



# Coronavirus Disease 2019 (COVID-19)

## Hand Hygiene Recommendations

Guidance for Healthcare Providers about Hand Hygiene and COVID-19

This information complements the [Infection Control Guidance](#) and includes additional information about hand hygiene.

### Background

- **Hand hygiene is an important part of the U.S. response** to the international emergence of COVID-19. Practicing hand hygiene, which includes the use of alcohol-based hand rub (ABHR) or handwashing, is a simple yet effective way to prevent the spread of pathogens and infections in healthcare settings. CDC recommendations reflect this important role.
- **The exact contribution of hand hygiene** to the reduction of direct and indirect spread of coronaviruses between people is currently unknown. However, hand washing mechanically removes pathogens, and laboratory data demonstrate that ABHR formulations in the range of alcohol concentrations recommended by CDC, inactivate SARS-CoV-2. <sup>[1,2]</sup>
- **ABHR effectively reduces the number of pathogens** that may be present on the hands of healthcare providers after brief interactions with patients or the care environment.







### Hygiene

#### Methods




- **CDC recommends using ABHR with greater than 60% ethanol or 70% isopropanol** in healthcare settings. Unless hands are visibly soiled, an alcohol-based hand rub is preferred over soap and water in most clinical situations due to evidence of better compliance compared to soap and water. Hand rubs are generally less irritating to hands and are effective in the absence of a sink. <sup>[3]</sup>
- **Hands should be washed with soap and water for at least 20 seconds when visibly soiled, before eating, and after using the restroom.** Learn more about hand hygiene in [healthcare settings](#).

### Impact to Operations

- **Healthcare organizations that encounter severe shortages of ABHR** (and have exhausted supply chain access to efficacious products) may consider local production of formulations as described by the temporary [FDA Policy for Compounding of Certain Alcohol-Based Hand Sanitizer Products](#) [↗](#). Healthcare organizations should return to using a commercially produced, FDA-approved product when supplies become available.
  - The FDA policy allows for ethanol or isopropyl to be used as the active ingredient in ABHR manufactured by entities that are not currently registered with the FDA to manufacture drugs.
  - ABHR must be properly formulated with emollients to protect the health of the skin, reduce pathogens on the hands, and avoid inadvertent exposure to organisms not killed by alcohol (e.g., spores).

- Formulations included in the FDA guidance are consistent with [World Health Organization Production Guidance](#)   . These locally produced products are intended for routine healthcare personnel hand cleaning, must not contain active ingredients other than those specified in the FDA guidance, and should not take the place of other regulated skin antiseptics (e.g., surgical hand rub).
- To avoid contamination with spore-forming organisms, WHO formulations require a 72-hour post-production quarantine.
- **CDC does not have a recommended alternative** to hand rub products with greater than 60% ethanol or 70% isopropanol as active ingredients. Benzalkonium chloride, along with both ethanol and isopropanol, is deemed eligible by [FDA](#)  for use in the formulation of healthcare personnel hand rubs.<sup>[2]</sup> However, available evidence indicates benzalkonium chloride has less reliable activity against certain bacteria and viruses than either of the alcohols. <sup>[3,4]</sup>
- **The USP hand sanitizer toolkit**  **formulas** have final concentrations of 80% ethanol or 75% isopropyl alcohol concentrations. A final concentration of 80% ethanol or 75% isopropyl alcohol recommended in the USP hand sanitizer toolkit are aligned with [World Health Organization \(WHO\) formulations](#)   .
  - These formulations have been defined at a single concentration value that falls within the range recommended by CDC.
  - WHO formulations have been manufactured in countries that do not have access to commercially available ABHR, evaluated internationally, and are recommended by WHO for use in response to an emerging viral pathogen, including viruses that are genetically related to, and with similar physical properties as, the SARS-CoV-2.

## References

1. Kratzel A, Todt D, V'kovski P, Steiner S, Gultrom M, Thao TTN, et al. Inactivation of severe acute respiratory syndrome coronavirus 2 by WHO-recommended hand rub formulations and alcohols. *Emerg Infect Dis*. 2020 Jul [date cited]. <https://doi.org/10.3201/eid2607.200915> 
2. Siddharta A, Pfaender S, Vielle NJ, Dijkman R, et al. Virucidal activity of World Health Organization recommended formulations against enveloped viruses include Zika, Ebola, and emerging Coronaviruses. *J Infect Dis*. 2017
3. [CDC Core Practices for Infection Prevention in All Healthcare Settings](#) (2017).
4. Food and Drug Administration. [Safety and effectiveness for health care antiseptics: Topical antimicrobial drug products for over-the-counter human use \(final rule\)](#)  .
5. Centers for Disease Control and Prevention. [Guidelines for hand hygiene in healthcare settings](#) (2002).
6. Kampf G, Todt D, Pfaender S, Steinmann E. [Persistence of coronaviruses on inanimate surfaces and its inactivation with biocidal agents](#)  . *J Hosp Infect*. 2020.