

## Household Chemical Safety and Coronavirus: What You Need to Know

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### ***In a nutshell...***

This article reviews data from the Centers for Disease Control and Prevention (CDC) that show increasing numbers of phone calls to US poison centers during the current coronavirus pandemic. The CDC notes these calls could be linked to cleaning and disinfecting in the household to help prevent the spread of the coronavirus. Tips for using household chemicals safely are provided.

Confined to their homes, many Americans are cleaning and disinfecting surfaces to help prevent the spread of the SARS-CoV-2 virus (coronavirus). Some may be cleaning their homes for the first time if their housekeeping service has been discontinued. In carrying out these tasks, some may be misusing household chemical products, causing injuries.

According to a recent [report](#) from the Centers for Disease Control and Prevention (CDC), phone calls to US poison centers increased during the first quarter of 2020 compared to the same periods in 2018 and 2019. Although CDC admits there is no direct evidence that coronavirus-related cleaning and disinfecting is the cause of this trend, the timing supports a link. The trend is concerning even if it is due to “stuck-in-the-house-anyway” spring cleaning.

### ***Calls to US Poison Centers***

CDC worked with a team from the [American Association of Poison Control Centers](#) to compare data on the number of phone calls made to the 55 US poison centers about household chemical exposures in January through March of 2020, 2019, and 2018. Calls made in 2020 were up 20.4% over 2019 figures and 16.4% over 2018 figures. Calls pertaining to children under the age of five who had suffered a household chemical exposure represented a large percentage of total calls in each of the three month periods. Further, CDC reports that between 2019 and 2020, the largest percentage increase in the number of calls received about



*As Americans clean and disinfect frequently touched surfaces against coronavirus, they should avoid skin contact, inhaling, and swallowing cleaners and disinfectants.*

exposures to cleaners was due to bleaches. In that same period, the largest percentage increase in all exposure routes (e.g., swallowing, skin contact, or inhaling) was inhaling.

### *Vinegar + Bleach = Trouble!*

The CDC report offers examples of recent household chemical exposure. In one of these, a woman soaked her fresh produce in a sink basin containing a mixture of 10% bleach solution, vinegar, and hot water. She soon developed difficulty breathing, accompanied by coughing, and wheezing, and was transported via ambulance to the emergency department. She improved with oxygen and bronchodilators. The woman was discharged after a few hours of observation.

Diluted regular strength chlorine bleach is an effective, inexpensive [surface disinfectant](#), but a healthy respect and adherence to manufacturers' directions are required to handle and use it safely. In combining bleach with vinegar (an acid), the woman created a chemical reaction in her kitchen that generated hazardous gas. Bleach should never be mixed with anything but water; produce from the grocery store can simply be [soaked or washed in plain tap water](#).

### *Cleaning and Disinfecting in the Age of Coronavirus*

As we struggle to find the household products that were once so easily purchased at the grocery store, we shouldn't become our own "chemical manufacturer." CDC offers the following commonsense tips on safely using cleaners and disinfectants during the pandemic:

- Always read and follow product manufacturers' label directions
- Use only room temperature water to dilute products (unless label directions indicate otherwise)
- Avoid mixing chemical products
- Wear eye and skin protection
- Ensure adequate ventilation
- Store chemicals out of the reach of children

The present pandemic has changed our lives in big and little ways. In the long run, it's likely there will be unexpected benefits, such as extended telecommuting and cleaner air. There will also be unintended consequences in the economy, education, sports, and entertainment. Don't let one of the unintended consequences of the pandemic be an avoidable, harmful chemical exposure.

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