Safer disinfecting in the age of coronavirus

Protect yourself against coronavirus AND hazardous disinfecting chemicals
We all are worried about coronavirus.

Coronavirus is **mostly spread through the air, from person to person.** That is why the most important actions we can take are:
- wearing masks
- avoiding crowds
- staying 6 feet or more apart from each other
- limiting time indoors outside of our home
- using ventilation (open windows, turn on fans)
Coronavirus can be on surfaces.

When people cough or breathe, the virus *can* fall on surfaces.

- If a sick person touches their face and a surface, the virus *could be* transferred to the surface.
- If a person touches a contaminated surface and a clean surface, the virus could be transferred.
- The coronavirus *can last for a length of time* on surfaces (different time for different surfaces).

There is a **low risk of coronavirus transmission from surfaces**

*https://www.cdc.gov/coronavirus/2019-ncov/more/science-and-research/surface-transmission.html#ref3*
More disinfecting = more exposure to disinfecting chemicals

The most widely used disinfecting chemicals can cause health problems.

People who clean professionally are most affected because they have the greatest exposure to disinfecting chemicals.

They can:
- cause people without asthma to develop asthma
- worsen asthma or trigger asthma
- cause headaches
- irritate or burn your skin or eyes
- cause you develop allergic reactions
- disrupt or act like hormones
- some may increase risk of certain cancers
- some may increase risk of reproductive problems including higher risk of having a child with birth defects
Safe cleaning & disinfecting is a racial justice and women’s rights issue.

About half of the nation’s janitors and two thirds of house cleaners are Latino or African American.

Women account for 9 out of 10 house cleaners.
But you can take steps to protect yourself

1. Disinfect only when necessary.
2. Know what disinfecting chemicals to avoid.
3. Choose safer disinfecting options.
4. To kill coronavirus, choose a disinfect on List N.
5. Take safety precautions.
Cleaning / Sanitizing / Disinfecting: What’s the difference?

- **Cleaning**: physically removes dirt and germs including bacteria, and viruses
- **Sanitizing**: reduces the number of germs on surfaces to a level considered safe for public health
- **Disinfecting**: kills germs like bacteria and viruses but has no effect on dirt

Disinfectants are regulated as pesticides.
Disinfect only when you need to.
In most situations, cleaning is enough.

- When done properly, cleaning with soap and water, or dish soap and water, is often enough to get rid of coronavirus.

- Soap and water removes the virus from surface.

- Soap and water are especially effective on coronavirus, because, in addition to removing the virus from surfaces, soap and water—and a little scrubbing—breaks apart the outer layer of the coronavirus.
Is your cleaner just a cleaner?

Many cleaning products ALSO have disinfectant ingredients. Your cleaner may have:

- Bleach
- Ammonia
- Quaternary ammonium compounds

These ingredients are disinfectants that can be harmful to your health. You do not need disinfectant chemicals to clean.

Anti-microbial & anti-bacterial cleaners are also cleaners with disinfectant ingredients.

You don’t need disinfectants to clean. Soap and water are effective and safe.
Should you disinfect at home?

The Centers for Disease Control does not recommend disinfecting at home unless:

- Someone in the home is sick with coronavirus
- Someone who may have coronavirus has come into the home
- You have touched an unknown surface outside the home that may have coronavirus (& did not wash your hands before touching surface in home.)

Sick people should isolate in a separate room if possible.

- Disinfect commonly used spaces (bathrooms)
- Do not clean the room of someone who is sick until at least 24 hours after they have left the room or are no longer sick.
- Wear a mask and gloves.

Here is the Center for Disease Control guidance on disinfecting at home:

https://drive.google.com/file/d/1dw4Wnt65x_HQoHpLYHt6RHf7AXJ5Yzas/view?usp=sharing
When should you disinfect?

Health care, hospitals, schools, & child care centers require disinfection. Restaurants and commercial kitchens require sanitation.

Disinfect:
Offices, apartment buildings, community facilities, or any place where many people share an indoor space if there is a cause for concern such as:

- high transmission of COVID-19 in the community
- low number of people wearing masks
- infrequent hand hygiene, or
- the space is occupied by people who are at greater risk for severe illness from coronavirus.*

Disinfect if there is a spill or accident involving bodily fluids: blood, urine, feces, vomit or other fluids
What should you disinfect?

In these shared spaces, disinfect frequently touched surfaces like:
- door handles
- light switches
- handrails
- shared restrooms (toilets, sinks, anything people touch)
- shared desks
- computer keyboards
- tables or counters
- play equipment
- anything that many people touch.
How to disinfect: Clean first, then disinfect.

Disinfectants don’t work on dirty surfaces.

- A disinfectant needs to directly contact virus in order to work. Dirt particles can actually cover up germs so disinfectants can’t touch them.

- If a product is both a disinfectant and cleaner, you need to use it once as a cleaner and then again as a disinfectant.
How to disinfect: Make sure disinfectant stays wet on surface you are cleaning for...how long?

Disinfectants need to be in contact with germs and viruses for a scientifically determined amount of time in order to be effective.

You need to check the label to see how long the disinfectant has to stay wet. It could be as long as 10 minutes.

Disinfectant will not work unless it stays wet for the amount of time the label requires.
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Know what disinfecting chemicals to avoid.
Avoid these disinfectant chemicals

Chlorine Bleach (also known as Sodium Hypochlorite): Can cause:
- asthma, worsen asthma or trigger an asthma
- burns, skin and eye irritation, lung irritation
- serious respiratory harm if mixed with other chemicals

Quaternary ammonium chemicals: Can cause
- skin and lung irritation
- asthma and breathing problems
- fertility issues and reproductive problems
- possible increase in risk of birth defects if used while pregnant
How to know if your product has quaternary ammonium

Most widely used disinfecting chemicals.
Often used in disinfecting wipes. Don’t let kids use disinfecting wipes!

Check the active ingredients on the label:
Quaternary ammonium chemicals have names that usually end in “-onium chloride.”
examples:
Benzalkonium chloride
Alkyl dimethyl benzyl ammonium chloride
Didecyldimethylammonium chloride

Avoid disinfectants with quaternary ammonium.
Choose safer disinfectants.
Choose safer disinfectants

There are safe disinfectants on List N that will kill coronavirus without harming your health. Safer disinfectants have one of these active ingredients:

**YES:**
- Isopropyl Alcohol (Isopropol) 70%
- Ethyl Alcohol (Ethanol) 70%
- Hydrogen peroxide
- Citric acid
- L-lactic acid
- Peracetic acid
- Hypochlorous acid

**NO to methyl alcohol (Methanol is a carcinogen!)**

**NO to products that have BOTH peracetic acid & hydrogen peroxide**

What about Thymol?
Some products with safer disinfecting chemicals
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Pick a disinfectant that kills coronavirus.
What disinfectants kill coronavirus: EPA’s List N

Environmental Protection Agency information in Portuguese on using disinfectants to fight coronavirus:

Portuguese version of List N (current as of May 2020)

English version of List N (searchable and continuously updated)
https://cfpub.epa.gov/giwiz/disinfectants/index.cfm
<table>
<thead>
<tr>
<th>EPA Número de registro</th>
<th>Ingredientes ativos</th>
<th>Nome do produto</th>
<th>Empresa</th>
<th>Siga as instruções de desinfecção e a preparação para o vírus seguinte</th>
<th>Tempo de contato (em minutos)</th>
<th>Tipo de formulação</th>
<th>Tipo de superfície</th>
<th>Usar site</th>
<th>Declaração de patógenos virais emergentes?</th>
<th>Data de adição à lista N</th>
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<tr>
<td>1677-21</td>
<td>Amônia quaternária</td>
<td>Micro-Quat</td>
<td>Ecoball Inc</td>
<td>Micovirus</td>
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<td>Sim</td>
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<td>Hipoclorito de sódio</td>
<td>CRB I</td>
<td>Clorox Empresa</td>
<td>Canino parvovírus; Feline parvovírus; Feline panleucopenia vírus</td>
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<td>Internacional Disinfect Inc</td>
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<td>Wexford Labs Inc</td>
<td>Rinovírus</td>
<td>5</td>
<td>Lencos</td>
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<td>Sim</td>
<td>14/05/2020</td>
</tr>
</tbody>
</table>
Can I buy safer disinfectants at a store?

Many of the disinfectants on List N won’t sound familiar, because they aren’t for home use. But what if you are working in homes and just want something you can buy directly at a store in your neighborhood?

Here are some of the safer disinfects from List N that are available at local stores:

**Windex Multi-surface Disinfectant Cleaner** EPA reg no: 4822-5€

*Lactic acid*

*citrus, unscented, or glade rainshower*

**Available at:** Walmart, Target, Staples,

Home Depot,

Shaw’s, Market Basket, Stop & Shop, Star Market
More options

**Lysol Bathroom cleaner**  EPA reg no: 675-55 *Citric acid*

*Available at:* Home Depot, CVS, Walmart, Stop & Shop

**Lysol Multi-Purpose Cleaner w/ Hydrogen Peroxide** Citrus Sparkle Zest EPA reg no: 777-126:

*Available at:* Walmart, Stop & Shop, CVS, Walgreens

**Lysol Neutra Air 2 in 1**

*Ethanol*  EPA reg no: 777-136

*Available at:* Target, Walgreens, Walmart, CVS

**Scrubbing Bubbles Bathroom Grime Fighter** EPA reg no: 4822-592

*L-Lactic acid*  *Available at:* Target, Rite AID, Shaws, Star Market, Market Basket
More options

Comet Disinfecting Bathroom Cleaner, 3573-54
Available at: Staples, Walmart, Amazon.com, CVS (in stores only)

Purell Healthcare Surface Disinfectant,
Purell Professional Surface Disinfectant
Purell Food Surface Disinfectant
Ethyl alcohol Can be used on food surfaces
Available at: Staples, Fastenal, Grainger, WB Mason, Lowes

Purell Professional Surface Disinfectant Wipes 84150-1
Available at: Grainger
A few more

Clorox Hydrogen Peroxide Cleaner Wipes 67619-25
*Available at:* Office Depot, Staples, Walmart, CVS

Clorox commercial solutions disinfectant biostain and odor remover
67619-33 hydrogen peroxide
*Available at:* Office Depot, Staples, Amazon, WB Mason

Clorox pet solutions advanced formula disinfectant stain odor remover
5813-110 hydrogen peroxide
*Available at:* Petco, Home Depot

Clorox commercial solutions hydrogen peroxide cleaner disinfectant
67619-24
*Available:* Staples, Office Depot, Walmart

Clorox Pro 4 in 1 disinfectant and sanitizer 67619-29 ethyl alcohol
*Available:* online
Lists of safer disinfectants

**Toxics Use Reduction Institute**, University of Massachusetts Lowell.


**Environmental Protection Agency Design for the Environment** certifies disinfectants that have no toxic chemicals. If you see this logo on a disinfectant you know that it is safer. They also have a short list of safer disinfectants online--check box to search for disinfectants that work on coronavirus:

[https://www.epa.gov/pesticide-labels/dfe-certified-disinfectants](https://www.epa.gov/pesticide-labels/dfe-certified-disinfectants)

The **Environmental Working Group** is a national nonprofit that has created this fact sheet of safer List N disinfectants that can be found in stores and online.

[https://www.epa.gov/pesticide-labels/dfe-certified-disinfectants](https://www.epa.gov/pesticide-labels/dfe-certified-disinfectants)
Force of Nature device that allows you to make your own cleaner/disinfectant. Plug in and add one of capsules to each bottle. When plugged in, the water and capsules turn into hypochlorous acid, a safer disinfectant.
Take safety precautions when disinfecting
Stay safe while disinfecting

• Read and follow instructions on label

• Wear personal protective equipment recommended on label

• **Always** wear gloves (rubber or PVC),
  • Wash your hands for 20 seconds after you take gloves off

• Immediately throw disposable gloves away or wash reusable gloves.

• Open up window and turn on fan

• Check the label to see if you need to dilute with water.

• Label will give information about what to do if you get the disinfectant in your eyes, skin, mouth.
Never mix disinfecting chemicals

Never mix chlorine bleach ("sodium hypochlorite") with anything but water.

Bleach + ammonia = toxic gas that can cause DEATH
Bleach + hydrogen peroxide = dangerous
Bleach + acid (in some toilet bowl cleaners) = can cause DEATH
Bleach + vinegar = dangerous
Bleach + isopropyl alcohol = dangerous
Hydrogen peroxide + vinegar = dangerous

At low levels, these combinations can cause:
• eye, nose, throat irritation
• respiratory problems

At high levels, these mixed chemicals can be very dangerous or lethal.
What’s on the label
Questions/thoughts?

Heloisa

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