

Recommendation for the Use of Alcohol-Based Hand Rub

Hand hygiene refers to removing or killing microorganisms (germs) on the hands. When performed correctly, hand hygiene is the single most effective way to prevent the spread of communicable diseases and infections. Hand hygiene may be performed either by using soap and running water, or with alcohol-based hand rubs. Hand washing should be promoted as the first choice. The use of alcohol-based hand rubs can be used as an alternative when hand washing facilities are not readily available and hands are not visibly soiled.

The Health Unit recommends the use of Alcohol-Based Hand Rub (ABHR), with at least 60% alcohol and greater may be considered in the school environment rather than non-alcoholic products.

Efficacy of Alcohol-Based Hand Rub (ABHR)

- There are some studies that indicate ABHR can be effective in reducing absenteeism in schools and also reducing respiratory illness transmission in the home.
- Alcohols provide for a rapid kill of most transient microorganisms due to their ability to denature proteins. The efficacy of the ABHR depends on the quality of the product, the amount used, the time spent rubbing and the hand surface rubbed.
- Norovirus is a frequent cause of gastroenteritis illness and norovirus is inactivated by alcohol concentrations ranging from 70% to 90%.
- Today's generation of ABHRs all contain skin softeners which help prevent drying.
- ABHR products being considered for purchase must have a Drug Identification Number (DIN) or Natural Product Number (NPN) from Health Canada. The active concentration of alcohol in products may be checked by searching the DIN number in the Health Canada Drugs and Health Products Database, located at: <http://www.hc-sc.gc.ca/dhp-mps/prodpharma/databasdon/index-eng.php>

Safety and the Use of ABHR

- Evidence indicates that alcohol is not absorbed through the skin and therefore does not pose a risk as far as increasing blood serum alcohol levels.
- ABHR is not to be ingested. There have been cases documented of toxicity from ABHR ingestion, so it is advisable to supervise children when the product is being used. The use of foams rather than gels or rinses may reduce the risk of ingestion of the product.
- The risk of fire related to the use of ABHR is very small. Placement and storage of ABHR must be in compliance with the fire prevention guidelines. The Office of the Fire Marshal has published
- "Safe Practices for the Use of Alcohol-Based Hand Rubs" (2011) and can be found at: <http://www.mcscs.jus.gov.on.ca/stellent/groups/public/@mcscs/@www/@ofm/documents/webasset/ec157005.pdf>
- Hand hygiene dispensers including soap should never be refilled or topped up due to the risk of contamination as some infectious agents can live in the hand hygiene product (i.e. soap or ABHR).

Non-alcohol-based Waterless Antiseptic Agents

- Non-alcoholic products have a quaternary ammonium compound (QAC) as the active ingredient,
- which has been shown to be less effective against most microorganisms compared to ABHR or soap and water.
- Products with a QAC are not effective against norovirus.
- QACs are also associated with an increase in skin irritation.

References

Public health guidance for schools (K-12) and childcare programs (COVID-19) <https://www.canada.ca/en/public-health/services/diseases/2019-novel-coronavirus-infection/health-professionals/guidance-schools-childcare-programs.html>

Ontario. Provincial Infectious Diseases Advisory Committee. Best Practices for Hand Hygiene in All Health Care Settings. December 2010. Available at: <http://www.publichealthontario.ca/en/eRepository/2010-12%20BP%20Hand%20Hygiene.pdf>