

Know thy enemy: SARS-CoV2

In any war, it is best to know one's enemy well to have a better chance of survival. We must know all we can about our invisible adversary, SARS-CoV2 virus, the cause of the current COVID-19 pandemic, in order to defeat this virus which, (Click On: [COVID-19 Latest Data](#)), and numbers and fatalities are still going up. It is suggested that 40-60 percent of the population could be infected before this pandemic ends.

Viruses are not alive

What is a virus? Contrary to conventional knowledge, **viruses are not living microorganisms like bacteria, so the virus is not "alive."** It is actually a protein molecule (DNA) covered by a protective layer of lipid (fat), which when absorbed by the cells of our ocular (eyes), nasal (nose) or buccal (mouth) mucosal lining, "instantly changes its genetic code (mutate) and rapidly converts itself into an aggressor and multiplier cell," then replicates super fast in a host (in animals, in the case of COVID-19, in bats, which was transmitted to humans in Wuhan, Hubei, China) and massively attack and damage the main target: the lungs (resulting in pneumonia, which is the final killer).

The virus is unable to "survive" on its own, without a host. It is totally dependent, a parasite, which decays on its own outside of a living host. On surfaces, this protein molecule will lose its potential activeness (destroyed) within a period of time (see list below), depending on the material of the surface. Since it is not alive there is no such thing as "killing the virus."

We can **destroy and inactivate the molecule by damaging/altering its DNA thru handwashing with foamy soap and water** (preferably warm, since it hates temperature beyond 23C or 73F) for at least 20 seconds and **drying our hands well** since it loves moisture. It is also destroyed by disinfectants: at least 70% alcohol, diluted chlorine bleach (5 tbsp per gallon water), likely by UVC light, which damages its DNA to disable replication, by anti-SARS-CoV2 medications (the old anti-malarial drug Hydroxychloroquine, with Azithromycin for the pneumonia) a combo still being clinically tried, and prevented with a vaccine, now being developed.

The foam that forms when we wash our hands with soap and warm water (heat melts fats) cuts, destroys, and dissolves the protective fats around this very fragile virus, breaking and dispersing the protein molecule on its own, inactivated. The same good effect happens when we wash our face or take a shower.

SARS-CoV2 virus on surfaces

Recent studies have suggested that SARS-CoV2 virus remains active on various surfaces for different length of time:

From the time an infected person coughs or sneezes, the trajectory of the **virus-loaded droplets stay in the air for up to 3 hours, and** thereafter settle on the ground within about 6-10 feet, depending on the air flow or wind. It is best **not to do dusting or shaking clean clothing**, which will spread the virus more. Use damp cloth to clean the floor, to limit the virus from flying around.

On copper and wooden surfaces, **it stays active for up to 4 hours**. On cardboard and paper, this virus could survive up to 24 hours, and about **2-3 days on ATM machines** (screen and keypad), **likewise on plastic and metal** surfaces. It is unclear for porous material, like clothing and textile, but it is suspected that the virus may be absorbed by the fiber and the virus dies more quickly than on hard surfaces.

Since the virus does not survive well when the temperature is above 73F (23C), the summer months in the sun belt States and in other countries, **the hot season might mitigate the spread** of the virus somewhat. Since SARS-CoV2 virus is new, we still have a lot to learn about it.

New speedy testing

At the behest of President Trump, the FDA had fast tracked the approval for countless labs to develop tests for COVID-19. He announced Tuesday that Abbott Lab had develop lightning-fast an accurate instant “point-of-care” molecular test that can be performed in doctor’s offices, hospitals, etc., which will yield positive results in 5 minutes and 13 minutes for negative test, on the spot. This brilliant test was launched last Wednesday, April 1st. This good news should not make us overly confident and careless. The mnemonic COVID strategy we coined below is still the best tactic we have against COVID-19 to save ourselves, our loved ones, and the elderly.

UVC light: anti-viral

Since UVC light was found to be effective in damaging the DNA of viruses in past MERS/SARS epidemic and pandemic, it is reasonable to suspect that UVC light could also be effective in destroying the SARS-CoV2 virus. All medical centers have been routinely sterilizing their OR and ICUs, etc. using UVC light for more than a century, after it was invented in 1801. Many have been trying it these days to sterilize the much-needed Personal Protective Equipment (PPE) for our medical front-liners, like masks, eye wears, gowns, gloves, etc., which are in low supply. In Italy 50 physicians have died from COVID-19, six in the Philippines, and countless around the globe, including China, Spain, Iran, among others. **Caution:** UVC light is injurious to the skin (burns and potential skin cancer) and to the eyes (cataract formation). **Use only on empty rooms.**

HydroxyChloroquine + Azithromax

Following President Trump's request, the FDA had just fast-tracked the approval for the off-label use of Hydroxychloroquine (used for decades for malaria, lupus, arthritis, amebiasis), for trial use for COVID-19 patients. Added to treat the COVID-19 pneumonia, is Azithromycin, a previously approved antibiotic. Some initial reports are very encouraging. The next question is whether hydroxychloroquine could also be effective for prophylaxis, to prevent from getting infected by this virus, especially those physicians and other front-liners, the unsung heroes putting themselves in harm's way in this pandemic, who are directly exposed to COVID-19 patients day in and day out, many without enough PPE to protect them.

Convalescent serum

The serum from recovered virus patients in past pandemics, including in the 1918 Spanish Flu that killed about 100 million, MERS, and SARS, showed that their (serum) contained a lot of antibodies that could be transfused to those infected with the virus to help them fight the infection successfully, in an otherwise helpless situation. The same regimen is now used as an adjunct therapy for COVID-19 patients.

ECMO for severe COVID-19

The use of Extra-Corporeal Membrane Oxygenator (heart-lung machine used routinely in open-heart surgery) is an option among those with COVID-19 pneumonia that is not responding to standard ventilator. The machine acts as an artificial lung to keep the patient's blood oxygenated. There are indications, restrictions, and limitations of this treatment.

Fight COVID-19 with COVID

The best tool we have to end this deadly pandemic faster and sooner is this common sense personal behavioral modification DIY strategy: **Destroy COVID-19 with COVID: Cover face to scratch, sneeze or cough; Omit non-essential travels; Voluntary quarantine at home; Intensive handwashing; Distancing is now social.**

Potential threat

Clinical report from China says the SARS-CoV2 virus was found in the saliva of recovered patients 39 days after the pharyngeal swab was negative and positive in feces up to 13 days afterwards. The question is whether those who had recovered and had tested negative are truly virus-free and non-contagious. The other is, Is the virus also spread by fecal contamination? Studies are ongoing.

Our unsung heroes

While we, who are able to stay home on self-quarantine, are safe, front-liner physicians, nurses, allied healthcare and other hospital personnel, first responders of every kind, put themselves in harm's way, exposing themselves to the killer virus 24/7, stepping out of their comfort zone in the name of selfless service to their sick fellowmen. Even their families at home are at a higher risk. They are our unsung heroes. At least 50 physicians treating COVID-19 patients in Italy have died from COVID-19, six physicians in the Philippines (the youngest in her mid30s), and countless in China, Spain, Iran, Korea, and the USA.

There is one thing, individually, we can do to help them: **STAY OUT OF THE WAY**. Stay home and **avoid getting infected and spreading** it to others, especially to the elderly, majority of them with health issues. **Let us not be the carrier of the virus and the courier of death.**

Once again, unless someone at home had tested positive, a clean and well-ventilated home is the safest sanctuary against COVID-19 and other infectious diseases. The young people could also die from COVID-19. **The youngest ones who died were ages 12, 17, 24, and 26 years old.**

The young man on the beach teeming with people during his summer break two weeks ago saying on TV "It's my civil right to do what I want with my body and enjoy," is obviously stupid and a greater threat than the virus to the public and, especially to freedom and democracy. He has the right to kill himself but not others.

Gear up when outside

If we have to go out to a grocery store, drug store, or for other essential matter, let us put on gloves, mask, and a cap, observe distancing, and wash our hands properly and frequently. We must not touch the mask, either. Having a healthy dose of paranoia (medical vigilance) during this deadly pandemic is also helpful to protect ourselves and our family. **The enemy is invisible and most eager to kill humans to survive and multiply.**