

Disinfectants

SERIES: Indoor Air Quality Fact Sheets

This fact sheet is one in a series.
See [series overview](#)
for background
information.

Cleaning, COVID-19, and air quality

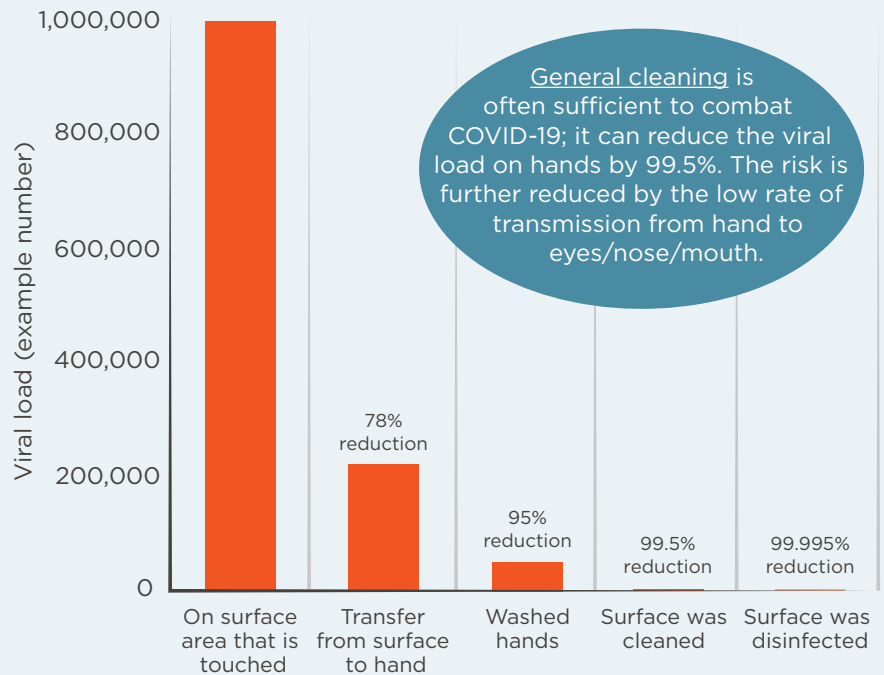
Airborne transmission is the dominant route for COVID-19. There is only 1 in 10,000 chance to get infected via surfaces.

The [EPA](#) and [CDC](#) emphasize that, unless otherwise mandated, increased disinfection is only needed when a COVID-19 case has been confirmed or in locations that are high traffic and do not have other prevention measures in place.

Cleaning has many impacts on health and the environment. This fact sheet focuses on intersections with COVID-19 prevention and air quality, but more information about green cleaning is available from [LEED](#) and [Green Seal](#).

Comparative impact of activities on reducing viral load

Graph generated from an [interpretation](#) of quantitative microbial risk assessment research, found in [The American Journal of Infection Control](#) and [Environmental Science & Technology Letters](#).



Impact on human health

Misuse or overuse of disinfectants can be toxic to humans and the environment. With some disinfectants, skin contact, inhalation, or accidental ingestion can cause irritation or damage to the [respiratory, nervous, gastrointestinal, and/or cardiovascular systems](#). Unfortunately, our increased use of disinfectants has led to more exposure. In 2020, disinfectant exposure cases reported to U.S. Poison Control Centers [increased 45%](#) compared to the same period in 2019.



Applying disinfectants

- If a disinfectant is needed, do NOT ask children to apply it
- Check that the product is on EPA's list of [Design for the Environment \(DfE\) Certified Disinfectants](#), sorted for those effective against SARS-CoV-2 (EPA's List N). If those products are unavailable, reference [EPA's List N](#) and choose products with [safer active ingredients](#).
- Ensure you are maximizing disinfection by [pre-cleaning with soap](#)
- Use the product [exactly as directed](#), including correct PPE and dwell time

Most products instruct the user to apply in a "well-ventilated area," which is not well-defined. Use caution and, when possible, apply during unoccupied periods, keep ventilation systems running and/or the windows open, and leave the space for a few hours. Limit inhalation of the product; for instance, use cloths to apply instead of spraying the product into the air.

What about fumigation and electrostatic spraying?

EPA generally [does not recommend](#) using airborne methods to apply disinfectants. EPA has only evaluated a product's safety and efficacy for methods addressed on its label. For now, the [CDC recommends](#) cleaning contaminated surfaces—not spraying in the air—to prevent the spread of disease.

