



Eliminating the COVID-19/ Coronavirus in Your Home

Experts in emerging viruses, microbial evolution and microbial risk assessment from Rutgers University in New Jersey offer the following tips for cleaning to kill the pathogens that cause COVID-19 and other deadly diseases. More information can be found at www.rutgers.edu/news/best-ways-kill-coronavirus-your-home.

General disinfecting guidelines:

- The U.S. Centers for Disease Control and Prevention recommends daily disinfection for frequently touched surfaces such as tables, doorknobs, light switches, countertops, handles, desks, phones, keyboards, toilets, faucets and sinks.
- The CDC also recommends the use of detergent or soap and water on dirty surfaces prior to disinfection.
- If someone in your home is sick with flu-like symptoms, consider regularly disinfecting objects in your home since SARS-CoV-2 has been shown to survive for 16 hours on plastics.
- Whatever cleaning solution you use, let it remain in contact with the surface long enough to kill viruses and other pathogens. The time needed will depend on the chemical.
- Don't use different cleaning agents at the same time. Some household chemicals, if mixed, can create dangerous and poisonous gases.

Bleach

- Bleach can be diluted with cold water to make an effective disinfectant against bacteria, fungi and many viruses including coronaviruses. You can typically use ¼ cup of bleach per 1 gallon of cold water – but be sure to follow the directions on the label of your bleach.
- Make diluted bleach solution as needed and use it within 24 hours, as its disinfecting ability fades with time.
- Non-porous items like plastic toys can be immersed in bleach for 30 seconds. Household surfaces that won't be damaged by bleach should get 10 or more minutes of exposure.
- Bleach solutions are very hard on the skin and should not be used as a substitute for handwashing and/or hand sanitizer.

Alcohol

- Alcohol in many forms, including rubbing alcohol, can be effective for killing many pathogens. You can dilute alcohol with water (or aloe vera to make hand sanitizer) but be sure to keep an alcohol concentration of around 70% to kill coronaviruses. Many hand sanitizers have a concentration of about 60% alcohol, and Lysol™ contains about 80%; these are all effective against coronaviruses.
- Solutions of 70% alcohol should be left on surfaces for 30 seconds (including cellphones – but check the advice of the phone manufacturer to make sure you don't void the warranty) to ensure they will kill viruses. Pure (100%) alcohol evaporates too quickly for this purpose.
- Containers of 70% alcohol should be sealed to prevent evaporation. But unlike bleach solutions, they will remain potent as long as they are sealed between uses.
- A 70% alcohol solution with water will be very harsh on your hands and should not be used as a substitute for handwashing and/or hand sanitizer.

Hydrogen peroxide

- Hydrogen peroxide is typically sold in concentrations of about 3%. It can be used as is or diluted to 0.5% concentration for effective use against coronaviruses on surfaces. It should be left on surfaces for one minute before wiping.

Natural chemicals (vinegar or tea tree oil)

- Vinegar, tea tree oil and other natural products are not recommended for fighting coronaviruses. A study on influenza virus found that cleaning with a 10% solution of malt vinegar was effective, but few other studies have found vinegar to be able to kill a significant fraction of viruses or other microbes. While tea tree oil may help control the virus that causes cold sores, there is no evidence that it can kill coronaviruses.