

## Emerging Issues In Infection Control: Latex Allergies and Potent Surface Disinfectants

In 1993, the College issued its first *Guidelines Respecting Infection Control In The Dental Office*. Then in June 1995, these *Guidelines* were updated. As information in the area of infection control is constantly evolving, the College encourages dentists to continually evaluate their infection control strategies and procedures. In this way, the profession can ensure that a safe environment will exist for all. This *Practice Advisory* discusses the potential impact of the use of latex gloves and potent surface disinfectants on patients, dentists and their staff.

### Risk Assessment

Risk assessment is key to the development of any infection control plan. As the 1995 College *Guidelines* on infection control state:

*Important to the development of any infection control plan is the understanding that not all dental procedures carry the same risk of disease transmission and hence, may not require the same degree of personal barrier protections.*

It is the right and responsibility of each dentist to exercise his or her best professional judgement regarding personal barrier protection based on the invasiveness of the dental procedure and the health of the patient.

### Latex Allergies

The use of latex gloves has been advocated to prevent transmission of some infectious diseases from patients to health-care workers. But for some patients and dental personnel, exposures to latex may result in allergic reactions. Reports of such reactions have dramatically increased in recent years. Many Ontario dentists, hygienists and dental assistants have been forced to leave practice due to an occupationally acquired latex allergy.



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## Latex Allergies (continued)

Recent reports in the scientific literature indicate that from about 1% to 6% of the general population, and about 5% to 17% of regularly exposed health-care workers are sensitized to latex. Life-threatening latex reactions recently have been reported in people with no prior recognizable risk factors. Others known to be at high risk are those who have had multiple surgical procedures, especially in infancy.

Certain groups of individuals are at high risk for developing immediate allergic reactions from latex. For example, individuals with spina bifida and those with congenital urinary tract problems seem to have a risk of nearly 50 per cent, presumably from frequent exposure.

Studies in the United States and England have found elevated levels of latex-specific antibodies in over 6 per cent of blood donors.

As of early 1999, the US Food and Drug Administration had received over 2,000 adverse event reports describing allergic reactions to medical gloves containing natural rubber latex. These reports relate both to patients and health-care providers and included 20 deaths. These numbers may be understated, as the cause of the reaction may not always be identified.

The consequences of latex allergy are considerable. Allergic reactions to latex include not only contact urticaria, but also a full range of respiratory symptoms including rhinoconjunctivitis, asthma, and life-threatening allergic attacks (anaphylaxis). Other risks include allergic rhinitis and hand dermatitis.

In most cases, latex allergy develops after repeated exposure to latex. Direct physical contact with latex-containing products is not needed to trigger the allergic reaction. Respiratory exposure to latex proteins can take place in the absence of skin contact since latex glove donning powders bind latex proteins in the gloves and carry them in the air.

It is also important to note that all the issues noted above regarding latex allergy also apply to latex dental dams and other latex-containing products used in dental practice.

The best treatment for latex allergy is avoidance. There are also several options to latex gloves available such as the use of gloves made of other materials like polyvinyl chloride (PVC), nitrile, chloroprene or thermoplastic elastomers.

In many non-invasive dental procedures, carefully performed handwashing may make the wearing of gloves unnecessary. As Health Canada stated in

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## Latex Allergies (continued)

its 1998 infection control guidelines on hand washing, cleaning, disinfection and sterilization in health care:

*Guidelines from national and international infection prevention and control organizations have repeatedly acknowledged that hand washing is the single most important procedure for preventing infection.*

The Health Canada guidelines go on to state:

*Glove use should be an adjunct to, not a substitution for, hand washing. If hand washing is performed carefully and appropriately by all personnel, gloves are not necessary to prevent transient colonization of health care workers' hands and subsequent transmission to others.*

And as the American Dental Association states in its infection control recommendations:

*For many routine dental procedures, such as examinations and non-surgical procedures, hand washing with plain soap appears to be adequate, since soap and water will remove transient micro-organisms acquired directly or indirectly from patient contact. For surgical procedures, an antimicrobial surgical hand-scrub should be used.*

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## Potent Surface Disinfectants and Antimicrobial Resistance

In June 2000, in the release of a report on antimicrobial resistance, the World Health Organization sounded the alarm about the increasing levels of drug resistance that threaten to erode the medical advances of recent decades. The report describes how almost all major infectious diseases are slowly but surely becoming resistant to existing medicines.

Here in Canada, in 1997 Health Canada released a report entitled, "Controlling Antimicrobial Resistance: An Integrated Action Plan for Canadians" that identified antimicrobial resistance "as a very serious threat to the treatment of infectious diseases."

In June 2000, the Council on Scientific Affairs of the American Medical Association warned that the overuse of biocides in an effort to produce a germ-free environment may result in lowered natural immunity to common pathogens, and an increased resistance by pathogens to frequently used biocides, and perhaps even antibiotics.

Most dental patients are healthy and immuno-competent, as are most dental care personnel. These factors are conducive for low susceptibility

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Potent Surface  
Disinfectants and  
Antimicrobial Resistance  
(continued)

(high resistance) to infectious diseases existing among most dental patients and their dental care providers. This is the major reason why there are almost no instances of documented infectious disease originating from the dental environment.

In light of this, and the growing concern about antimicrobial resistance, it may be wise for dental personnel to reconsider their existing reliance on relatively potent chemical agents for the routine cleansing of hard surface. In most instances, ordinary soap or detergent and water are as safe and as effective.

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Conclusion

These emerging developments suggest that it is appropriate to reassess the use of latex gloves and potent disinfectants, especially when, as health-care professionals, our primary goal is above all to do no harm.

The College encourages dentists to continually evaluate their infection control strategies and procedures as the information base in this area is constantly evolving. In this way, the profession will ensure that a safe environment exists for both dental care providers and patients.



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