First defense against coronavirus: 20 seconds of proper hand-washing

95% of people don't wash their hands correctly.

When people ask how to protect themselves against the alarming spread of coronavirus COVID-19, one of the first suggestions from doctors is a common-sense one: Wash your hands – but do it the right way.

"There are more bacteria on your hands than anywhere else," says Dr. Terry Platchek of the Stanford School of Medicine. Samples taken from health care workers' hands in a 2009 study found a variety of bacteria on one square centimeter of skin.

The study found a bacterial count ranging from 39,000 to 460,000 in an area about the size of your smallest fingernail.

Not all bacteria will harm you, of course. Some are greatly beneficial. However, "some common bacteria, such as Staphylococcus, can cause serious infection," notes Dr. Coil.

"The only way to get contaminated matter off your hands is to wash them," Dr. Platchek says. "Washing lifts microbes off the skin and sends them down the drain."

Follow these steps to ensure all parts of your hands are clean:

1. Wet your hands thoroughly to the wrist. Wetting hands produces more lather for cleaning. Water temperature does not make a difference, but extremely hot water can irritate skin. Turn off the tap to save water.

2. Apply soap, enough to cover both hands. Plain soap is fine. Studies show antibacterial soaps have little additional benefit.

3. Lather your hands by rubbing them together palm to palm.

4. Rub your right palm over the back of your left hand, interlacing your fingers, then switch left over right.

5. Rub palms together with fingers interlaced.

6. Scrub the backs of fingers and fingernails in cupped palms with fingers together.

7. Scrub your left thumb by turning and rubbing it in your right palm. Do the same for the right thumb and left palm.

8. Scrub your left palm with clasped fingers of your right hand and vice versa.

9. Rinse with running water. A basin of standing water may be contaminated by previous use.

10. Wet hands can still carry germs so dry thoroughly with a single-use towel or air dryer. Use towel to turn off tap.

No soap? You can use hand sanitizer in a pinch; its alcohol content kills germs. Make sure it contains at least 60% alcohol and follow directions.

When should you wash?

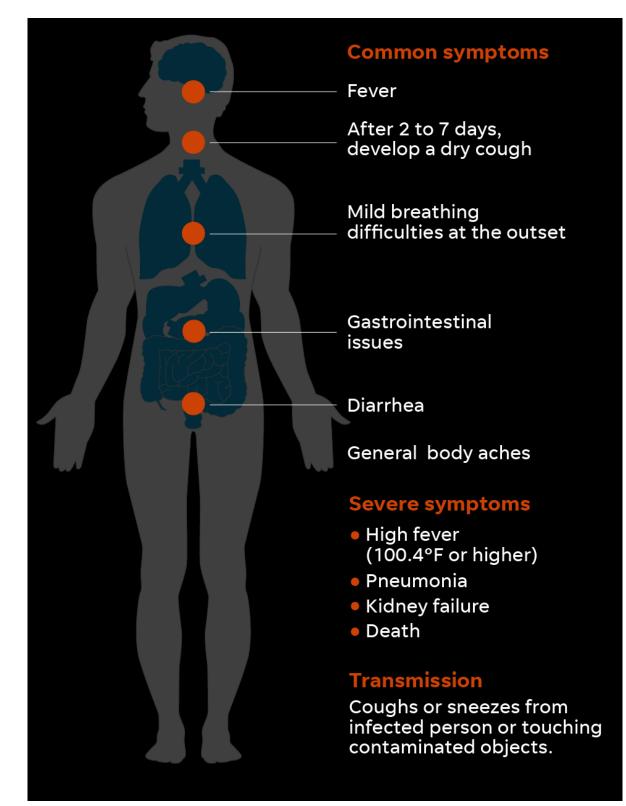Proper washing reduces the number of germs on your hands. Researchers recommend you wash:

- After using the bathroom.
- Before you eat.
- Any time your hands are visibly dirty.
- After handling raw meat.
- More often if you have a cold or flu.
- After blowing your nose.
- After feeding or playing with a pet.
- After treating a cut or wound.
- After disposing of trash or garbage.

Medical sources say washing your hands isn't a guarantee against infections of coronavirus or any other disease. It will, however, provide a stronger first defense against illness.

How can you prepare for the coronavirus?

As there's no available vaccine, the CDC recommends taking <u>preventative measures to decrease the likelihood of infection</u>:

- Wash hands often with soap and water for at least 20 seconds
- Avoid touching the face with unwashed hands
- Avoid close contact with people who are sick
- Cough or sneeze into your elbow or use a tissue to cover it, and throw the tissue away
- Clean and disinfect frequently touched objects and surfaces

Common symptoms

Fever

After 2 to 7 days, develop a dry cough

Mild breathing difficulties at the outset

Gastrointestinal issues

Diarrhea

General body aches

Severe symptoms

- High fever (100.4°F or higher)
- Pneumonia
- Kidney failure
- Death

Transmission

Coughs or sneezes from infected person or touching contaminated objects.

I'm an epidemiologist. Here's what I told my friends about the coronavirus and COVID-19.

FOCUS ON SLOWING DOWN THE SPREAD OF COVID-19, THE CORONAVIRUS. DID I MENTION: WASH. YOUR. HANDS. THEN WASH THEM AGAIN.

Malia Jones
Opinion contributor

I'm not an expert on the COVID-19 virus by any stretch, but I study epidemics and have general knowledge and training that is applicable. Here are my thoughts on what's happening and what we should do:

First of all, we are going to see a tremendous increase in the number of cases of coronavirus in the coming days. This is not entirely because of some new pattern in the spread of the disease but rather due to a major change in the requirements to be tested.

Until recently, if you had a flu-like illness but had not recently traveled to China, Italy, South Korea or Iran, you could not be tested. This is just the way health care works; you get tested if you meet the case definition, and the case definition included travel.

Now, you can be tested if you are sick and have a doctor's order to be tested. So expect things to feel a lot more panicky all of a sudden. We will see hundreds or thousands of new cases as testing increases.

Is the panic legitimate?

Sort of. But this is not the zombie apocalypse.

The death rate of 30 deaths per 1,000 cases is probably a wild overestimate. (The denominator is almost certainly wrong because it is confirmed cases, and we only confirm cases when we test for them.)

That said, even at 3 per 1,000 cases, this would be a big deal. By way of comparison, the death rate for seasonal influenza is between 1 and 2 in 1,000 cases. So, yeah, going from roughly 0x to 30x worse than a bad flu year? That's a problem.

Unlike flu, COVID-19 is not particularly dangerous for children, so that's some happy news. It is dangerous for older adults and those with lung conditions, so we need to be extra careful to protect those populations from exposure.

What can we do?

Our focus should be on *slowing down the spread* of this disease. We have a limited health care system, and the virus is spreading very quickly right now. We need to slow it down so that we have time to deal with new cases within the capacity of the system.

Here is my advice:

Wash your hands. Wash them so much.

The current best guess is that the new coronavirus is transmitted via close contact and surface contamination. COVID-19 can be transmitted by contact with contaminated surfaces. I have started washing my hands each time I enter a new building and after being in shared spaces (classrooms especially), in addition to the standard practice of washing after using the bathroom and before eating. Use soap and water. Hand sanitizer also kills this virus, as does rubbing alcohol (the main ingredient in hand sanitizer).

There is no need to be obsessive about this. Just wash your hands. A little bit more effort here goes a long way.

Don't pick your nose.

... Or put your fingers in your mouth, on your lips or in your eyes. Surface contact works like this: You touch something dirty — like an elevator button. Virus sticks to your hands. Then you rub your eye. Then you touch your sandwich and put the sandwich in your mouth. Now there is virus in your eyes and mouth. You may be thinking, but I don't pick my nose because I am an adult. An observational study found that people sitting at a desk working touched their eyes, nose or lips between three and 50 times an hour.

If you're healthy, you don't need a face mask.

There has been a suggestion that face masks actually promote surface contamination because you're always adjusting them — and touching your face. I don't know if that's true. But face masks should not be worn by the healthy public right now unless you are the person who is sick and you're on your way to or actually at the doctor's office.

The mask's function is to prevent spit from flying out of your mouth and landing on things when you cough or sneeze. It flies out of your mouth and is caught in the mask instead. If you are the person who is sick and not on the way to the doctor, go home. Let the people who really need them have the masks. Like doctors, nurses and people who are sick.

The world is running low on masks. If everyone wants a mask so they can feel OK about keeping their Daytona Beach spring Break plans and then hospitals in India can't buy them anymore, shame on us.

Coronavirus does not appear to be airborne in the sense that it doesn't remain floating around freely in the air for a long time, as with measles. You are probably not going to breathe it in, unless someone is coughing in front of you. And if someone is coughing in your face, feel free to tell them to go home and immediately move 6 feet away from them. (Yeah I know, if you have a toddler, this is hard advice to follow.)

Sanitize the objects you and lots of other people touch.

This is especially true of people outside your family. Think door handles, shared keyboards at schools, and salad bar tongs. Best guesses are that the virus can live on surfaces for two to 48 hours, maybe even longer, depending on the surface, temperature and humidity.

Many common household cleaning products will kill this virus. However, white vinegar solution does not. You can make your own inexpensive antimicrobial spray by mixing 1 part household bleach to 50 parts cold tap water. Spray this on surfaces and leave for 10-30 minutes. Note: This is bleach. It will ruin your sofa.

'Social distancing.' You're going to get so sick of this phrase.

This means keeping people apart from one another (preferably 6 feet apart and sanitizing shared objects). This public health strategy is our next line of defense, and its implementation is what will lead to flights and events being canceled, and schools and even borders closed.

For now, you could limit face-to-face meetings, especially large ones. Zoom is an excellent video conferencing option. If you spend time in shared spaces, see No. 1. Ask about the hygiene plan at your child's school. Keep your children home if they are sick. If you can telecommute, do that a little more. If you are someone's boss and employees could do their jobs remotely, encourage them to do so.

Avoid large gatherings of people if possible, especially if they are in an area with cases *or* places that lots of people travel to. If you attend group events and start to feel even a little bit sick within two to 14 days, you need to self-isolate immediately. Like for a tiny tickle in your throat.

All your travel plans are about to be disrupted.

If you are considering booking flights right now, get refundable tickets. Most trip insurance will not cover cancellations due to a pandemic. Look for "cancel for any reason" trip insurance.

Considerations for risks related to the trip you are planning: How bad would it be if you got stuck where you are going for three to six weeks? How bad would it be to be isolated at home for two to three weeks upon your return? Do you have direct contact with people who are over 70 and/or have lung conditions? Are there cases in your area that you might be carrying to new places and groups of people?

If you are sick, stay home.

For the love of all that is holy, stay at home. Your contributions to the world are really just not that important.

There is a good chance school will be canceled and nonessential movement limited.

If someone in your family gets sick, your family will almost certainly be isolated for two to three weeks (asked to stay at home). You could start stocking up with essentials for that scenario, but don't run out and buy a years' worth of toilet paper. Again, not the apocalypse. Two weeks' worth of essential items is enough. Refill any prescriptions, check your supply of coffee, kitty litter and jigsaw puzzles.

When public health works, the result is the least newsworthy thing ever: Nothing happens.

If this all fizzles out and you start feeling like "Wah, all that fuss for nothing?" send a thank you note to your local department of public health for a job well done. They are working very, very hard right now. Fingers crossed for that outcome.

There are some positives here.

All this handwashing could stop flu season in its tracks! We have an opportunity to reduce our global carbon footprint by telecommuting more, flying less and understanding where our stuff comes from.

We can use this outbreak to think about the problems with our health care system. We can use it to reflect on our positions of privilege and implicit biases. We can start greeting each other using jazz hands.

I'm genuinely excited about those opportunities.

There is a lot we don't yet know about this virus. It didn't even exist 90 days ago. So stay tuned; it is an evolving situation. The World Health Organization has a decent FAQ.

May the force be with you.

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