INFECTION CONTROL SNAPSHOT

Alcohol-Based Hand Rubs

Alcohol-based hand rubs are alcohol-containing preparations designed for application to the hands to reduce the number of viable microorganisms on the hands. These are waterless antiseptic agents not requiring the use of exogenous water. In the United States, these preparations usually contain 60%–95% ethanol or isopropanol. Because of the advantages of alcohol-based hand rub products, the Centers for Disease Control and Prevention (CDC) encourage using alcohol-based hand rubs in an attempt to increase compliance among healthcare personnel.

How to Use an Alcohol-Based Hand Rub

- Apply the product to the palm of one hand (Do not use if hands are visibly contaminated.)
- Dispensing the proper amount is critical—follow manufacturer instructions
- Rub hands together (covering all surfaces of hands and fingers) until hands are dry
- If hands feel dry after rubbing hands together for 10–15 seconds, an insufficient volume of product likely was applied

Advantages

- Fast acting and effective antimicrobial action (if hands are not visibly soiled)
- Potential to improve skin condition—causes less dermatitis (if the product contains emollients)
- May be used in absence of sinks and water, and during boil-water advisories
- Potential to increase hand-hygiene compliance

Disadvantages

- Cannot be used when hands are visibly dirty or contaminated
- Must carefully follow manufacturer instructions for amount of product to use and time to “rub”
- Flammable (safety precautions listed below)
- Possible “gritty” feeling on hands when used with powdered gloves or from emollient “build up” after repeated use
- May be more expensive than traditional hand-hygiene agents

Alcohol-Based Hand Rubs and Fire Safety

In Europe, where alcohol-based hand rubs have been used extensively for years, the incidence of fires associated with these products has been low. The results of a survey in the U.S. also support this. However, since alcohols are flammable, precautions should be taken to minimize any potential fire risk. The National Fire Protection Association (NFPA) has published amended guidance to the Life Safety Code (LSC) allowing alcohol-based hand rubs in healthcare facilities if several safety conditions are met:

- The egress corridor width is 6 feet or greater and dispensers are separated at least 4 feet apart.
- The maximum individual dispenser fluid capacity is 1.2 liters for dispensers in rooms, corridors, and areas open to corridors and 2.0 liters for dispensers in suites of rooms.
- If using wall-mounted dispensers, do not install over or directly adjacent to electrical outlets and switches.
- In locations with carpeted floor coverings, dispensers installed directly over carpeted surfaces are permitted only in areas with sprinklers.
- Each smoke compartment may contain a maximum aggregate of 10 gallons of alcohol-based hand rub solution in dispensers and a maximum of 5 gallons in storage.

Because dispensers should not be installed near electrical outlets and the restrictions on the amount of product in operatories, dental clinics may want to consider using smaller pump dispensers instead of purchasing wall-mounted dispensing systems.

If you want more info

- CDC Guidelines for Infection Control in Dental Health-Care Settings (www.cdc.gov/oralhealth).
- CDC Hand Hygiene Guidelines and Resources (www.cdc.gov/handhygiene/).