division of the U.S. Environmental Protection Agency (EPA) that is responsible for registering disinfectants will not allow EPA-registered products to carry green certifications.

You can, however, make informed decisions by doing a bit of research.

First, look at the Green Seal environmental standards for general-purpose, bathroom, glass, and carpet cleaners used for industrial and institutional purposes (GS-37).

This guideline provides a detailed list of product-specific and environmental requirements that can be used to help select products.

Determine which of these are of primary importance to you and review each disinfectant product against the criteria to help narrow down the products you decide to use.

An alternative method is using the Environmental Choice Program's EcoLogo certification for disinfectants and disinfectant cleaners (CCD-166).

Unlike the EPA, Health Canada, which is responsible for registering disinfectants in Canada, will allow for third-party certification, and the CCD-166 criteria can be used to help review products for their green profile.

A basic understanding of infection control and the areas to consider when choosing disinfectants doesn't require a stethoscope, coke-bottle glasses, or even the ability to squirt.

All anyone needs is a mixture of knowledge, imagination and responsibility. **CM**