

Medical Gels

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Background

Medical gels are used routinely in clinical practice during physician exams and diagnostic procedures. Contamination of gels* from improper handling can result in serious health care associated infections such as bacteremia and septicaemia.^(1,2,5,7,8,9,10,11,12)

*Medical Gels include ultrasound gels, lubricating gels, and other medicated gels.

Position Statement

To provide for safe handling of medical gels, the following is recommended.

1. INDICATIONS FOR PARTICULAR GELS

Indication	Type of Gel		
	Single dose Sterile	Bacteriostatic	Non-sterile
Whenever a biopsy, puncture of any kind, or imminent surgery is to be performed regardless of body site	√		
Near a fresh surgical wound	√		
Procedure penetrating mucous membrane	√		
Endoscopies on intact mucous membranes	√	√	
Non-endoscopic procedure on mucous membranes (e.g., vaginal/ rectal exam)	√	√	
Non-intact skin	√		
Intact skin			√
Babies in NICUs and critical pediatric patients ⁽¹¹⁾	√		

2. GENERAL CONSIDERATIONS

a) Sterile gel:

- Single use packaging is required for sterile gel as an opened sterile gel package is no longer sterile
- Sterile product must be used employing the principles of asepsis
- Discard the opened package at end of procedure

b) Nonsterile gels.

- Non-sterile gel containers must never be topped up (i.e., refilled when partially empty)
- If multidose containers of nonsterile gel are used on intact skin, the container must be sealed correctly when not in use⁽¹¹⁾
- Containers of gel should never be washed and refilled for use but should be discarded when empty⁽¹¹⁾
- When a new bottle is opened, the bottle should be dated and discarded after 1 month or expiry date if earlier⁽⁵⁾
- Bulk containers of gel are not recommended due to risk of contamination, therefore their use should be discouraged.

c) Warming of Gel

- Do not warm gel due to the increased risk of bacterial multiplication¹³.

d) Storage of Gels

- Products must be stored in clean areas where they are protected from sources of contamination such as moisture, dust, insects, etc.
- Discard the medical gel if in doubt about integrity

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References

1. Gaillot, O., Maruéjols, C., Abachin, E., Lecuru, F., Arlet, G., Simonet, M., & Berche, P. (1998). Nosocomial outbreak of *Klebsiella pneumoniae* producing SHV-5 extended-spectrum- β -lactamase, originating from a contaminated ultrasonography coupling gel. *Journal of Clinical Microbiology*, 36(5), 1357-1360.
2. Weist, K., Wendt, C., Petersen, L.R., Versmold, H., & Rden, H. (2000). An outbreak of pyoderma among neonates caused by ultrasound gel contaminated with methicillin-

susceptible *Staphylococcus aureus*. *Infection Control and Hospital Epidemiology*, 21(12), 761-764.

3. Laboratory Center for Disease Control. (December 1998). Hand Washing, Cleaning, Disinfection and Sterilization in Health Care. *Canada Communicable Disease Report*, 24(S8).
4. Association for Professionals in Infection Control and Epidemiology, Inc. (2016). *APIC text of infection control and epidemiology*. Washington, DC: Author.
5. Health Canada. Health Products and Food Branch. Notice to Hospitals: Important safety information on ultrasound and medical gels. December 14, 2004.
6. Capital Health Infection Prevention and Control (IPAC). Position Statement on Safe Use of Medical Gels: December 2011.
7. Hutchinson, J., Runge, W., Mulvey, M., et al. (2004). *Burkholderia cepacia* Infections Associated.
8. Jacobson, M., Wray R., Kovach, D., Henry, D., Speert, D., Matlow, A, (2006). Sustained Endemicity of *Burkholderia Cepacia* Complex in a Pediatric Institution, Associated with Contaminated Ultrasound Gel: *Infection Control and Hospital Epidemiology (ICHE)*. 2006, April 27. 362-6.
9. Hutchinson, J., Runge W, Mulvey, M, Norris G, Yetman, M., Valkova, N, Villemur, R, Lepine, F. *Burkholderia cepacia*s infections Associated with Intrinsically Contaminated Ultrasound Gel: The Role of Microbial Degradation of Parabens. *Infection Control and Hospital Epidemiology (ICHE)*, (2004) April 25(4); 291-6
10. CDC: Clinician Outreach and Communication Activity (COCA) Safety Communication: Bacteria Found in Other-Sonic Generic Ultrasound Transmission Gel Poses Risk of Infection. CDC April 20,2012
11. Oleszkowicz, S.C., Chittick, P., Russo, V., Keller, M.S., Sims, M., Band, J. *Infections Associated with Use of Ultrasound Transmission Gel* (2012):33 (12): 1235-1237
12. Clinical Outreach and Communication Activity (COCA) CDC Emergency Communication System. Safety Communication: Bacteria Found in Other-Sonic Generic Ultrasound Transmission Gel Poses Risk of Infection. April 20,2012
13. Spratt, H.G., Levine, D., Tillman, L. (2014). Physical therapy clinic therapeutic ultrasound equipment as a source for bacterial contamination. *Physiother Theory Pract*, 2014; 30(7): 507–511