

# Coronavirus GUIDE

WHAT YOU  
NEED TO  
KNOW

In this section, you'll find information to help keep you knowledgeable about the disease and how best to protect yourself and those you care about. This resource will continue to run in our eEditions for as long as it's needed.

DAILY NEWS ON THE VIRUS WILL BE FOUND IN OUR NEWS SECTION, EXTRA EXTRA.



CRAIG MITCHELLDYER AP

**NEW IN THIS ISSUE:** Parents turn teachers amid virus ..... PAGE 25  
Clogged toilets a side effect of coronavirus cleanup ..... PAGE 3



CAROLYN COLE TNS

A postal worker delivers mail in Torrance, Calif., wearing a mask and gloves on March 14. Experts warn against thinking gloves and masks will keep you totally safe.

## FALSE SENSE OF SECURITY?

What you should know about wearing gloves and a mask if you can't work from home

BY NICOLE SANTA CRUZ  
*Los Angeles Times*

LOS ANGELES  
As state and local officials have issued strict stay-at-home mandates to curb the spread of COVID-19, there are many workers who don't have the luxury of staying home. There's the neighbor working at a grocery store with an elderly parent at home, or the gas station clerk keeping the pumps running. As the virus spreads and

“  
IF YOU'RE TOUCHING SURFACES, WHAT ELSE ARE YOU TOUCHING WITH THOSE GLOVES? ARE YOU TAKING SOMETHING FROM ONE PERSON AND GIVING IT TO ANOTHER PERSON?”

*David Bazzo, a clinical professor of family medicine at UC San Diego*

more people become infected, you may be wondering how to stay safe. Here's the best information we have from Southern California public health experts.

Above all, wash your hands. First, experts say, hand-washing is unbeatable. Hot or cold water. Use soap. Sing a song while you're doing it so you're washing for at least 20

seconds. Wash your hands before, during and after your shift and avoid touching your face. One expert suggested using a scented soap so you could use the scent as a re-

minder not to touch your face. Think about what your hands are coming into contact with. If you're touching door-knobs, rails or elevator buttons, wash your hands again. "There's nothing better than washing hands," said Steve Chen, associate dean for clinical studies at USC. What about gloves? Gloves can serve as a layer of protection but can still transmit the novel coronavirus, which causes COVID-19, said

SEE GLOVES, PAGE 2

## Beware the coronavirus scams: Colloidal silver, various herb remedies and fake test kits

BY ALEJANDRA REYES-VELARDE  
*Los Angeles Times*

LOS ANGELES  
In the midst of the coronavirus pandemic, public health officials have made it clear: There is no pill, vaccine or sup-

plement that can cure or prevent the virus. But that hasn't stopped scam artists from trying to take advantage of people's fears. In Peru, a curandero claiming to have "a pact with the devil" promised to treat coronavirus among other ailments. On

Craigslist, a now-removed post claimed: "I think I found how to prevent coronavirus ... from my grandmother's herbal remedy recipe card." And a televangelist recently promoted his "Silver Solution" on his show, suggesting the concoction would boost the immune system and

kill the virus within 12 hours. These are just a few examples of people who are trying to capitalize on the coronavirus panic, and there are countless others - from price gougers selling hand sanitizer for hundreds of dollars to fake at-home coronavirus test kits coming

from out of the country. Officials are aggressively pursuing scammers, threatening legal action if they continue. The FDA has issued warning letters to seven entities that it says have made false claims about coronavirus cures or treatments, including "The Jim Bakker Show," which is already facing legal action from federal and state agencies. Los Angeles City Attorney Mike Feuer and county District

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### WHAT'S INSIDE

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What is the coronavirus, what are its symptoms and how does it differ from other common illnesses? Pages 4-13



TNS

#### STAYING HEALTHY

From washing your hands, to social distancing, everything you need to know to flatten the curve. Pages 14-30



TNS

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Using exercise, online concerts, new recipes or bingeing television shows to make being stuck at home easier. Pages 33-45



# Coronavirus guide



FEDERICO RIOS NYT

A neighborhood during mandatory isolation in Bogota, Colombia, on March 21. Nature may help diminish the pandemic if aggressive measures to control the spread of infections continue, experts say. That doesn't mean the virus won't return.

BY KNVUL SHEIKH AND  
ERNESTO LONDOÑO

New York Times

Communities living in warmer places appear to have a comparative advantage to slow the transmission of coronavirus infections, according to an early analysis by scientists at the Massachusetts Institute of Technology.

The researchers found that most coronavirus transmissions had occurred in regions with low temperatures, between 37.4 and 62.6 degrees Fahrenheit (or 3 and 17 degrees Celsius).

While countries with equatorial climates and those in the Southern Hemisphere, currently in the middle of summer, have reported coronavirus cases, regions with average temperatures above 64.4 degrees Fahrenheit (or 18 degrees Celsius) account for fewer than 6% of global cases so far.

“Wherever the temperatures were colder, the number of the cases started increasing quickly,” said Qasim Bukhari, a computational scientist at MIT who is a co-author of the study. “You see this in Europe, even though the health care there is among the world’s best.”

The temperature dependency is also clear within the United States, Bukhari said. Southern states, like Arizona, Florida and Texas, have seen slower outbreak growth compared with states like Washington, New York

## WILL HIGHER TEMPERATURES HELP?

### Warmer weather may slow, but not halt coronavirus

and Colorado. Coronavirus cases in California have grown at a rate that falls somewhere in between.

The seasonal pattern is similar to what epidemiologists have observed with other viruses. Dr. Deborah Birx, the global AIDS coordinator in the United States and also a member of the Trump administration’s coronavirus task force, said during a recent briefing that the flu, in the Northern Hemisphere, generally follows a November to April trend.

The four types of coronavirus that cause the common cold every year also wane in warmer weather.

Birx also noted that the pattern was similar with the SARS epidemic in 2003. But she stressed that because the virus outbreaks in China and South Korea began later, it was difficult to determine whether the new coronavirus would take the

same course.

At least two other studies published on public repositories have drawn similar conclusions for the coronavirus. One analysis by researchers in Spain and Finland found that the virus seemed to have found a niche in dry conditions and temperatures between 28.3 degrees and 49 degrees Fahrenheit (or minus 2 and 10 degrees Celsius). Another group found that before the Chinese government started imposing aggressive containment measures, cities with higher temperatures and more humid environments reported a slower rate of infection transmission early in the outbreak.

But none of the studies have been peer-reviewed by other scientists, and Bukhari acknowledged that factors such as travel restrictions, social distancing measures, variations in the availability of tests and hospital burdens

might have affected the number of cases in different countries.

The possible correlation between coronaviruses cases and climate should not lead policymakers and the public to complacency.

“We still need to take strong precautions,” Bukhari said. “Warmer temperatures may make this virus less effective, but less effective transmission does not mean that there is no transmission.”

Warmer temperatures might make it harder for the coronavirus to survive in the air or on surfaces for long periods of time, but it could still be contagious for hours, if not days, Bukhari said.

Even seasonal viruses like influenza and the viruses that cause the common cold don’t completely disappear during summer. They are still present at low levels in many people’s bodies and in other parts of the world,

biding their time until conditions are suitable for infections to spread again.

Some viruses have the opposite pattern. Polio and tuberculosis, for example, tend to spread faster in warmer climates. And some viruses may have no seasonal variation at all.

It will take another 4 to 6 weeks before health officials will have a clearer picture of how weather patterns shape the trajectory of the coronavirus, said Jarbas Barbosa, assistant director at the Pan American Health Organization, the regional office of the World Health Organization that focuses on the Americas.

The fact that local transmission is happening across the global south signals that this virus may be more resilient to warmer temperatures than the flu and other respiratory viruses. That is why World Health Organization officials still urge countries to

act urgently and aggressively to try and contain the virus while case numbers are relatively low and close contacts can easily be traced and quarantined.

“One of the big perils in assuming that the virus is less dangerous in warmer temperatures, among particular ages or for any specific group is complacency,” said Julio Frenk, a physician who served as health minister in Mexico and is now president of the University of Miami. “If people fail to heed the warnings and recommendations of public health professionals, the results will be disastrous.”

But because high humidity and heat only align perfectly during mainly July and August in some parts of the Northern Hemisphere, Bukhari cautioned that the effects of warmer weather on reducing transmissions might only last for a brief period in some regions.

“This suggests that even if the spread of the coronavirus decreases at higher humidity, its effect would be limited for regions above 40 degrees North, which includes most of the Europe and North America,” he said.

And because so much is unknown, no one can predict whether the virus will return with such ferocity in the fall.

Manuela Andreoni contributed reporting.

## FROM PAGE 1 GLOVES

David Bazzo, a clinical professor of family medicine at UC San Diego. In short: The gloves may be protecting you but also transmitting the virus.

“If you’re touching surfaces, what else are you touching with those gloves?” Bazzo said. “Are you taking something from one person and giving it to another person?”

Before and after wear-

ing the gloves, experts say to wash your hands. Think about how often you’re changing those gloves, and make sure that the pair, or pairs, you’re cycling through fit snugly.

Remember, Bazzo said, that if you’re washing your hands and practicing social distancing (as much as you can), that’s probably as good as wearing gloves.

Experts also said to use the same precautions you would if you weren’t wearing gloves.

“Sometimes when peo-

ple wear protective equipment, it gives them a false sense of security, and we should protect against that as well,” Bazzo said.

Should you wear a mask?

Answers to this question are mixed. Masks are recommended for people who are sick to help keep them from spreading the virus, experts said.

If you’re wearing the CDC-recommended mask – the N95 respirator – it needs to fit right.

Experts said they’d seen widespread misuse of

masks: People will touch the mask, fidget with it, drop it, then put it back on. Sometimes they’re upside down or worn for too long, said Bernadette Boden-Albala, the dean of public health at UC Irvine.

The Centers for Disease Control and Prevention has not recommended that people wear masks for everyday activities, and with a shortage of supplies, experts urged caution. Ask yourself whom you might be taking it away from.

The evidence suggests there’s no benefit to wearing a mask if you’re not infected, USC’s Chen said..

U.S. health officials, however, have recommended that medical workers treating suspected coronavirus patients wear the N95 mask.

If an infected person uses “the mask diligently, it should reduce transmission,” Chen said. That means putting on the mask with your hands only after they’ve been washed.

Experts acknowledge that it’s tough to know how to keep yourself safe. And for the people who have an elderly parent at home or who must work in jobs that require interaction with others, there isn’t an easy answer.

“I can say here’s what we know,” Bazzo said. “Here are best practices, and please try to stick to those as best you can because that’s your best chance of preventing spread and trying to keep you and your family safe.”



# Coronavirus guide

## Americans coping with the coronavirus are clogging toilets

BY MICHAEL LEVENSON  
*New York Times*

Many Americans seem to be following the recommendations of public health officials to clean and sterilize countertops, doorknobs, faucets and other frequently touched surfaces in their homes.

The problem? Many are then tossing the disinfectant wipes, paper towels and other paper products they used into the toilet.

The result has been a coast-to-coast surge in backed-up sewer lines and overflowing toilets, according to plumbers and public officials, who have pleaded with Americans to spare the nation’s pipes from further strain.

Many say the woes besieging the nation’s infrastructure have been compounded by the lack of toilet paper on store shelves, which is leading some to use paper towels, napkins or baby wipes instead.

Across the country – in Charleston, South Carolina; northeastern Ohio; Lexington, Kentucky; Austin, Texas; and Spokane, Washington – wastewater treatment officials have beseeched residents not to flush wipes down the toilet using the hashtag #WipesClogPipes.

“Flushable wipes are not truly flushable,” said Jim Bunsey, chief operating officer of the Northeast Ohio Regional Sewer District. “They might go down the drain, but they



TAMIR KALIFA NYT

A teacher distributing meals to district students while their schools are closed for the coronavirus outbreak cleans her hands with a disinfecting wipe in Brenham, Texas, on March 17. Sewage systems and toilets are clogging as Americans clean their homes with disinfectant wipes and turn to paper towels, napkins and baby wipes to cope with the lack of toilet paper.

do not break up like regular toilet paper.”

The plumbing repair company Roto-Rooter

issued a similar plea to its customers, and said that substituting facial tissue for toilet paper was “an-

other bad idea,” unless it’s used in small amounts and flushed frequently.

The California State Water Resources Control Board warned this week that “even wipes labeled ‘flushable’ will clog pipes and interfere with sewage collection and treatment throughout the state.”

“Flushing wipes, paper towels and similar products down toilets will clog sewers and cause backups and overflows at wastewater treatment facilities, creating an additional public health risk in the midst of the coronavirus pandemic,” it said.

The agency said wastewater treatment plants across California were reporting problems.

It noted that most urban sewage systems depend on gravity and water flow to move toilet paper and waste, and were not designed to accommodate disinfectant wipes and paper towels, which do not break down as easily and clog the system.

The board noted that

clogged sewer lines are more than just a headache for residents cooped up in their homes during a pandemic. Spills flow into lakes, rivers and oceans, where they can harm public health and the environment, it said.

Plumbers said they were fielding an increase in calls from people working from home and self-quarantining.

“We have noticed an uptick in the amount of clogged main sewer lines and, when we dispatch our technicians, we are pulling baby wipes out of the line and we’re seeing paper towels and Lysol wipes,” Mark Russo, vice president of Russo Brothers & Co., a plumbing and heating service in East Hanover, New Jersey, said on Saturday.

“These items are things that should never be flushed down the toilet,” he said.

FROM PAGE 1

## SCAMS

Attorney Jackie Lacey have formed a coronavirus task force dedicated to scouring the internet and brick-and-mortar stores for fraudsters and price gougers.

Feuer’s office is already investigating two Los Angeles: CEN Group LLC., which on its website, SafeBabyHealthy-Child, promoted vitamin C as a coronavirus treatment, and the website MondernBeyond.com, which was selling face masks claiming to reduce the risk of getting the coronavirus by 95.99%.

So far, CEN Group LLC. has complied with requests to take down the false claims, Feuer said.

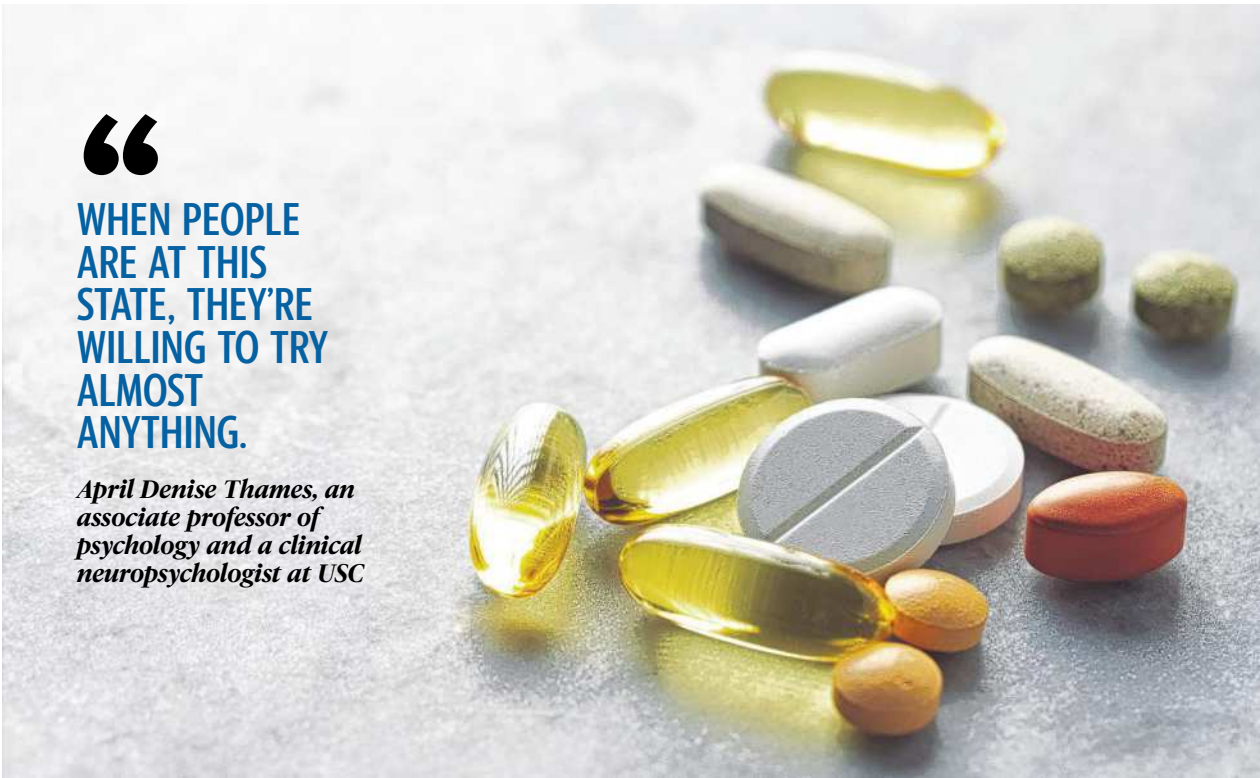
On March 12, U.S. Customs and Border Protection officials at Los Angeles International Airport seized six plastic bags containing fake coronavirus home testing kits that were shipped from the United Kingdom. Dozens of vials inside the plastic bags were labeled “Corona Virus 2019nconvd (COVID-19)” and “Virus1 Test Kit,” according to CBP.

Feuer said his coronavirus task force is on the lookout for other fake at-home test kits advertised online.

The city attorney wouldn’t talk about the details of each investigation, or how many cases his office was following, but he promised: “Scam artists who are targeting Angelenos are going to confront our office and we’re going to take them on.”

The crackdown comes as normal day-to-day activities are grinding to a halt across the country. In the Bay Area, seven counties are under a shelter-in-place order, and in Los Angeles County, bars and restaurants have closed or prohibited dining in. Nearly 900 people in California have tested positive for the virus and 17 have died so far. Experts say in the next year, up to 70% of the population will become infected.

Officials say that not only do the false claims for cures and tests fuel the national anxiety, they could prevent sick people from seeking the help they need, or discourage healthy people from



DREAMSTIME TN5

Officials are aggressively pursuing scammers, threatening legal action if they continue to prey on people’s coronavirus fears with fake pills, vaccines or supplements they claim can cure or prevent the virus.

adopting best practices such as social distancing and washing their hands.

Scam artists who emerge during a health crisis are nothing new. Any time a new panic arises, they seize the opportunity to prey upon a frightened population, as was the case with SARS in 2003 and the H1N1 virus in 2009, another outbreak during which we heard about colloidal silver. Some scammers touted it a cure-all, insisting that it could get rid of cancer, AIDS, tuberculosis, diabetes and numerous other diseases. Others pushed counterfeit Tamiflu pills as a cure.

“When people are at this state, they’re willing to try almost anything,” said April Denise Thames, an associate professor of psychology and a clinical neuropsychologist at USC.

On a recent show, Jim Bakker – a televangelist who spent almost five years in jail in the 1990s for defrauding followers into buying memberships and retreats that supported his extravagant lifestyle – said of his colloidal silver product: “We’ve tested, it works on just about everything.”

Holding the black “Silver Solution” bottle, he asked a guest: “This influenza that is now circulating the globe, you’re saying that silver solution would be effective?”

It hasn’t been tested on this strain of the virus, but “it’s been tested on other strains of the coronavirus

and has been able to eliminate it within 12 hours” the woman responded. “Totally eliminate it. Kills it. Deactivates it.”

Bakker is now facing a lawsuit in the state of Missouri, and New York officials have ordered him to stop promoting his colloidal silver products, which have since been removed from his website. Feuer has also taken aim at Bakker, saying his office is collaborating with federal and state officials that have already targeted the televangelist.

Representatives of “The Jim Bakker Show,” which airs in Los Angeles on satellite and cable TV, did not immediately respond to a request for comment.

In Boise, Idaho, a business called Herbal Amy, which was selling products developed by herbalist Stephen Buhner, received a warning letter from the FDA.

According to the letter, the Herbal Amy site claimed that Buhner “analyzed how coronaviruses infect tissues ... and herbs that are useful to interrupt that process” and that “Stephen Buhner has used this with other coronavirus infections, including SARS, it works well.”

By Tuesday, the website had taken down those statements and added a note warning that the products were made in a kitchen and were not FDA-approved. The website also noted that herbs high in demand, such as Chinese skullcap root,

were sold out.

“As people are concerned about their immune systems, these and many other immune herbs are being sold out across the nation,” the site read, before directing people looking for such products to google Stephen Buhner’s herbs.

In response, Buhner said though he’s not happy about Herbal Amy’s claims and that the company used his name without permission, he believes in the effectiveness of herbal medicines in some circumstances. He said he is not affiliated with Herbal Amy or any other company selling his herbs.

“Despite the existence of a few antiviral pharmaceuticals the only real treatments that Western medicine has developed for viral infections are vaccines,” Buhner said in the statement. “Unfortunately, vaccines for new organisms generally take a year or so to develop, hence my desire to create an herbal protocol that people could begin using to boost their immunity to, and disrupt the tissue infections of, this specific coronavirus strain.”

Facebook, Amazon and other major companies have banned and removed advertisements and posts about bogus cures. In addition, Amazon has blocked or removed millions of products suspected of making misleading claims about the coronavirus. Facebook has

done the same, and has instigated a new policy about certain medical supplies:

“We are temporarily banning advertisements and commerce listings that sell medical face masks,” a Facebook spokesperson said. “Our teams are monitoring the COVID-19 situation closely and will make necessary updates to our policies if we see people trying to exploit this public health emergency for their own benefit.”

When panic and fear are pervasive, people are more likely to fall victim to these types of claims, because their decision-making skills could be impaired by the heightened anxiety, Thames said.

“In times of uncertainty and distress, there’s a tendency for people to be reactive,” Thames said. “We’re all vulnerable to it.”

Officials say that seniors, whose decision-making skills may be diminished by age, are more frequently targeted by scammers looking to make money or steal people’s identities. The health risks and panic caused by the coronavirus makes them even more vulnerable to scammers claiming to have a quick fix for the virus.

On the other hand, younger adults and teenagers may be susceptible to scams because, Thames said, they will often think with emotions, “so if

something looks good or exciting, the thought often is, ‘Why not?’”

Others who have a distrust of the public health system or don’t have the means to obtain the care they need sometimes search for alternative forms of healing, putting them at risk as well.

“I’ve had several patients come to me and say, ‘I heard this works’ about some herb they heard about, and they would prefer to try that than any type of Westernized medicine,” Thames said. “It’s a complete scam, because it’s not backed by scientific evidence of any kind.”

The scams also show up via emails and robo calls.

One robo call claiming to be associated with the World Health Organization said: “The WHO is informing you that you applied for a coronavirus vaccine and today is the last day to address it. If you have any questions, press 9 for help.” The message is then repeated in Chinese.

Emails might disguise themselves as helpful resources from official sources, such as the WHO or the Centers for Disease Control and Prevention. When users click through, they are actually allowing access to personal data like passwords or credit card details or downloading malicious software, said Nikolas Behar, a cybersecurity expert.

Behar said these types of online scanners are always pervasive and looking for new targets. The coronavirus is simply “the flavor of the month.”

Officials and experts say protecting the public will be, to a great extent, a matter of how well health officials can disseminate educational information to those at risk.

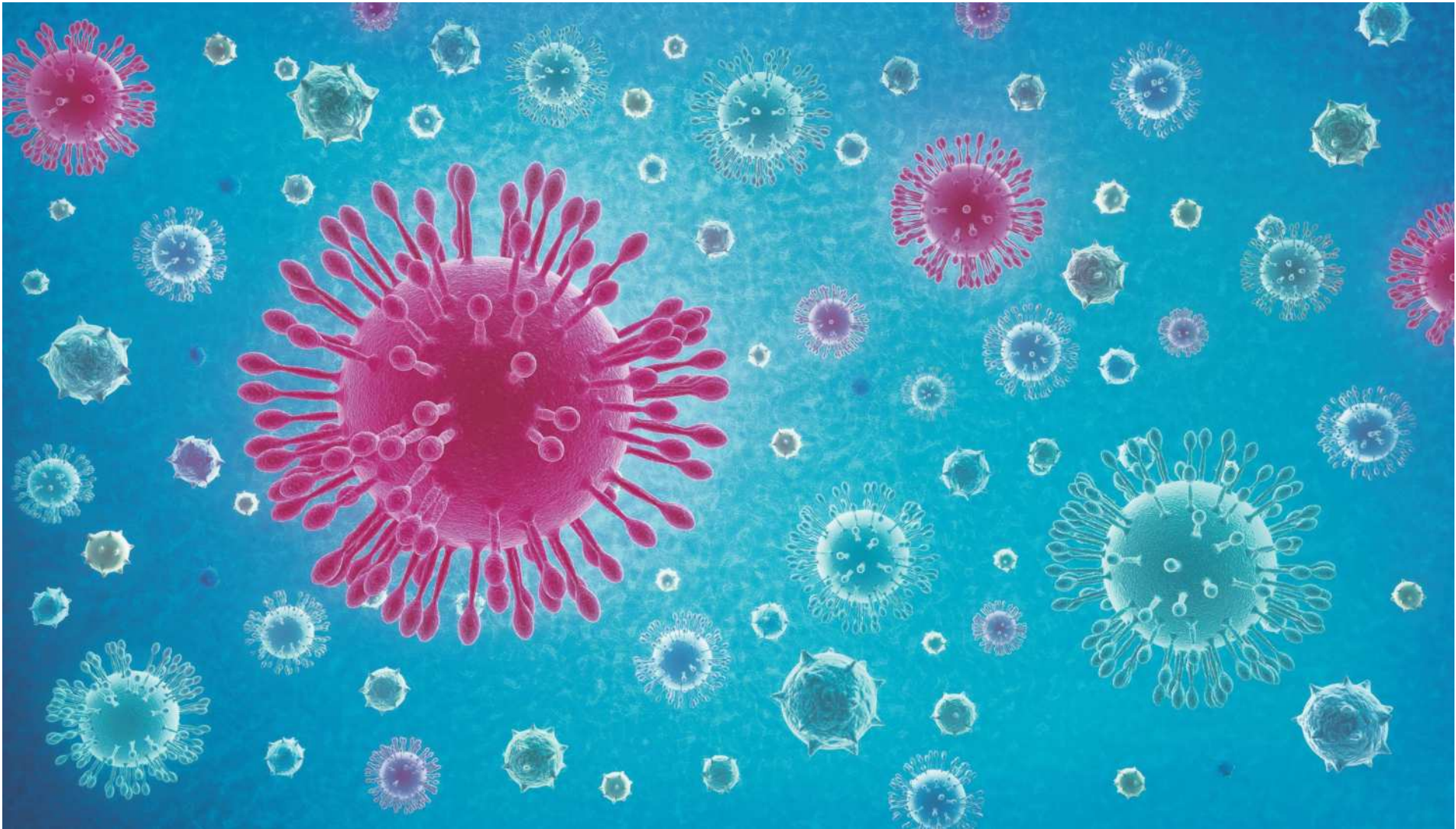
Thames said the public should be educated about the rigorous scientific process that cures and vaccinations need to go through before becoming available to the public.

“There needs to be a wide public information campaign by our national health experts about some basic issues ... where they make clear there’s no home testing, there are no cures for coronavirus, and there is no medication that one can take,” she said.

“The more pervasive the campaign would be, in many languages, the better.”



# Coronavirus guide



MARCOS SILVA Getty Images/iStockphoto

Conceptual illustration of the coronavirus as if it were observed from a microscope.

BY PAUL SISSON  
*The San Diego Union-Tribune*

With novel coronavirus in the news, there are many questions on many minds. This compilation of frequently asked questions attempts to provide some answers to the most common queries:

**Q: Why do they call it coronavirus?**

**A:** These viruses are spherical with a halo of protein spikes on their surface that are crown-like in appearance.

**Q: Should everyone be wearing masks?**

**A:** Definitely not. At least not in America, where the government has had time to identify and start monitoring everyone returning from China for symptoms of coronavirus. Those who are at risk of infection are told to stay

home until the possible incubation period of the virus passes, and those with the highest risk have been held in quarantine facilities on military bases until the quarantine period passes. This makes it very unlikely that anyone would encounter someone with coronavirus in public.

If everyone goes out and buys a mask or two or three it will put further strain on supplies needed by health care workers who really do need these resources to avoid getting sick doing their jobs. Also,

since coronavirus spreads inside large water droplets that land in your eyes, nose or mouth, or when one person touches another, wearing a mask alone wouldn't necessarily prevent you from becoming infected if someone who was sick coughed or sneezed on you. Masks are actually found to be most effective when worn by those who are sick, because they can catch those droplets and prevent them from moving through the air.

**Q: How does coronavirus kill?**

**A:** It's like any other respiratory virus such as influenza. Inhaled water droplets with virus particles inside get into the lungs, and your immune system immediately tries to get them out, either by flooding them with mucus that you can cough out or by causing inflammation of the tiny air sacs inside your lungs that are critical for moving oxygen from the air you breathe into your bloodstream. These immune system

reactions can be so forceful that they cause a patient to essentially suffocate. But, if you get to the hospital soon enough, there are many modern techniques to reduce inflammation and support your breathing until your immune system naturally fights off the infection.

**Q: Why is coronavirus so deadly?**

**A:** It's really not. The mortality rate for coronavirus currently stands at about 2 percent, though epidemiologists think that

rate will decrease further once they have time to account for all of the infected people who never sought medical care. This is not ebola, which has a mortality rate of around 90 percent.

**Q: Well, if it's not that deadly, then why have almost 13,000 people died from coronavirus infection?**

**A:** There are a lot of people in China. Wuhan City alone has a population of more than 11 million with an estimated 58 million living in Hubei province where the outbreak is fiercest. There is evidence that the Chinese government suppressed early reports of a novel virus starting to spread in the community, and, with no isolation and quarantine procedures being used in the early days, the

SEE VIRUS, PAGE 5



Getty Images/iStockphoto

BY STACEY BURLING  
*The Philadelphia Inquirer*

If you're worried that you might have the new coronavirus, think before you go rushing to an emergency department. If you really do have the new disease, called COVID-19, you don't want to expose fellow patients, who may already be weakened by heart and lung problems. Call the emergency department or your doctor, area health experts said, and ask for advice. Here are more answers to questions you may have:

**WHAT ARE THE SYMPTOMS OF THE NEW CORONAVIRUS?**

Unfortunately, there's a lot of overlap with the flu – it's still flu season, although cases are declining – colds, and other respiratory viruses. Key COVID-19 symptoms are fever, cough and shortness of breath. Some people have very mild symptoms or are not aware they're infected. COVID-19 symptoms may come on more slowly than those of flu, which tends to have sudden onset, said Martin Topiel, an infectious disease specialist

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# Coronavirus guide

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# VIRUS

virus got a foothold that it might not have otherwise. Severe respiratory illness sometimes requires intensive care level treatment to survive, but hospitals were quickly inundated, meaning some who died would have survived had there been a hospital bed available for them.

**Q: So people are surviving coronavirus? Why don't we ever hear about them?**

**A:** According to the latest report from the World Health Organization, the vast majority of people who have been infected have survived. By that organization's count, there have been nearly 300,000 confirmed cases so far with around 13,000 deaths, through March 22. Now it is the case that some of the people who are currently sick might

still die, but this ratio of deaths to confirmed cases has held for weeks, suggesting that most people who get infected survive.

**Q: Why bring quarantined evacuees to Marine Corps Air Base Miramar near San Diego?**

**A:** A CDC official said that military bases are ideal because they offer expansive properties separated from the general population that are already secured with men

and women carrying guns and trained to use them.

**Q: What can I do to avoid getting infected?**

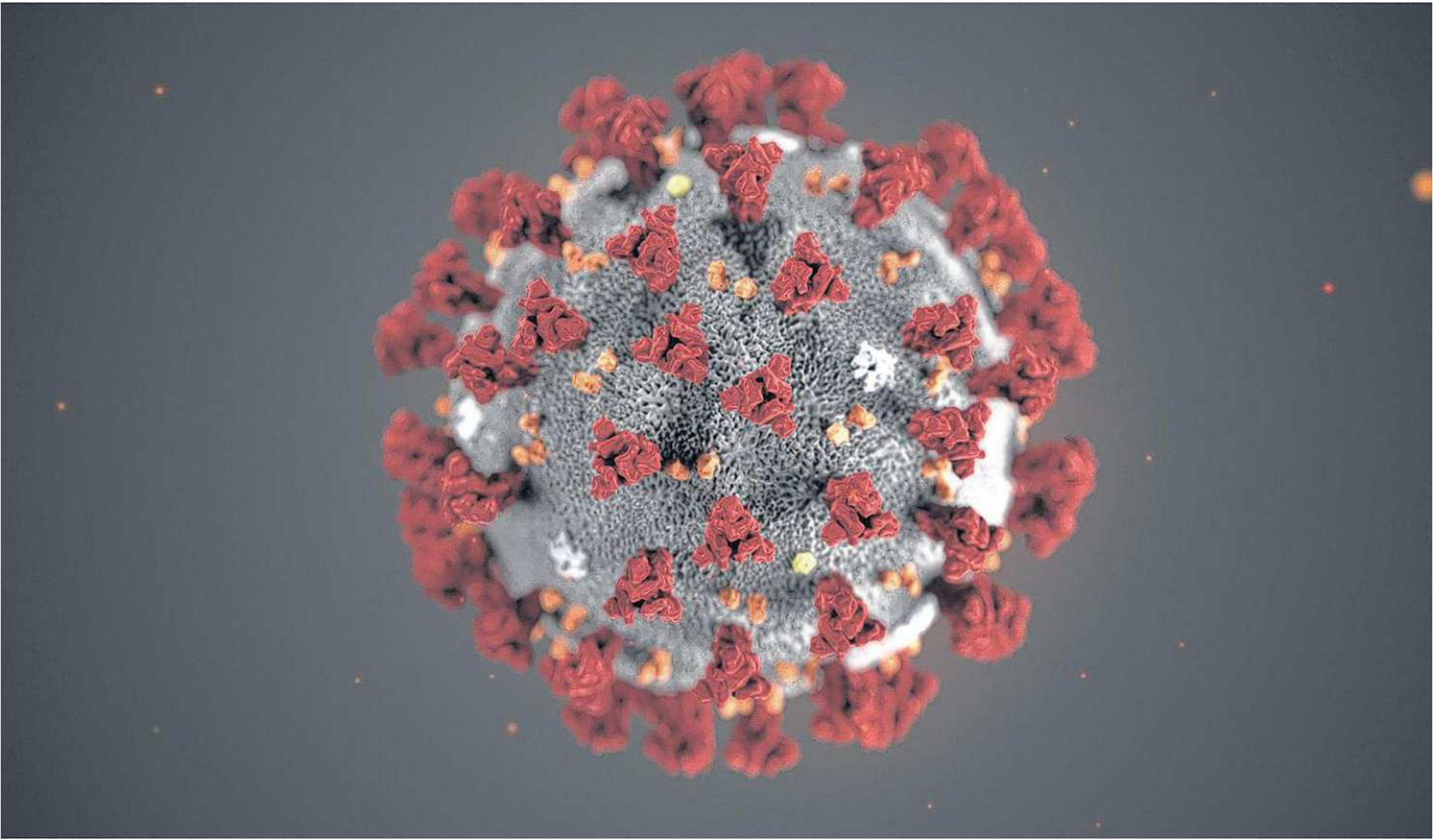
**A:** The main thing is to stay at least 6 feet away from anyone who has coughing or sneezing symptoms, though, if they do, they've probably got a common cold rather than novel coronavirus. Regular hand washing also helps a lot for preventing all types of respiratory infections.

**Q: Why are they calling coronavirus COVID-19? Why not name it after Wuhan in China where it started?**

**A:** It's sort of a medical acronym. CO stands for corona, VI for virus, D for disease and 19 for the year when the current outbreak started. The World Health Organization followed international naming protocols designed to avoid stigmatizing any certain place, people or animal. Remember

when "swine flu" in 2009 angered pig farmers who said their product was being unfairly cast in an unfavorable light?

*These answers were reviewed for accuracy by Dr. Mark Sawyer, an infectious disease specialist at Rady Children's Hospital in San Diego.*



CDC TNS

This illustration provided by the Centers for Disease Control and Prevention in January shows the 2019 Novel Coronavirus.

## What to do if you are sick

*Steps to help prevent the spread of COVID-19 if you are sick.*

• **Call ahead:** If you have a medical appointment, call the healthcare provider and tell them that you have or may have COVID-19.

• **If you are sick:** You should wear a facemask when you are around other people.

• **Stay home:** Isolate at home during their illness. You should restrict activities outside your home, except for getting medical care.

• **Stay away from others:** As much as possible, you should stay in a specific room and away from other people in your home. Also, you should use a separate bathroom, if available.

• **Cover:** Cover your mouth and nose with a tissue when you cough or sneeze.

• **Dispose:** Throw used tissues in a lined trash can.

• **Wash hands:** Immediately wash your hands with soap and water for at least 20 seconds. And clean your hands often.

• **Clean and disinfect:** Practice routine cleaning of high touch surfaces.

• **Stay at home until instructed to leave:** The decision to discontinue home isolation precautions should be made on a case-by-case basis, in consultation with healthcare providers and state and local health departments.

Source: CDC  
Graphic: Staff, TNS

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# SICK?

with Virtua Health.

**WHAT DO YOU DO IF YOU HAVE SYMPTOMS?**

Patients should call their primary care doctors first, said Debra Powell, chief of the infectious disease section at Reading Hospital. Medical offices will triage patients by asking about symptoms, travel history and other possible exposure to the virus. "If you have mild symptoms and are concerned, you probably should just stay home," she said. Those with more serious symptoms will likely be seen by the doctor. If patients need to go to an emergency department or ride in an ambulance, doctors should call ahead so emergency personnel know to wear protective gear.

Older adults and those with chronic ailments need to take this disease seriously, because they are at highest risk of death and health complications. "Older patients and individuals who have underlying medical conditions or are immunocompromised should contact their physician early in the course of even mild illness," the U.S. Centers for Disease Control and Prevention said Monday.

The decision to stay home is one person with mild symptoms and no known exposures will have to make in conjunction with their employers, Topiel said. "Just because someone has a cold doesn't mean they can't come to work," he said. That advice could change as the situation evolves.

James Garrow, a spokesman for the Philadelphia Department of Public Health, said Monday that most people in this area are unlikely to have been exposed to the virus at this time. "If you are otherwise healthy and your symptoms are mild, you do not need to seek health-care evaluation for coronavirus."

Providers such as Jefferson Health and CVS MinuteClinic are asking patients who think they may have COVID-19 to schedule a video visit online, through their websites or apps, before going to an emergency department or urgent care center.

Aditi Joshi, an emergency medicine specialist who is medical director of JeffConnect, said funneling patients to her program for screening would help emergency department staffs focus on people with more serious ailments.

Anyone in respiratory distress, whether from flu or coronavirus, would be sent to an emergency department while JeffConnect calls ahead.

**SHOULD YOU GET A CORONAVIRUS TEST?**

Powell said this is a changing situation as tests are only slowly becoming more available.

The CDC released new guidance Monday on who should be tested. You no longer have to have been traveling or exposed to someone who had visited a country with a lot of COVID-19. Physicians are urged to "use their judgment." Priority is going to symptomatic cases where getting a diagnosis would help keep the infection from spreading; patients

who are at higher risk for serious complications, including those 65 and older and those with diabetes, heart disease, chronic lung and kidney disease; people receiving medicine that depresses the immune system; and medical personnel who may have been exposed.

**HOW DO YOU TREAT CORONAVIRUS AT HOME?**

Pretty much like a cold, Powell said. Drink lots of fluids. You can take Tylenol or an NSAID such as ibuprofen for fever. There are no treatments specifically for COVID-19.

**WHEN SHOULD YOU WORRY THAT YOU REALLY NEED TO SEE A DOCTOR?**

Difficulty breathing, high fever and a deeper, productive cough can be signs of pneumonia. These need medical attention. Older people and those with underlying health problems should be especially vigilant.

**WHAT IF ONE PERSON IN THE FAMILY IS SICK AND EVERYBODY ELSE IS FINE?**

Powell thinks you should all stay home, but do your best to isolate the person with symptoms. A bedroom is a good option. Try to stay six feet away from the person with symptoms. Wipe down surfaces they touch frequently with disinfecting wipes. Encourage everyone to wash their hands frequently.

**IF YOU'RE SELF-QUARANTINED, CAN YOU RUN ERRANDS?**

No. Powell said that even if you're careful to

stay away from other people in, say, the grocery store, you might spread virus by contaminating surfaces.

**WHEN CAN YOU GO BACK TO WORK OR SCHOOL?**

People who've been sick should wait at least until they no longer have symptoms, said Steve Alles, director of the Philadelphia Department of Health's disease control division.

A report this week from German authorities found that sick people are most contagious in the early days of infection. Although they can test positive when their symptoms have gone, the study said most people who were mildly ill likely are not infectious after about 10 days from onset of symptoms.

For those who have been exposed but have no symptoms, the incubation period is up to 14 days.

**CAN MY PETS GET THIS?**

This virus is thought to have jumped from animals to humans, but there is no evidence that it is spreading among pets or from cats and dogs to their owners. Still, the CDC suggests letting family members without symptoms take on pet care and recommends that people with symptoms should avoid close contact such as "petting, snuggling, being kissed or licked, and sharing food." If you must care for your pets, wash your hands before and after.

"I would say, feed your dog, but keep him out of your face," Powell said.

## 5 steps to wash the right way

*By following some basic steps on the proper way to wash your hands, you can help reduce your risk and do your part to protect others, if your community is affected by the coronavirus.*

• **Wet your hands** with clean running water (warm or cold), turn off the tap, and apply soap.

• **Lather your hands** by rubbing them together with the soap. Lather the backs of your hands, between your fingers and under your nails.

• **Scrub your hands** for at least 20 seconds. Need a timer? Hum the "Happy Birthday" song from beginning to end twice.

• **Rinse your hands** well under clean running water.

• **Dry your hands** using a clean towel or air dry them.

## No sink? Use sanitizer

*Washing hands with soap and water is the best way to get rid of germs in most situations. If soap and water are not readily available, you can use an alcohol-based hand sanitizer that contains at least 60% alcohol.*

Source: CDC  
Graphic: Staff, TNS



# Coronavirus guide



ALEX WELSH NYT

A health worker puts on gloves during a demonstration of protective equipment training used for the Coronavirus, at a hospital in Northridge, Calif., March 3. When the head of the World Health Organization said this week that the new coronavirus's death rate was an estimated 3.4%, the figure seemed to shock both experts and President Donald Trump.

# HOW DEADLY IS CORONAVIRUS?

## WHAT WE KNOW AND WHAT WE DON'T

BY QUOCTRUNG BUI,  
MARGOT SANGER-KATZ  
AND SARAH KLIFF  
*New York Times*

When the head of the World Health Organization said this week that the new coronavirus' death rate was an estimated 3.4%, the figure seemed to shock both experts and President Donald Trump.

"I think the 3.4% number is really a false number," Trump said in a Fox News interview. "Now, this is just my hunch, but based on a lot of conversations," he added, "I'd say the number is way under 1%."

By definition, the case fatality rate is the number of deaths divided by the total number of confirmed cases, which appears to be what the WHO did to arrive at its rate.

Is 3.4% a misleading number? We spoke to a number of experts in epidemiology, and they all agreed that 1% was probably more realistic (the WHO has also said the number would probably fall). But they also said evidence about the spread and severity of the disease was still too new and spotty to know for sure.

The fatality rate is a key figure that public health officials use to respond to disease outbreaks. The more deadly a disease, the more aggressive they're willing to be in disrupting normal life. But current data allows scientists to measure only a crude statistic called the case fatality rate, which is based on reported cases of an illness.

"It's essential for understanding how big our response should be," said Marc Lipsitch, a professor

of epidemiology at Harvard. "All responses have costs. If we think the risk is higher, then we should be willing to tolerate bigger costs, more inconvenience and the mental health loss from social distancing."

There are several reasons we still don't know the right number. Insufficient testing, for example, may be making the fatality rate look larger than it actually is – but deaths where a coronavirus infection was never diagnosed could make it look smaller. These are the key biases that epidemiologists and public health officials think about when looking at the case fatality estimates so far, and how they might change in coming weeks and months.

- Not enough people have been tested

The fewer people you test for a disease, the fewer infections you are going to measure. In the United States, until last week, the only people being tested for the disease were those who had traveled to China or were known to have had contact with other ill people. Those strict standards were driven in part by a shortage of reliable tests. But we now know that there were many infected people in the country who weren't being counted.

Think about that problem on a much larger scale. If there were a magical way to test everyone in the world for the disease, we would know exactly how many people have the infection. Discovering every case would tend to drive down the fatality rate, since the number of deaths would be divided over a much

larger number of living infected people. There is increasing evidence that some people infected with coronavirus have few or no symptoms. Those people are the least likely to seek or receive tests.

- Limited testing in many countries means that the reported death rates probably skew high.

"Since most cases are mild, and testing has not been universal, almost by definition we are failing to detect and therefore count all of the cases," said Mark Lurie, an associate professor of epidemiology at Brown University.

Over the long term, epidemiologists often do a kind of blood testing of large numbers of people in a given community. By testing their immune systems, they can measure how many people have been exposed to a disease. That type of research is often the gold standard for getting a real infection rate and a better fatality rate, called the infection fatality rate. The infection fatality rate for the flu, for example, is about one tenth to two tenths of 1% – far lower than any of the estimates for the coronavirus. But that measurement technique is most useful after a disease has already spread widely, so it can't be easily used now.

- The number of deaths could be wrong

Compared with infections, deaths are relatively easy to count, especially now that we know that this disease exists and what its symptoms look like. But public health experts say we still may not have a complete count of all coronavirus deaths. In some countries, frail people have died of pneu-

monia and weren't tested, including an elderly Spanish patient who was tested for the coronavirus only after his death. If sick people are dying without going to a hospital, they could be missed.

But the biggest challenge for measuring deaths right now is that people can be infected with coronavirus for a long time before becoming sick enough to be at risk of death. Currently, we are counting everyone who tests positive for the virus as infected and alive. But, in the future, some of those people will die of COVID-19, the illness caused by the virus.

Justin Lessler, an epidemiologist at Johns Hopkins, was part of a team of scientists who studied a group of COVID-19 cases in Shenzhen, China. He found that most people who died had been sick for longer than 30 days. "Think of when all the cases outside of Hubei have occurred," he said of the province whose capital is Wuhan. "If it's 30 days or even two weeks, we're really at the tip of the iceberg."

Generally, epidemiologists like to measure the fatality rate for a disease over a set period. They look at everyone who gets sick and see how many are still alive over weeks, months or years, depending on the disease. So far, scientists have been unable to do those kinds of studies for the novel coronavirus.

- Conditions in countries vary

Right now, the global estimates are combining deaths and cases from countries around the world with very different populations and different

health systems. But experts say differences between populations in each country and in the nations' health systems may make death rates higher in some places than in others.

The risk factors for death or severe illness from coronavirus are still being studied, but there is strong evidence that older people are at a higher risk of dying. There are very few documented cases of children who have developed serious illness. A disproportionate number of deaths have been among patients older than 65. The share of people over 65 in China is 11%, and in Italy it's 23%.

In the United States, it's 16%. Countries like Italy, with more older people, may end up with a higher rate of death.

Smoking may also play a role, evidence suggests, and the smoking rates in different countries vary considerably. Smoking among men in China is common. In the United States, smoking rates are substantially lower. Other health problems, like diabetes, cardiovascular disease and lung ailments like asthma, may also predispose people to a greater chance of severe illness, though the effects are still being studied.

The sophistication and capacity of the health care system most likely matters a lot, too. Patients with severe COVID-19 often need complex care for pneumonia and respiratory failure, sometimes including mechanical ventilation. The quality of that care will probably depend on the availability of ventilators and trained staff to monitor them.

"When facilities got

overwhelmed, there were more deaths," said Dr. Thomas Frieden of the experience in China. Frieden, who was the director of the Centers for Disease Control and Prevention in the Obama administration, said that when he was in government, he worked to expand the country's strategic reserve of ventilator machines. Whether there will ultimately be enough hospital capacity for everyone with serious illness in the United States depends on how quickly and broadly the virus spreads.

Researchers are racing to develop treatments for the disease, as well as a vaccine. Once there are better ways to help people who are infected, the fatality rate may go down for everyone.

Eventually, scientists should be able to offer still more granular estimates of risk. This would allow people of different ages and health histories, in different countries, to estimate their risk of serious illness or death.

"When I looked at the 3.4% number and where they got it, I thought this is both wrong and irrelevant," said Dr. Ashish Jha, the director of the Harvard Global Health Institute. "It's not relevant to nearly any single person. This is a worldwide average."

As Jha noted, most people want to know their personal risk, not the risk for the average person worldwide. Developing estimates with that level of nuance will take even longer than building a more reliable infection fatality rate.



# Coronavirus guide



DAVID GOLDMAN AP file

A 73-year-old man places a cold compress on his forehead while battling the flu at a hospital in Georgia on Feb. 9, 2018. Doctors can test for the flu and get results within a day, but coronavirus testing as of March is still limited in the United States by availability.

# FLU AND CORONAVIRUS: SIMILAR SYMPTOMS, DIFFERENT FEARS

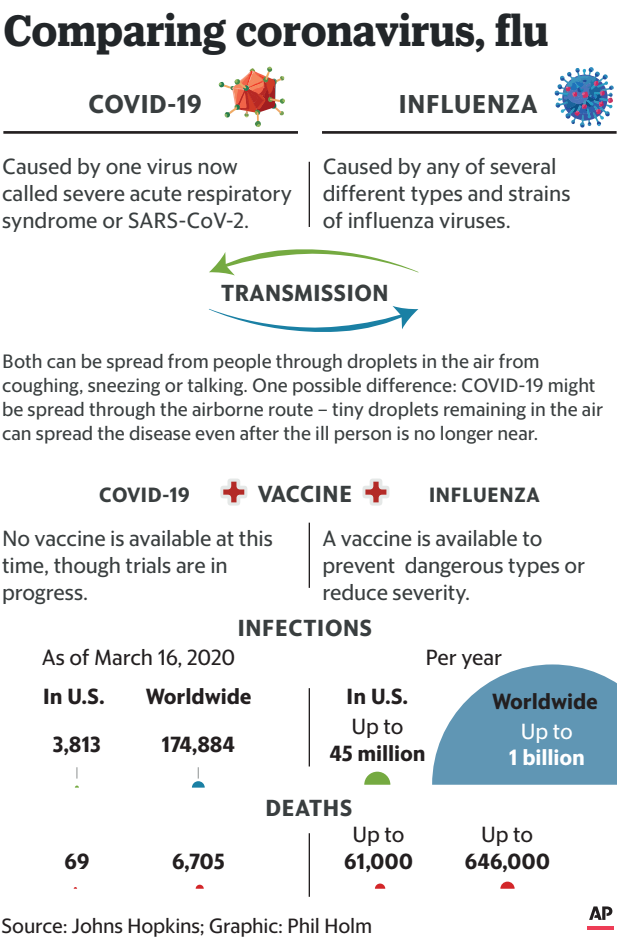
BY MARILYNN MARCHIONE  
Associated Press

Is it the flu, a cold or the new coronavirus? Patients and doctors alike are parsing signs of illness to figure out who needs what tests or care and how worried they should be. “You have three different major viruses floating around at the same time,” causing somewhat similar symptoms - but different levels of concern, said Dr. Gary LeRoy, president of the American Academy of Family Physicians. So what’s the biggest danger? And why are we responding to them so differently?

**FAMILIAR FOE** COVID-19, the disease caused by the new coronavirus, is a flu-like illness that has killed a small fraction of the number of people that the flu kills every year. Through the first four months of the outbreak, coronavirus has killed about 4,300 people. Flu kills 290,000 to 650,000 every year around the world, according to the World Health Organization. To some, that comparison seems comforting because flu is such a familiar foe. President Donald Trump regularly brings it up, noting in a tweet how many more Americans die from flu and adding, “Nothing is shut down,

life & the economy go on ... Think about that!” But to public health experts, the huge number of flu deaths is exactly why extraordinary steps should be taken to try to prevent the new coronavirus from spreading widely. The flu’s annual return can’t be stopped because it’s already so embedded in the population. There is still a chance COVID-19 cases can be limited or spread slowed while treatments are developed.

**HOW DEADLY ARE THE VIRUSES?** Flu kills about 0.1% of those it infects, but that’s still hundreds of thousands of people each year because it infects millions. Researchers are still trying to understand just how deadly the new coronavirus is. The mortality rate from infection with the virus isn’t known yet because the cases caught in an early part of an outbreak are often the most severe, people with mild or no symptoms aren’t being tested, and sometimes overwhelmed hospitals struggle to care for the sickest patients. Various reports have estimated the fatality rate from less than 1% to as high as 4% among cases diagnosed so far, depending on location. Most people infected by the new coronavirus develop mild or moderate





# Coronavirus guide

# How to tell the difference between coronavirus, seasonal allergies

BY KIERSTEN WILLIS  
*Atlanta Journal-Constitution*

ATLANTA  
The timing of the coronavirus pandemic has emerged as spring arrives and allergy season begins. As people make runs to the grocery store to prepare to hunker down at home, they may notice some around them sneezing. But should you be worried that a neighbor going “achoo” could be an indicator of COVID-19? Here’s the difference between allergy symptoms and those of the coronavirus.

**WHAT IS THE NEW CORONAVIRUS?**  
The Centers for Disease Control and Prevention stated coronaviruses are a large family of viruses. The novel coronavirus, which causes the disease COVID-19, is a new dis-

ease and is caused by a coronavirus that was not previously seen in humans. Defined as an infectious disease by the World Health Organization, it had been unknown before WHO said it originated as an “outbreak” that “began in Wuhan, China, in December 2019.”

**WHAT ARE SEASONAL ALLERGIES?**  
The National Institutes of Health noted seasonal allergies, or allergic rhinitis, is common and affects 8 percent of adults and children in the U.S. Also known as hay fever, allergies cause an immune response in the body to something that causes no problems for most people – pollen from plants.

**IF YOU HAVE CORONAVIRUS SYMPTOMS**  
WHO stated they are

typically mild and begin gradually. Common symptoms include: dry cough, tiredness, fever.  
Some people may have these symptoms: nasal congestion, runny nose, aches and pains, sore throat, nausea.  
According to WHO, some people become infected but don’t feel unwell or experience any symptoms. Around 80 percent of people recover from the disease without any special treatment needed. Still, about one in six people becomes seriously ill from COVID-19 and experiences breathing difficulties.  
Serious illnesses are more likely to occur in people who fall in the CDC’s higher-risk group: people who have serious chronic medical conditions, including lung disease, diabetes and heart disease and older adults. Should people experience

difficulty breathing, cough or a fever, and should get medical attention.  
**IF YOU HAVE ALLERGY SYMPTOMS**  
The NIH stated they may include the following: sneezing, itching in the eyes, mouth, nose and throat, coughing, runny or stuffy nose.  
The American College of Allergy, Asthma & Immunology stated that watery eyes can also be a symptom. The professional association also noted that allergies can be seasonal or occur year round.  
**HOW CAN YOU PREVENT OR TREAT THE CORONAVIRUS?**  
Currently, there is no vaccine in place to prevent COVID-19, according to the CDC. Instead, the agency stated the best way to prevent illness is to avoid exposure by practicing social distancing and

washing your hands frequently with soap and water for at least 20 seconds.  
Additionally, people should avoid touching their face and if they don’t have soap and water readily available, they should use hand sanitizer that contains at least 60 percent alcohol.  
WHO stated there is no evidence that home remedies, traditional or Western medicine can prevent or cure the disease, but they may be able to provide comfort and alleviate symptoms. The organization doesn’t recommend self-medication as a means of treatment or providing a cure for COVID-19.  
**HOW CAN YOU PREVENT OR TREAT SEASONAL ALLERGIES?**  
The best way to control seasonal allergy symptoms is to avoid triggers,

according to the NIH. It’s recommended to wash clothing, hair and bedding – the latter in hot water. Also bathe your pets since they can bring pollen indoors. Upholstered furniture and carpets should be avoided, according to the NIH, because they can harbor allergens. Keep humidity levels low for indoor allergens and vacuum floors once weekly.  
Mild symptoms can be alleviated with over-the-counter antihistamines, nasal sprays and decongestants, but severe symptoms may sometimes require prescription medications and allergy shots.  
If anyone has the previously outlined symptoms and are in doubt, they should check with their physician.

Kiersten Willis:  
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BY CHRISTEN A. JOHNSON  
*Chicago Tribune*

CHICAGO  
Rachael Stewart is planning to meet her second child, a baby boy, in about four weeks. A name is chosen, a doula is selected and flights are booked for her out-of-state mother to be in attendance for the birth.  
But now, Stewart, who lives in Chicago, is coming to terms with the fact that many of these “wish list items” have to be rearranged, or canceled, due to the effects of the coronavirus on hospitals.  
Her doula will now chime in via video, and her mother, who was flying in from Georgia and hadn’t been there the first time Stewart gave birth, will likely be conferenced in as well since the University of Chicago Medicine Family Birth Center now only allows one visitor in the delivery room.  
“A lot of what I was hoping for looks like it might not happen,” said Stewart, whose husband will be with her in the delivery room.  
Riverside, Ill., resident Sarah Magnier is 30 weeks pregnant, and said she is keeping her fingers crossed that some things will change by her May 22 due date, like Elmhurst Hospital’s new labor and delivery policy that went into effect this week, she said.  
“The hospital announced there’s no visitors and only one partner in labor and delivery currently,” said Magnier. “We intended to have a doula in this delivery, so that would exclude having that resource for us and would certainly limit having to see other family or our 2-year-old son while we’re in the hospital after birth.”  
Both Stewart and Magnier are healthy and have had low-risk pregnancies, but like most places, local hospitals are taking all necessary precautions to limit the spread of COVID-19, especially for the most vulnerable.  
A newborn in London was diagnosed with the



ERIN HOOLEY TNS

Rachael Stewart, who is pregnant and due April 10 stands outside her Chicago home with her daughter, Mya Moore, 8, and her husband, Clif Stewart, on March 16. Dr. Melissa Simon, an OB-GYN at Northwestern Medicine, says even though very little is known about what happens during pregnancy amid coronavirus, the real issue is about contact.

## Pregnant women share concerns about coronavirus

illness shortly after being born, The Guardian reported. The child’s mother was also diagnosed with the virus; she was hospitalized before giving birth from what doctors deemed pneumonia, the news site said. Based on reports, officials don’t know if the baby got the virus in the womb or during birth. The report did not cite whether the mother delivered by cesarean section.  
A February Lancet study suggested that vertical transmission of COVID-19 from a mother to a baby in the womb is unlikely. The study followed nine pregnant women in Wuhan, China, during their third trimester. Each woman gave birth via cesarean section. Some of the women showed symptoms of COVID-19, such as fevers and coughs. All the babies in the study were born alive, and test-

ed negative for the virus.  
The study notes that: “Findings from this small group of cases suggest that there is currently no evidence for intrauterine infection caused by vertical transmission in women who develop COVID-19 pneumonia in late pregnancy.”  
Dr. Melissa Simon, an OB-GYN at Northwestern Medicine, says even though very little is known about what happens during pregnancy amid coronavirus, the real issue is about contact.  
“After you give birth, the baby usually gets put on the mom’s chest and near the mom’s face and that’s really where the transmission would happen,” said Simon. “So right now, it’s the contact that we need to take precaution with after birth, or during breast feeding as well.”  
Simon acknowledges

that limited contact can take a toll on bonding, but she says new moms can still interact with the infant so long as they take the proper precautions.  
“We know this could impact relationships and bonding, but as long as you’re practicing good hygiene, you’ll reduce any chance of transmission,” said Simon, who encouraged women to have this conversation with their health care provider.  
If you’re breastfeeding an infant and you have the coronavirus, or you’re suspected to have the virus, Simon suggests to wear a mask, wash your hands, and limit direct respiratory drops to the baby. If you’re pumping, make sure all your equipment is clean.  
“We don’t know how long the coronavirus can last on a surface, especially a surface such as a bottle or any pumping

device,” said Simon. The coronavirus can live on surfaces for hours to days, according to the Centers for Disease Control and Prevention.  
Pregnant people should only be tested for COVID-19 if they are showing symptoms for the virus, said Simon. She recommends being triaged at home for the symptoms first, then coming into the hospital if necessary. No matter where a woman is in her term, she said, they’re telling all pregnant women the same information.  
“I want to make sure the people coming into the hospital are really the ones who need to be evaluated,” Simon said.  
If a pregnant woman is showing symptoms of COVID-19, and she has a pre-existing chronic condition – such as diabetes, asthma or high blood pressure – those women become priority, no matter how far along they are in their pregnancy.  
“Pregnant women tend to have a decreased immune response,” said Simon,”but if they have

(other conditions) that would make their immune system more susceptible to not being able to fight, that can make them even more susceptible to having bad complications from coronavirus.”  
She believes practicing social isolation and distancing is even more imperative for pregnant women, but knows it can be hard during a big transition.  
“In pregnancy you have a higher chance of feeling anxious or depressed,” said Simon. “Even for women who’ve just given birth in the last few weeks, it’s a time with high anxiety, baby blues and depression, and all of those feelings are very valid. It’s really important to seek help if you’re feeling that way and you’re practicing this social distancing, especially in this time of need.”  
Magnier said she’s more concerned about mental health than her physical health during this time.  
“Isolation when you’re going through major life changes makes it much harder,” she said. “When you’ve got a newborn, you’re not leaving the house much anyway so it extends the likelihood we’ll be spending an awful lot of time inside our four walls over the next few months.”  
She has plans in place to help with potential loneliness and isolation, like continuing to teach her prenatal fitness class twice a week – but online.  
“I’m excited to be able to connect with other moms who are going through the same things as I am,” said Magnier. “It’s nice to have that village even if it is virtual versus in person.”  
Simon urges pregnant women to ask for help if they are having trouble coping with the isolation.  
“Please reach out to your health care provider if you need help and need to get connected to a hotline or case worker or somebody to talk to,” Simon said. “We can do that for you.”



# Coronavirus guide



DREAMSTIME TNS

The over-the-counter pain reliever ibuprofen has not been linked to complications in those infected with the novel coronavirus, experts say.

# There’s no good reason to avoid ibuprofen if you’re infected with the coronavirus

BY MELISSA HEALY  
*Los Angeles Times*

First, some facts: The over-the-counter pain reliever ibuprofen is not linked to a higher risk of COVID-19 infection. Nor has it been linked to complications in those infected with the novel coronavirus that has now reached 164 countries. When treating pain or a fever, you may choose ibuprofen (such as Advil or Motrin) or acetaminophen (Tylenol) without needing to worry that your decision has any bearing on the disease at the center of the pandemic.

And now, the reason for using this space to dispense those bland morsels of coronavirus non-news: A message tweeted Saturday by France’s minister of Solidarity and Health warning that ibuprofen, an anti-inflammatory drug, “could be an aggravating factor” in COVID-19 infection. (So could the steroid medication cortisone, the tweet said.)

In cases of fever, the health minister added, “take paracetamol” — the generic name used in Europe for acetaminophen. And if you are already taking anti-inflammatory medication or have medical concerns, consult your doctor, he advised.

With a novel coronavirus

sweeping across the world, consumers are hungry for tips on how to protect themselves and their loved ones from infection. They are keenly attuned to public health advice, whether it is solidly based on evidence, altogether fabricated, or

**MORE RESEARCH IS NEEDED TO EVALUATE REPORTS THAT IBUPROFEN MAY AFFECT THE COURSE OF COVID-19. CURRENTLY, THERE IS NO EVIDENCE THAT IBUPROFEN INCREASES THE RISK OF SERIOUS COMPLICATIONS OR OF ACQUIRING THE VIRUS THAT CAUSES COVID-19.**

*National Institute for Allergy and Infectious Diseases*

somewhere in between. French Health Minister Olivier Veran’s weekend tweet appears to fall in that middle region. As it began circulating widely outside of France this week, it left U.S. doctors, public health officials and communications experts shaking their heads in dismay.

“More research is needed to evaluate reports that ibuprofen may affect the course of COVID-19,” the National Institute for Allergy and Infectious Diseases said in an emailed response. “Currently, there is no evidence that ibuprofen increases the risk of serious complications or of acquiring the virus that causes COVID-19.”

Driving home the point,

the U.S. institute’s statement noted: “There is also no conclusive evidence that taking ibuprofen is harmful for other respiratory infections” either.

University of Nebraska infectious disease specialist Dr. Andre Kalil called it “crazy” to toss unsupport-

With diseases involving two other novel coronaviruses — severe acute respiratory syndrome (SARS) and Middle East respiratory syndrome (MERS) — studies found that very ill patients who got corticosteroids were no more likely to die than

ported that they administered corticosteroids to just under half of the extremely ill patients they were seeing. Those patients were experiencing potentially life-threatening immune reactions to their infections, and the doctors judged that corti-

sone treatment would reduce the resulting inflammation in their lungs and elsewhere. Their numbers, however, were too small to warrant any conclusions about the effects of such treatment.

Kalil said the jury remains very much out on the use of corticosteroids. He doubted that its much weaker cousin, ibuprofen, would have any effect. But he insisted there is “no scientific data in humans in favor or against ibuprofen or paracetamol.”

Medical professionals and public health authorities need to “focus on what we need to do,” he said: Find out what works and what does not in the treatment and prevention of COVID-19.

As a result, the World Health Organization has recommended against the routine use of corticosteroids (those that work throughout the body) in the treatment of SARS (which no longer circulates) and MERS (which still does).

It made no such pronouncements about ibuprofen. On the other hand, for very sick patients, tamping down inflammation may be lifesaving. Chinese physicians scrambling to help a first wave of patients infected with the new coronavirus re-

That’s a task that Kalil is on. He is principal investigator of a federally funded clinical trial that last week enrolled its first of a planned 400 subjects to test whether existing medicines can treat COVID-19. The trial, to be conducted at as many as 45 sites in the United States and 20 sites in other countries, will look at whether the antiviral medication remdesivir, as well as similar medications, can shorten or reduce the severity of illness in patients with pneumonia induced by the coronavirus.

It wasn’t just doctors who took Veran to task for his shaky advice. Dartmouth political scientist Brendan Nyhan, who studies the power that misinformation and conspiracy theories have over patients, citizens and consumers, said the French minister’s comments appeared to be at best premature. At worst, they were counterproductive, he said.

“Public health officials need to avoid making statements that don’t reflect evidence we have,” Nyhan said. Sometimes, officials do need to rely on educated guesses in a crisis, “but this doesn’t seem to be a decision that had to be made today. The crisis is confusing enough without public health authorities making it worse.”



# Coronavirus guide

BY PAM BELLUCK  
*New York Times*

As cases of coronavirus infection proliferate around the world and governments take extraordinary measures to limit the spread, there is still a lot of confusion about what exactly the virus does to people's bodies.

The symptoms – fever, cough, shortness of breath – can signal any number of illnesses, from flu to strep to the common cold. Here is what medical experts and researchers have learned so far about the progression of the infection caused by this new coronavirus – and what they still don't know.

## How does this coronavirus cause infection?

The virus is spread through droplets transmitted into the air from coughing or sneezing, which people nearby can take in through their nose, mouth or eyes. The viral particles in these droplets travel quickly to the back of your nasal passages and to the mucous membranes in the back of your throat, attaching to a particular receptor in cells, beginning there.

Coronavirus particles have spiked proteins sticking out from their surfaces, and these spikes hook onto cell membranes, allowing the virus's genetic material to enter the human cell.

That genetic material proceeds to “hijack the metabolism of the cell and say, in effect, ‘Don't do your usual job. Your job now is to help me multiply and make the virus,’” said Dr. William Schaffner, an infectious disease specialist at Vanderbilt University Medical Center in Nashville, Tennessee.

## How does that process cause respiratory problems?

As copies of the virus multiply, they burst out and infect neighboring cells. The symptoms often start in the back of the throat with a sore throat and a dry cough.

The virus then “crawls progressively down the bronchial tubes,” Schaffner said. When the virus reaches the lungs, their mucous membranes become inflamed. That can damage the alveoli or lung sacs, and they have to work harder to carry out their function of supplying oxygen to the blood that circulates throughout our body and removing carbon dioxide from the blood so that it can be exhaled.

“If you get swelling there, it makes it that much more difficult for oxygen to swim across the mucous membrane,” said Dr. Amy Compton-Phillips, the chief clinical officer for the Providence Health System, which included the hospital in Everett, Washington, that had the first reported case of the coronavirus in the United States, in January.

The swelling and the impaired flow of oxygen can cause those areas in the lungs to fill with fluid, pus and dead cells. Pneumonia, an infection in the lung, can occur. Some people have so much trouble breathing, they need to be put on a ventilator. In the worst cases, known as Acute Respiratory Distress Syndrome, the lungs fill with so much fluid that no amount of breathing support can help, and the patient dies.

## What trajectory does the virus take in the lungs?

Dr. Shu-Yuan Xiao, a



Getty Images/Stockphoto

# What does the coronavirus do to the body?

professor of pathology at the University of Chicago School of Medicine, has examined pathology reports on coronavirus patients in China. He said the virus appears to start in peripheral areas on both sides of the lung and can take a while to reach the upper respiratory tract, the trachea and other central airways.

Xiao, who also serves as the director of the Center For Pathology and Molecular Diagnostics at Wuhan University, said that pattern helps explain why in Wuhan, where the outbreak began, many of the earliest cases were not identified immediately.

The initial testing regimen in many Chinese hospitals did not always detect infection in the peripheral lungs, so some people with symptoms were sent home without treatment.

“They'd either go to other hospitals to seek treatment or stay home and infect their family,” he said. “That's one of the reasons there was such a wide spread.”

A recent study from a team led by researchers at the Icahn School of Med-

icine at Mount Sinai in New York found that more than half of 121 patients in China had normal CT scans early in their disease. That study and work by Xiao show that as the disease progresses, CT scans show “ground glass opacities,” a kind of hazy veil in parts of the lung that are evident in many types of viral respiratory infections. Those opaque areas can scatter and thicken in places as the illness worsens, creating what radiologists call a “crazy paving” pattern on the scan.

## Are the lungs the only part of the body affected?

Not necessarily. Compton-Phillips said the infection can spread through the mucous membranes, from the nose down to the rectum.

So while the virus appears to zero in on the lungs, it may also be able to infect cells in the gastrointestinal system, experts say. This may be why some patients have symptoms like diarrhea or indigestion. The virus can also get into the bloodstream, Schaffner said.

The Centers for Disease Control and Prevention says that RNA from the new coronavirus has been detected in blood and stool specimens, but that it's unclear whether infectious virus can persist in blood or stool.

Bone marrow and organs like the liver can become inflamed too, said Dr. George Diaz, section leader for infectious diseases at Providence Regional Medical Center in Everett, Washington, whose team treated the first U.S. coronavirus patient. There may also be some inflammation in small blood vessels, as happened with SARS, the viral outbreak in 2002 and 2003.

“The virus will actually land on organs like the heart, the kidney, the liver, and may cause some direct damage to those organs,” Schaffner said. As the body's immune system shifts into high gear to battle the infection, the resulting inflammation may cause those organs to malfunction, he said.

As a result, some patients may endure damage that is inflicted not just by

the virus but by their own immune system as it rages to combat the infection.

Experts have not yet documented whether the virus can affect the brain. But scientists who studied SARS have reported some evidence that the SARS virus could infiltrate the brain in some patients. Given the similarity between SARS and COVID-19, the infection caused by the new coronavirus, a paper published last month in the Journal of Medical Virology argued that the possibility that the new coronavirus might be able to infect some nerve cells should not be ruled out.

## Why do some people get very ill but most don't?

About 80% of people infected with the new coronavirus have relatively mild symptoms. But about 20% of people become more seriously ill; and in about 2% of patients in China, which has had the most cases, the disease has been fatal.

Experts say the effects appear to depend on how robust or weakened a person's immune system is. Older people or those

with underlying health issues, like diabetes or another chronic illness, are more likely to develop severe symptoms.

Xiao conducted pathological examinations of two people in China who went into a hospital in Wuhan in January for a different reason – they needed surgery for early-stage lung cancer – but whose records later showed that they had also had coronavirus infection, which the hospital did not recognize at the time. Neither patient's lung cancer was advanced enough to kill them, he said.

One of those patients, an 84-year-old woman with diabetes, died from pneumonia caused by coronavirus, Xiao said the records showed.

The other patient, a 73-year-old man, was somewhat healthier, with a history of hypertension that he had managed well for 20 years. Xiao said the man had successful surgery to remove a lung tumor, was discharged, and nine days later returned to the hospital because he had a fever and cough that was determined to be the coronavirus.

Xiao said that the man had almost certainly been infected during his first stay in the hospital, since other patients in his post-surgical recovery room were later found to have the coronavirus. Like many other cases, it took the man days to show respiratory symptoms.

The man recovered after 20 days in the hospital's infectious disease unit. Experts say that when patients like that recover, it is often because the supportive care – fluids, breathing support and other treatment – allows them to outlast the worst effects of the inflammation caused by the virus.

## What do scientists still not know about coronavirus patients?

A lot. Although the illness resembles SARS in many respects and has elements in common with influenza and pneumonia, the course a patient's coronavirus will take is not yet fully understood.

Some patients can remain stable for over a week and then suddenly develop pneumonia, Diaz said. Some patients seem to recover but then develop symptoms again.

Xiao said that some patients in China recovered but got sick again, apparently because they had damaged and vulnerable lung tissue that was subsequently attacked by bacteria in their body. Some of those patients ended up dying from a bacterial infection, not the virus. But that didn't appear to cause the majority of deaths, he said.

Other cases have been tragic mysteries. Xiao said he personally knew a man and woman who got infected but seemed to be improving. Then the man deteriorated and was hospitalized.

“He was in ICU, getting oxygen, and he texted his wife that he was getting better, he had good appetite and so on,” Xiao said. “But then in the late afternoon, she stopped receiving texts from him. She didn't know what was going on. And by 10 p.m., she got a notice from the hospital that he had passed.”



# Coronavirus guide



THEODORE PARISIENNE TNS

Scores of school buses sit in a parking lot March 16 in Queens, New York, as millions of schoolchildren stay home during the coronavirus pandemic.

# A CORONAVIRUS GLOSSARY

## DEFINING TERMS TO HELP YOU MAKE SENSE OF THE PANDEMIC

BY RONG-GONG LIN II  
*Los Angeles Times*

The new coronavirus has thrust a host of unfamiliar terms into our everyday discourse. Some are brand new; others aren’t but are being used in unexpected ways.

Here are some definitions to help you keep up with the latest on the global pandemic.

### SARS-COV-2

The official scientific name of the coronavirus causing the pandemic. It stands for severe acute respiratory syndrome coronavirus 2. It was previously known as 2019-nCoV.

This isn’t the only coronavirus in circulation – four other strains are responsible for 20% to 30% of the common colds we’ve been getting for decades. Two other coronaviruses were responsible for severe acute respiratory syndrome (SARS) and Middle East respiratory syndrome (MERS). The virus that caused SARS was named SARS-CoV, which stands for SARS-associated coronavirus; the virus that caused MERS was named MERS-CoV.

### COVID-19

Short for Coronavirus Disease 2019. It’s the official name of the disease caused by SARS-CoV-2.

**Incubation period:** The time between when someone is infected with a pathogen, such as a virus, and when the first symptoms of illness appear.

### QUARANTINE

When someone who has been exposed to a disease but is not visibly sick stays away from others for a period of time in case they are infected. By keeping their distance, they can avoid spreading the disease to others. A quarantine usually lasts a little longer than the incubation period for a disease, just to be safe.

A quarantine can be ordered by the U.S. Centers for Disease Control and Prevention, or by state and local governments.

### ISOLATION

When someone who is definitely sick stays away from others so that they don’t infect anyone else. In the case of this coronavirus, isolation should continue until the risk of infecting someone else is thought to be low. The decision to end isolation should be made on a case-by-case basis, in consultation with health care providers and the local health department, according to the CDC.

Isolation can be ordered by the CDC or by state and local governments.

**Public health orders:** These are legally enforceable directives that may

place restrictions on the activities of individuals or groups in the name of protecting the public’s health. Federal, state or local agencies may issue public health orders, such as restricting people’s movements or requiring that their movements be monitored by health authorities.

### CONTAINMENT

A public health strategy in which officials aim to prevent the spread of an infectious disease beyond a small group of people to the broader community.

Containment actions include restricting travel from affected regions, identifying infected people and tracking down everyone they live with or have spent time with (contact tracing), and asking those who have been exposed to the virus to stay at home for a period of time. Although it did not work for COVID-19, containment has been used to keep a measles outbreak from spreading out of control within communities with low immunization, for instance.

### MITIGATION

The public health goal once a virus has spread so widely that it’s impossible to keep it away. Instead of mainly relying on public health authorities to do things like locate sick people and identify their contacts, health officials ask the public to help slow

the spread of the virus. Useful actions can include reminding people to stay home when they’re sick and disinfecting commonly touched surfaces in buildings daily.

One of the main strategies is to practice “social distancing.”

### SOCIAL DISTANCING

Measures designed to keep people away from crowded places where a virus could more easily spread. In the case of COVID-19, health officials are encouraging members of the public to work from home, cancel mass events and maintain about six feet of space between themselves and others. A radical measure is to close most businesses and order the public to shelter at home except for essential activities, such as purchasing food and caring for relatives, while allowing people to go outside for a walk.

If successful, social distancing measures will help slow the pace of new infections and “flatten the curve.”

### FLATTENING THE CURVE

This phrase describes the goal of spreading out infections in a population to minimize the number of people who are sick at any given time.

Picture a hump-shaped graph that shows the number of new infections over time. If a disease is

spreading quickly, the number of new daily cases of infection will be very high, and the hump will rise steeply. But if the disease spreads slowly, the number of new daily cases will be lower, and the hump will be shorter and wider.

Slowing the spread of the virus can help prevent the hospital system from being overwhelmed by too many patients. If that were to happen, critical care units could run out of the ventilators that are needed to help people breathe if their lungs fail.

During the 1918 Spanish flu pandemic, officials in Philadelphia failed to cancel a citywide parade and acted far more slowly to ban public gatherings than their counterparts in St. Louis. As a result, the peak death rate in Philadelphia was much worse than in St. Louis, according to a study in the Proceedings of the National Academy of Sciences published in 2007.

### COMMUNITY SPREAD

When an infectious disease is spreading in an area and the people who are contracting it don’t know where or how they caught it. It’s an indication that a virus is no longer contained to a limited number of people.

### CLOSE CONTACT

In the case of COVID-19, it’s anyone who is within 6 feet of a person

infected with SARS-CoV-2 for a prolonged period of time.

This includes people who live with, care for or visit an infected person. It can also describe people who merely share a waiting room with an infected patient or who have direct contact with a patient’s infectious secretions (such as by being coughed on).

### OUTBREAK

An increase, often sudden, in the number of cases of a disease above what is normally expected among the population in a limited area.

### EPIDEMIC

An outbreak that has spread to a wider area.

### PANDEMIC

An epidemic that has spread over multiple countries or continents, usually affecting a large number of people.

### PRESUMPTIVE POSITIVE

When a public health laboratory has determined a patient has tested positive for a viral infection, but officials are still awaiting confirmation from the CDC. For the purposes of public health, a presumptive positive result is treated as confirmed positive. There are, however, rare situations in which a presumptive positive may turn out to be negative.



# CORONAVIRUS DRUGS

BY AMINA KHAN  
*Los Angeles Times*

Medicines designed to treat COVID-19 won't be on pharmacy shelves for months or even years, but thousands of patients are in hospitals and health clinics now. So doctors are looking to drugs that are already approved for treating other diseases.

Malaria, HIV and arthritis wouldn't seem to have much in common with SARS-CoV-2, the novel coronavirus that has upended the world in just a few short months. But medicines developed for those ailments are showing some promise against the respiratory illness at the center of the pandemic.

Here's a closer look at some of the medicines being tested

## Where we are on possible treatments and what we know

to see if they're effective against COVID-19.

### CHLOROQUINE

This drug has been used to treat patients with malaria for nearly a century. It is a synthetic version of quinine, a natural compound that people have been extracting from the bark of cinchona trees since the early 1600s.

Chloroquine works by essentially slowing down how efficient the virus is at entering cells, which can slow the rate

of replication, said Karla Satchell, a microbiologist at Northwestern University Feinberg School of Medicine. To fight malaria, it essentially helps poison the digestive system of some blood parasites in the genus *Plasmodium* that are spread to humans through infected mosquitoes.

COVID-19 is caused by a coronavirus, not a parasite. Still, researchers hypothesized that chloroquine could help patients with the new disease by slowing the virus' spread. It

basically works by curtailing the virus' ability to use certain compartments in a cell (called vacuoles) to get itself inside its target. It's like having an extra bolt on your front door, but it doesn't keep the pathogen from kicking the door down. Think of it as "flattening the curve" inside the body, giving the immune system time to catch up.

About two dozen clinical trials are already underway in China to test chloroquine's efficacy against the novel coro-

navirus. Early results show that it seemed to cut down the virus' rate of replication. Some researchers have suggested that its ability to modulate the immune system's behavior may allow it to mitigate so-called cytokine storms, a potentially deadly overreaction to the disease that can result in organ failure.

Chloroquine has several built-in advantages. It's already known to be safe in humans (though it can result in poisoning at overdose levels). It's cheap. It has a backer in President Donald Trump, who on Thursday asked the Food and Drug Administration to examine its feasibility as a COVID-19 treatment. And in pre-clinical research, it's been

SEE DRUGS, PAGE 13

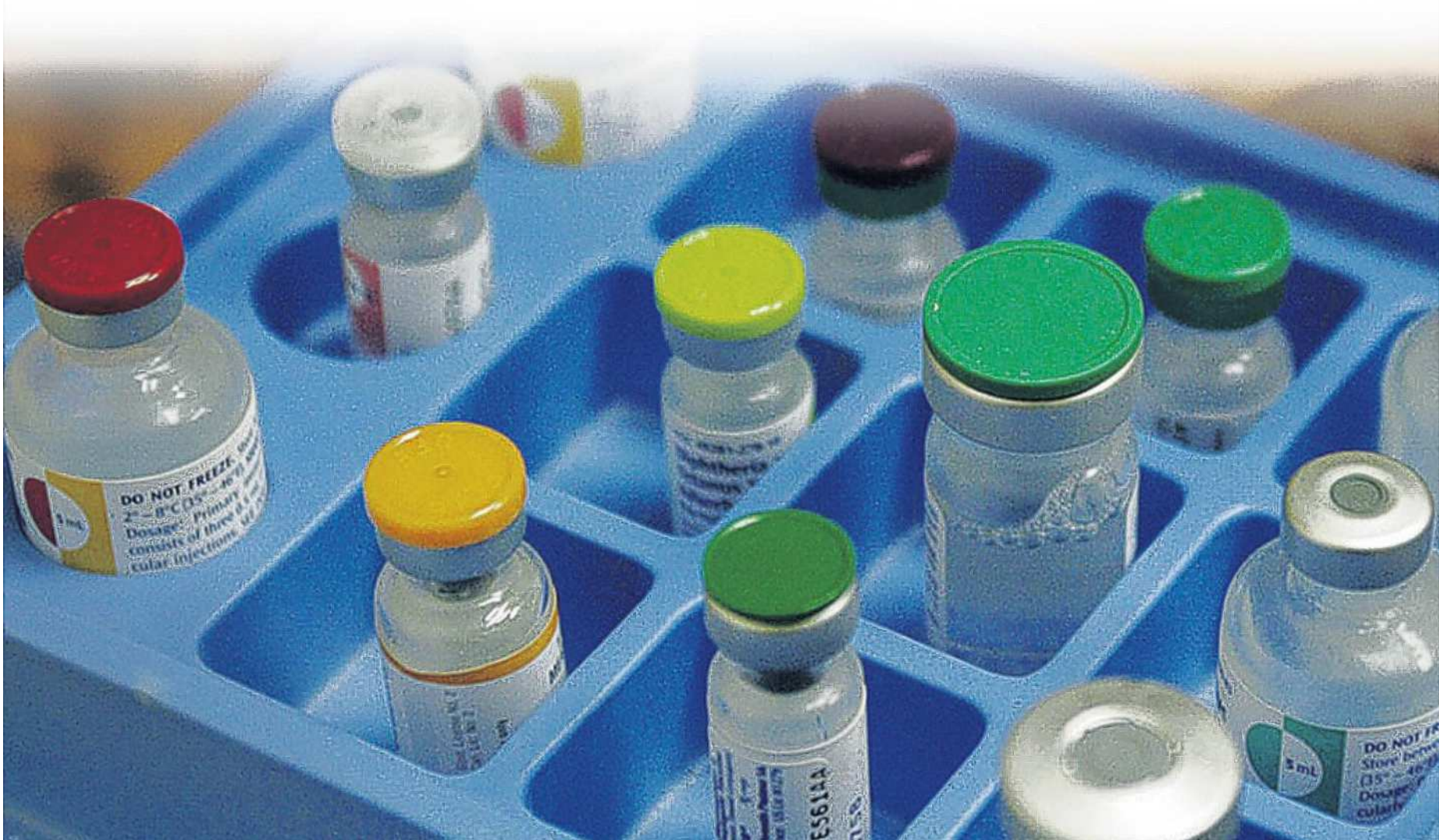


Photo illustration; image from TNS

## COVID-19 lung patterns show few clues for treating pneumonia

BY LAURAN NEERGAARD  
*Associated Press*

WASHINGTON

Scans of the lungs of the sickest COVID-19 patients show distinctive patterns of infection, but so far those clues offer little help in predicting which patients will pull through. For now, doctors are relying on what's called supportive care that's standard for severe pneumonia.

Doctors in areas still bracing for an onslaught of sick patients are scouring medical reports and hosting webinars with Chinese doctors to get the best advice on what works and what hasn't.

One thing that's clear around the globe: Age makes a huge difference in survival. And one reason is that seniors' lungs don't have as much of what geriatrics expert Dr. Richard Baron calls reserve capacity.

"At age 18, you have a lot of extra lung capacity you don't use unless you're running a marathon," explained Baron, who heads the American

Board of Internal Medicine. That capacity gradually declines with age even in otherwise healthy people, so "if you're an old person, even a mild form can overwhelm your lungs if you don't have enough reserve."

Here's what scientists can say so far about treating those who become severely ill.

### HOW DOES COVID-19 HARM THE LUNGS?

The new coronavirus, like most respiratory viruses, is spread by droplets from someone's cough or sneeze. The vast majority of patients recover, most after experiencing mild or moderate symptoms such as fever and cough. But sometimes the virus makes its way deep into the lungs to cause pneumonia.

Lungs contain grapelike clusters of tiny air sacs called alveoli. When you breathe, oxygen fills the sacs and passes straight into blood vessels that nestle alongside them. Pneumonia occurs when an infection – of any sort, not just this new virus – inflames the lungs' sacs.

In severe cases they fill with fluid, dead cells and other debris so oxygen can't get through.

If other countries have the same experience as China, about 5% of COVID-19 patients could become sick enough to require intensive care

### HOW DOES THAT DAMAGE APPEAR?

Doctors at New York's Mount Sinai Health System analyzed 121 chest CT scans shared by colleagues in China and spotted something unusual.

Healthy lungs look mostly black on medical scans because they're full of air. An early infection with bacterial pneumonia tends to show up as a white blotch in one section of one lung. Pneumonia caused by a virus can show up as hazy patches that go by a weird name – "ground glass opacities."

In people who get COVID-19 pneumonia, that haze tends to cluster on the outside edge of both lungs, by the ribs, a distinctive pattern, said Dr. Adam Bernheim, a radiologist at Mount Sinai.

As infection worsens, the haze forms rounder clusters and gradually turns more white as the air sacs become increasingly clogged.

### HOW TO TREAT THE PNEUMONIA?

There are no drugs so far that directly attack the new coronavirus, although doctors are trying some experimentally, including an old malaria treatment and one under development to treat Ebola.

"The best treatment we have is supportive care," said Dr. Aimee Moulin, an emergency care physician at the University of California Davis Medical Center.

That centers around assistance in breathing when the oxygen levels in patients' blood starts to drop. For some people, oxygen delivered through a mask or tubes in the nose is enough. More severely ill patients will need a breathing machine.

"The goal is to keep the person alive until the disease takes its course" and the lungs begin to heal, explained Mount Sinai's Dr. Neil Schachter.

The very worst cases develop an inflammatory condition called ARDS – acute respiratory distress syndrome – that floods the lungs with fluid. That's when the immune system's attempt to fight infection "is going crazy and itself attacking the lung," Baron explained.

Many things besides the coronavirus can cause the condition, and regardless of the cause, it comes with a high risk of death.

### WHAT ELSE IS IMPACTED?

Severe pneumonia of any sort can cause shock and other organ damage. But in a webinar last week, Chinese doctors told members of the American College of Cardiology to watch for some additional problems in severe COVID-19, especially in people with heart disease. The worst off may need blood thinners as their blood starts to abnormally clot, and the heart itself may sustain damage not just from lack of oxygen but from the inflammation engulfing the body.

Another caution: The sickest patients can deteriorate rapidly, something a hospital in Kirkland, Washington, witnessed.

Of 21 patients who needed critical care at Evergreen Hospital, 17 were moved into the ICU without 24 hours of hospi-

tal admission, doctors reported last week in the *Journal of the American Medical Association*.

Age isn't the only risk factor. Data from China show regardless of age, 40% of people who required critical care had other chronic health problems such as heart disease and diabetes.

### DOES COVID-19 LEAVE LASTING LUNG DAMAGE?

It's too soon to know about any lasting trouble when the most severely ill pull through. The WHO has said that it can take three to six weeks to recover from a severe case of COVID-19.

But it can take months to get back to normal activity after any form of severe pneumonia, particularly if the person had earlier health problems, too. Recovery in part depends on how long someone was on a breathing machine.

"If you're on a ventilator for four weeks in deep sleep in an intensive care unit, it takes six months to a year to rehabilitate," Dr. Diederik Gommers of the Netherlands Association for Intensive Care told Dutch lawmakers. "It is very debilitating if you are in intensive care for so long."



# Coronavirus guide

BY STACEY BURLING  
*Philadelphia Inquirer*

Frank T. Leone, a pulmonologist who directs Penn’s Comprehensive Smoking Treatment Programs, is often asked to see patients in Penn’s hospitals who smoke. The hope is that Leone, who specializes in tobacco dependence, can convince them to quit.

On March 19, he saw a young man – a two-pack-a-day smoker – who had broken an ankle but was panicking about the threat the new coronavirus, which can cause fatal lung infections, poses to people whose lungs are already weakened by constant exposure to smoke or other noxious substances. “Doc, I don’t want to die,” he told Leone.

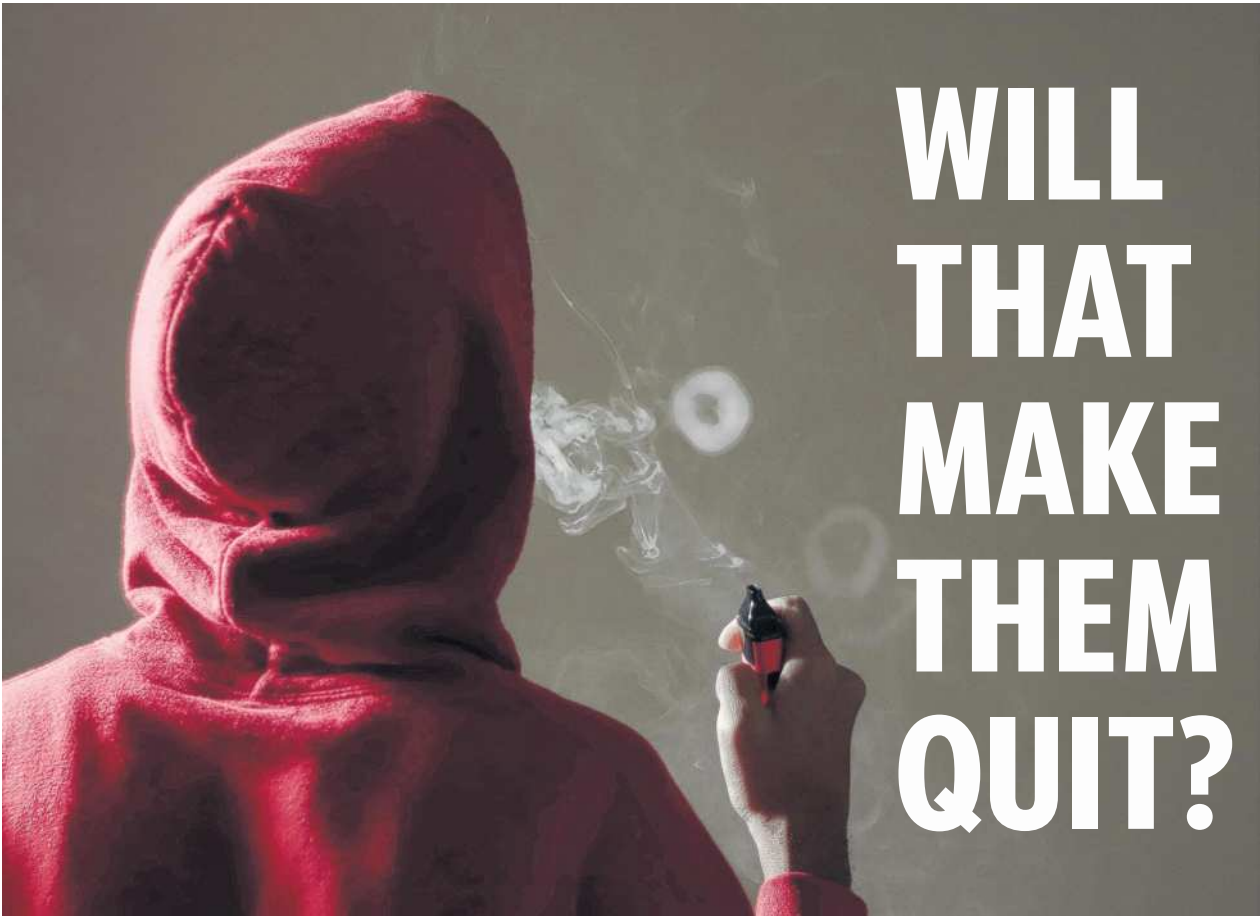
Leone said he’s meeting more patients who say they’d like to quit – now. Other doctors who treat lung patients and smokers have also seen a small uptick in interest. It remains to be seen, though, they said, whether that translates into action. In-person visits to smoking cessation programs are currently on hold because of the virus.

“I think it’s a little bit early,” said Aditi Satti, a pulmonary critical care doctor who directs Temple Health’s smoking cessation program. “People are just starting to wrap their heads around what’s happening around us.”

Ross Summer, chief of the section of allergy, pulmonary and critical care medicine at Sidney Kimmel Medical College of Thomas Jefferson University, said lung patients are calling about coronavirus whether they smoke or not. “People are extremely concerned and worried,” he said. He’s worried that some of them are forgoing routine doctor’s visits they really need because they’re afraid to leave their houses.

Satti said that, so far,

## Coronavirus poses extra risks for smokers and vapers



CHICKEN STRIP TNS

Lung experts said there's good reason to suspect that the coronavirus will be more dangerous to people who smoke or vape. Frequent exposure to other things that can harm the lungs, such as dust and pollutants, may also leave people less able to recover from infection.

studies have not shown that fear helps people quit cigarettes and stay off of them.

The nature of cigarette addiction makes it hard to stop during a crisis, Leone said. Nicotine works in the part of the brain that detects threat. Rather than sedating, “it’s giving the brain the sort of all-clear, safe signal,” he said.

At a time like this, smokers know that they are at high-risk for trouble if they get COVID-19, the disease caused by the new coronavirus.

Unfortunately, their brains experience smoking cessation as a threat. And smoking is the thing that makes smokers feel less threatened. “The place that people go for a brief respite is their cigarettes,” Leone said.

This is why smokers tend to feel torn and say,

“I’m going to stop, but not right now.”

Summer thinks all the scary news from the virus could make things worse. “This type of stress usually leads to more smoking,” he said.

Lung experts said there’s good reason to suspect that the new virus will be more dangerous to people who smoke or vape. Frequent exposure to other things that can harm the lungs, such as dust and pollutants, may also leave them less able to recover from infection.

Leone said about 20% of adults in Philadelphia smoke. Rates are in the low teens in the surrounding suburban counties.

The National Institute on Drug Abuse earlier this month cautioned that, “because it attacks the lungs, the coronavirus that causes COVID-19 could

be an especially serious threat to those who smoke tobacco or marijuana or who vape.” Because far more men than women smoke in China, that might explain why more men have died there, the agency said.

So far, evidence about smoking and the new coronavirus is limited. A study by the Chinese Center for Disease Control found that the case fatality rate was 6.3% in people with chronic respiratory disease compared to the overall rate of 2.3%. (These rates are likely too high because they are based on cases doctors knew about, while they may never have seen people with mild disease.) Another small Chinese study of 78 patients with pneumonia found that smokers were 14 times more likely to deteriorate

over two weeks than non smokers.

Summer said the lungs are the only organs that are always exposed to the outside through the air we breathe. Pollution, vaping and cigarette smoke put them under increased stress. “In general,” he said, “smokers are more susceptible to pneumonia.”

Local lung experts said that smoking increases inflammation in the lungs, making them less likely to respond appropriately when faced with a viral onslaught. Tiny fibers called cilia that remove dirt, dust and germs are damaged by smoke as are blood vessels important for oxygen distribution. Damage to the airway wall can also make it easier for bacteria to grow, said Gerard Criner, chair of thoracic medicine and

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## DRUGS

shown to be effective against viral infections such as severe acute respiratory syndrome (SARS), Middle East respiratory syndrome (MERS) and HIV.

### HYDROXYCHLOROQUINE

As you may guess, this drug is closely related to chloroquine. It’s a potentially less toxic metabolite of the malaria drug that’s used to treat certain autoimmune diseases like lupus and rheumatoid arthritis. Scientists think it works by disrupting communications between cells in the immune system. Like chloroquine, scientists suspect it might help to mitigate cytokine storms.

Doctors are testing it in COVID-19 patients on the theory that if chloroquine is helpful, hydroxychloroquine might be too, and recent lab results seem to back that up. At least seven clinical trials have begun in China to test hydroxychloroquine in patients with COVID-19, and the University of Minnesota also launched one of its own this week.

“After 90 days we will have some indication of whether this is effective or not,” and how effective it could be, said Dr. Jakub Tolar, dean of the University of Minnesota Medical School.

Early results in China are promising, showing that it inhibited SARS-COV-2 infections in the lab.

Like chloroquine, hydroxychloroquine has already been

established as safe for use in humans – it’s been on the market since the 1950s. Trump’s request that the FDA investigate chloroquine included hydroxychloroquine as well. On Saturday, he tweeted out an endorsement of a preliminary report from France in which six patients received hydroxychloroquine along with the antibiotic azithromycin.

### KALETRA

This combination of two antiviral drugs, lopinavir and ritonavir, is used to combat HIV. It’s widely available, and several clinical trials around the world are underway.

The two drugs, both protease inhibitors, have different but complementary roles when used in combination. Lopinavir prevents viral enzymes from cutting up important proteins that are key to HIV’s reproduction. Ritonavir helps boost lopinavir’s concentrations in cells.

Scientists wondered whether the pair might be able to disrupt SARS-COV-2’s life cycle in similar ways.

But a study published this week in the New England Journal of Medicine reported no benefit for patients with severe COVID-19. While that’s not great news for the drug’s prospects, an editorial accompanying the paper called the work a “heroic effort.” And, to be clear, it was just one study; other trials could eventually provide further insight.

### REMDESIVIR

This drug was developed by Gilead Sciences to fight Ebola but failed to prove effective.

Still, remdesivir has since been shown to have some effect against both MERS and SARS in cell lines and limited animal testing, and since those diseases are caused by coronaviruses, it may have some effect against the one that causes COVID-19.

Exactly how remdesivir works has been unclear, though a new study shows that it appears to block RNA replication during the reproductive cycle of a coronavirus.

It was given to the first COVID-19 patient in the United States for compassionate use after his condition took a turn for the worse, and he began to recover the next day, according to a case study published in the New England Journal of Medicine. Whether the drug was actually responsible for any of that improvement is unknown.

Several clinical trials in the works should provide some answers. A clinical trial sponsored by the National Institute of Allergy and Infectious Diseases, part of the National Institutes of Health, has already launched at several locations in the U.S., including the University of Nebraska, the University of Minnesota and UC Irvine.

“Although remdesivir has been administered to some patients with COVID-19, we do not have solid data to indicate it can improve clinical outcomes,” Dr. Anthony S. Fauci, director of the NIAID, said in a statement.

These clinical trials would offer some solid data as to whether it really works.

### LOSARTAN

This hypertension drug reduc-

es blood pressure by preventing a hormone called angiotensin from binding to receptors on blood vessels, allowing them to stay relaxed.

Scientists hypothesized that losartan might help patients with COVID-19 because, as an angiotensin receptor blocker, it obstructs the site through which the virus gets into the cells, Tolar said.

This drug rounds out the trifecta of treatments that University of Minnesota researchers are putting through clinical trials; they have not yet started recruiting subjects, according to the NIH.

### OTHER APPROACHES

Repurposing drugs that are already on the market (or at least, proven safe) makes for a good first step in fighting a novel virus, but it’s something of a blunt instrument, scientists pointed out.

That’s why researchers are also studying the virus in depth to try to develop more tailored treatments from the bottom up – or at least, from a little closer to ground level.

Satchell’s center is taking this route, studying the virus’ proteins and other structures in depth and designing drugs to combat it. Currently, they’re targeting the molecular factories that viruses set up to manufacture more copies of themselves.

“If you just walked up to a machine and stuck a screwdriver in it somewhere, it would stop working,” she said. The trick is to figure out where to stick the screwdriver, and what it should look like. “And that’s

surgery and director of the Temple Lung Center

Leone said that vaping causes many of the same cellular changes as smoking. “The physical assault on the lungs is virtually identical,” he said.

Chronic obstructive pulmonary disease (COPD) can develop after years of exposure to smoking. Criner said that one Italian study found that 26% of people who died of COVID-19 had COPD.

Deborah Brown, chief mission officer for the American Lung Association, said she cautions people who smoke tobacco or marijuana or who vape to take extra precautions and consider themselves at high risk for complications.

She hopes smokers will use the disruption in their work lives to create a new plan for quitting. The organization has a personalized online quitting program as well as a self-help guide. Staffers at 1-800-LUNG-USA can answer questions. The association also has an online support community through Inspire.com.

Like other smoking cessation programs, Leone’s has had to cancel in-person meetings. He considers those most effective because they allow him to explore why clients smoke and create a stronger therapeutic relationship. He’s talking with people now by phone.

Satti, who also has had to stop smoking cessation clinics, is urging people interested in quitting to visit the Pennsylvania Free Quitline.

Criner said “there’s always a benefit to stopping smoking even if you smoked a long time.” He said it will decrease mucus production as well as flare-ups of COPD. One study found that stopping smoking for 10 to 14 days improved postoperative complications.

It’s too soon to know how it will affect response to the new coronavirus.



# Coronavirus guide



JUST\_SUPER Getty Images

While there are COVID-19 vaccine candidates in the works, it could take a year to 18 months before one is ready.

BY AMINA KHAN  
*Los Angeles Times*

Nothing can stop a global outbreak in its tracks better than a vaccine. Unfortunately, creating a vaccine capable of preventing the coronavirus that causes COVID-19 will probably take at least a year to 18 months, health officials say.

“That is the time frame,” Dr. Anthony Fauci, director of the National Institute of Allergy and Infectious Diseases, told the House Oversight and Reform Committee last week. Anyone who says they can do it faster “will be cutting corners that would be detrimental.”

While there are about 10 vaccine candidates in the works – and at least one of them could begin clinical trials in April – it would still take about three more months to conduct the first stage of human testing and another eight months or so to complete the next stage of the trial process, he added.

New vaccines require copious research and time-consuming testing that can cost hundreds of millions of dollars. There’s no guarantee of success, but even if everything goes well, the final product might not hit the market until after an outbreak has subsided.

Here’s a look at how vaccines are made and why the process takes so long.

**Q: How does a vaccine work?**

**A:** Your body has a multi-pronged defense system for recognizing and combating dangerous invaders: your white blood cells. There are several types, each with a different purpose:

- Macrophages engulf and then eat pathogens or cells that are dead or damaged. They leave behind identifying fragments of the invading microbes. These fragments are called antigens.
- B-lymphocytes produce antibodies that recognize and bind to those antigens. If a pathogen with those antigens shows up in the blood stream again, those antibodies can mount an attack.
- If those pathogens are already hiding out inside your cells beyond the antibodies’ reach, T-lymphocytes can attack those infected cells.

## Why will it take so long to make a vaccine that can prevent COVID-19?

Your immune system has to go through this process each time it encounters a threat from a new virus or bacterium. A vaccine provides a shortcut. Essentially, it helps your immune system learn to recognize a specific threat by tricking it into thinking it’s under attack. Then it can produce the antibodies it needs without having to face a real infection.

**Q: Are all vaccines the same?**

**A:** Nope. The Centers for Disease Control and Prevention describes several types of vaccines:

- Attenuated vaccines, like those for chickenpox and measles, use a live virus or bacteria that has been intentionally weakened so that it can’t cause serious disease in a healthy immune system.
- Inactivated vaccines, such as the one for polio, use germs that have been killed. They typically don’t provide as much immunity as attenuated vaccines, so they may require boosters over time.
- Toxoid vaccines, including the DTaP vaccine for diphtheria and tetanus, use weakened versions of the toxins created by invading bacteria to teach the body how to fight the pathogens.
- Subunit vaccines, such as DTaP’s whooping cough component, only use fragments of the virus or bacterium they protect against.
- Conjugate vaccines teach the immune system to fight bacteria that try to disguise their antigens in the long chains of sugar molecules that form the walls of bacterial cells.

**Q: What do you need to know about a virus to create a vaccine?**

**A:** The immune system learns how to fight a virus by studying its face – the outside of the particle, including those telltale antigens. So a vaccine needs to give your body a snapshot of that face.

One classic technique involves injecting a person with a killed virus. Another uses live viruses that have been grown and deliberately weakened, typically by removing specific genes in their RNA or DNA.

Both of these strategies take some time, and scientists worry that if they use them on novel viruses, they may not behave the way researchers predict, said Dr. Kathryn Stephenson, who runs the clinical trial unit at Beth Israel Deaconess Medical Center’s Center for Virology and Vaccine Research.

Another option for scientists is to reconstruct that snapshot using information from a virus’ genetic code, which may be made of either RNA or DNA.

Nowadays, researchers can get started fast. Scientists in China made the coronavirus’ RNA sequences available on Jan. 10, and many labs began working toward a vaccine the next day, Stephenson said.

**Q: Once you know that, is the rest easy?**

**A:** Hardly. Designing the vaccine is just the first step. Then it has to be produced.

There are many different vaccine-making platforms, each with its own set of advantages and disadvantages.

“What would make a great vaccine for coronavirus is one that you can make quickly and one that would provide long-lasting and effective immunity,” Stephenson said. “Those are not always the same thing.”

For example, a vaccine based on the virus’ genome RNA can be made quickly, in perhaps a month or two, but it may be harder to manufacture in giant quantities.

Another option is to take the virus’ genetic snapshot and put it into a different virus for transport. When introduced into the body, the so-

called viral vector vaccine enters cells, prompting them to produce huge numbers of this snapshot for the immune system to see. These vaccines take longer to make – say, six to eight months – but they can be scaled up more readily.

“A lot of us are working on both of those,” Stephenson said.

**Q: How are vaccines tested?**

**A:** Before a vaccine candidate is approved for use, it must be proven safe and effective in a series of trials that are monitored by the Food and Drug Administration.

The first step is to show that it’s safe in preclinical studies. These can be conducted in vitro (using cells in a laboratory dish) or in vivo (using an animal as a stand-in for humans). Finding the right animal for testing can be a challenge, said Robert Grenfell, director of health and biosecurity at CSIRO, Australia’s national science agency, but scientists working on a vaccine for the new coronavirus won’t have to start from scratch. The new virus shares much of its genome with the coronavirus that caused the 2003 outbreak of severe acute respiratory syndrome, and some Australian researchers already have been studying the SARS virus in ferrets.

Then clinical trials in humans can begin. Phase 1 trials are small, usually with a few dozen closely monitored participants. The main goal here is to make sure the vaccine is safe. Phase 2 trials typically enroll hundreds of patients to expand the safety assessment and allow scientists to dig into the body’s immune response. Phase 3 trials can enroll thousands of people, typically with some of them randomly assigned to get the vaccine and some getting a placebo.

This process can take years under normal circumstances. In an emer-

gency, it could be sped up dramatically.

The big sticking point is often the Phase 3 trial. In an epidemic, many study volunteers may not want to risk getting a placebo instead of the vaccine, Stephenson said.

Researchers faced this dilemma during the Western African Ebola outbreak that took off in 2014. The virus had a mortality rate of about 40%, making people desperate for the still-unproven vaccine. So researchers employed a novel experimental design that involved vaccinating people with varying degrees of separation from an Ebola patient and using computer models to help determine if the vaccine had had an effect.

“I think people learned from that that there are ways to be creative,” Stephenson said. A creative solution may be needed when a coronavirus vaccine is ready for Phase 3 testing, she added.

**Q: How good does a vaccine need to be in order to gain approval?**

**A:** The FDA wants it to be safe and effective – in other words, it has to protect enough people with as few unwanted side effects as possible. But exactly what qualifies as safe and effective may depend on the disease in question.

For some perspective: Stephenson, who also studies HIV, said that researchers would be very happy if they could come up with an HIV vaccine that protected 50% or so of those who got it. On the other hand, for a highly contagious virus like measles, a vaccine would need to work in almost everyone to establish herd immunity, she said.

David Weiner, a molecular immunologist who directs the Wistar Institute’s Vaccine and Immunotherapy Center, said a successful coronavirus vaccine wouldn’t have to be 100% effective.

“I would like us to see it work in the majority of people,” he said, but “if it worked in 50%, 50% is a big improvement over 0%.”

**Q: Once a vaccine is approved, is the hard part over?**

**A:** Definitely not. The labs that create a successful vaccine probably won’t be the ones that are able to scale up – they’ll need a dedicated manufacturer for that part. And many companies may be wary of investing the resources it takes to manufacture a new vaccine when the epidemic could end before there’s a chance to bring it to market, Weiner said.

“Big Pharma is afraid to go in because the outbreaks end and they lose all the money they put in,” he said. That’s why the Oslo-based Coalition for Epidemic Preparedness Innovations, or CEPI, has stepped in with funding to help shepherd some of those efforts, he added.

One of the big technical challenges in large-scale manufacturing is quality control, Stephenson said.

“Every vaccine has its own particular issue,” she said, but “the manufacturing challenges mainly have the most to do with safety precautions and making sure than when you’re done, the vial of vaccine has in it what you say it has.”

**Q: Who would get the vaccine first?**

**A:** This can be a difficult question when there’s a limited amount of vaccine and a whole lot of demand.

Since older adults appear to be most at risk from COVID-19, it’s likely that health officials would focus on them first, Stephenson said.

Medical professionals – who are at high risk of exposure and are needed to care for those who are sick – would likely be a priority as well.

“Front-line healthcare workers are usually one of the first groups you vaccinate because you need your workforce in place,” she said.

Vaccines are often less effective in older people than they are in younger ones, and this could affect the way that a vaccine is administered. A vaccine might be given in multiple doses, or an adjuvant might be added to it to boost the immune system’s reaction to it.



# Coronavirus guide



DANIELLE A. SCRUGGS NYT

Dr. Paul Casey takes video calls at Rush University Medical Center, which is using telemedicine to screen and treat patients, in Chicago on March 6. Rush University Medical Center and other large hospitals across the country are quickly expanding the use of telemedicine to safely screen and treat patients for coronavirus, and to try to contain the spread of infection while offering remote services.

BY REED ABELSON  
*New York Times*

The man had recently traveled, including a brief stop in Tokyo. He had a fever and cough about a week ago, but was now feeling fine.

He called the virtual medical line set up by Rush University Medical Center in Chicago recently to help screen patients for coronavirus.

“He said all the right buzzwords: cough, fever, fatigue,” said Dr. Meeta Shah, an emergency room physician at Rush.

After talking with him, Shah did not think he needed to be admitted but referred him to the city’s health department.

Rush and other large hospitals across the country are quickly expanding the use of telemedicine to safely screen and treat patients for coronavirus, and to try to contain the spread of infection while offering remote services.

“This is a kind of turning point for virtual health,” Shah said. “We’re actually seeing how it can be used in a public health crisis.”

While the notion of seeing a doctor via your computer or cellphone is hardly new, telemedicine has yet to take off widely in the United States. Health insurance plans do typically offer people the option of talking to a nurse or doctor online as an alternative to heading to an emergency room or urgent care center, but most people don’t make use of it. Now doctors, hospital networks and clinics are rethinking how the technology can be used, to keep the worried well calm and away from clinical care while steering the most at risk to the proper treatment.

“The use of telemedicine is going to be critical for management of this pandemic,” said Dr. Stephen Parodi, an infectious disease specialist and executive with The Per-

# Doctors and patients turn to telemedicine in the coronavirus outbreak

manente Medical Group, the doctors’ group associated with Kaiser Permanente, one of the leaders in the use of virtual visits for its patients.

Telemedicine got an additional boost under the \$8.3 billion emergency funding measure from Congress, which loosened restrictions on its use to treat people covered under the federal Medicare program. At a news conference Monday, Seema Verma, the administrator of the Centers for Medicare and Medicaid Services, praised the government’s efforts to expand the use of telemedicine under Medicare, the federal program for people 65 and older.

In a meeting Tuesday at the White House with President Donald Trump, private health insurers also said they would pay for the virtual visits for people who may have coronavirus to improve access to care for their customers.

By using their phone or computer, patients will be able to get guidance about whether they need to be seen or tested instead of showing up unannounced at the emergency room or doctor’s office. Patients, particularly those who would be at high risk for a serious illness if they were

infected, can also opt to substitute a trip to a doctor’s office with a virtual visit when it is a routine check in with a specialist or a primary care doctor. That way they can avoid crowded waiting rooms and potential infection.

When Rush admitted a student last week who was believed to have the virus, the hospital was able to prepare for his arrival by clearing the ambulance bay of people and vehicles to protect patients and hospital staff from possible infection. Taken to an isolation room, he was examined by Dr. Paul Casey, an emergency room physician, and a nurse, both in protective gear.

An infectious disease specialist was consulted over an iPad. The patient, who did have the virus, was released last Friday, and Rush was able to avoid the fate of other hospitals in the United States, where patients with COVID-19 led to the widespread quarantine of health care workers.

“When the news of coronavirus broke last month, we saw the opportunity,” Casey said.

Health systems are racing to adapt and even develop virtual services that can serve as their front line for patients.

“Telehealth is being re-discovered,” said Dr. Peter Antall, the chief medical officer for AmWell, a company based in Boston that is working with health systems across the country. “Everybody recognizes this is an all-hands-on-deck moment,” he said. “We need to scale up wherever we can.”

Other systems are also readying their telemedicine offerings. “The COVID-19 outbreak is going to serve as an impetus,” said Dr. Shabana Khan, the director of telepsychiatry at NYU Langone Health. “We have no choice.”

Patients concerned about the coronavirus are being directed to NYU’s virtual urgent care, which they can gain access to via their phone or a computer. “Our volumes are showing they are hearing that message loud and clear,” said Dr. Paul A. Testa, an emergency medicine doctor who is the system’s chief medical information officer.

NYU is also encouraging its doctors who are self-quarantined because of recent travel to see patients using video, as well as directing patients who are particularly vulnerable because of existing medical conditions to consider a virtual visit

instead of heading to a doctor’s office.

But Testa emphasized that patients who need to be seen in person should not hesitate to seek care. “We’re not discouraging anybody from coming in,” he said.

Virtual care has its limits, of course, and many of the startups and others promoting their offerings may not be fully equipped to handle patients who might have the virus. At Zoom+Care, a chain of clinics in Oregon and Washington, consumers are being encouraged to use the company’s online chat feature so that their risks can be assessed.

“We’re being very explicit at Zoom+Care that we can’t test you for COVID-19,” said Dr. Mark Zeitzer, who is the clinics’ medical director of acute care services. Instead, people may be told to self-quarantine and keep a careful eye on their symptoms.

But the idea of using telemedicine to prevent further spread of the virus is being adopted quickly. At Intermountain Healthcare, the Utah system that cared for an infected patient at its Salt Lake City hospital, the concern over a potential measles outbreak last year led executives to consider how to

better protect the community from infectious diseases.

“When coronavirus hit the streets, we took the measles workflow and expanded on it,” said Kerry Palakanis, a nurse practitioner who is the executive director of Intermountain’s initiative, Connect Care.

The system is also thinking about how it can use the same technology to deliver home health care, particularly for patients who are at high risk because of chronic medical conditions or have COVID-19 but can be treated safely at home. People at home could be equipped to take their blood pressure or test their blood sugars, and a doctor or nurse could be available over video.

By monitoring more patients virtually, Intermountain will be able to limit the potential exposure of nurses who conduct home visits. “Those nurses are traveling out throughout the community,” Palakanis said.

Telemedicine companies say they are getting an increase in the number of calls, both from those who want to know more about what they can do to minimize their risk of catching coronavirus and those with worrisome symptoms. “We see the whole spectrum of patients,” said Dr. Kristin Dean, medical director for Doctor On Demand, a company whose service is offered to customers of some of the major health insurance companies.

In evaluating whether patients may be safely monitored at home, doctors take into account people’s medical history and the severity of their symptoms, she said.

“The patients have been appreciative of that switch,” said Parodi of Permanente. “Many of them don’t want to come in and be exposed in a clinic or office setting.”



# Coronavirus guide



GABRIELA BHASKAR NYT

A man picks a single bottle of hand soap that was just placed on the shelves in a New York store on Friday. Due to a shortage from suppliers, employees have said that they cannot predict what products will be delivered as people take precautions against the coronavirus.

BY FERRIS JABR  
*New York Times*

It probably began with an accident thousands of years ago. According to one legend, rain washed the fat and ash from frequent animal sacrifices into a nearby river, where they formed a lather with a remarkable ability to clean skin and clothes. Perhaps the inspiration had a vegetal origin in the frothy solutions produced by boiling or mashing certain plants. However it happened, the ancient discovery of soap altered human history. Although our ancestors could not have foreseen it, soap would ultimately become one of our most effective defenses against invisible pathogens.

People typically think of soap as gentle and soothing, but from the perspective of microorganisms, it is often extremely destructive. A drop of ordinary soap diluted in water is sufficient to rupture and kill many types of bacteria and viruses, including the new coronavirus that is currently circling the globe. The secret to soap’s impressive might is its hybrid structure.

Soap is made of pin-shaped molecules, each of which has a hydrophilic head – it readily bonds with water – and a hydrophobic tail, which shuns water and prefers to link up with oils and fats. These molecules, when suspended in water, alternately float about as solitary units, interact with other molecules in the solution and assemble themselves into little bubbles called micelles, with heads pointing outward and tails tucked inside.

Some bacteria and viruses have lipid membranes that resemble double-layered micelles with two bands of hydrophobic tails sandwiched between two rings of hydrophilic heads. These membranes are studded with important proteins that allow viruses to infect cells and perform vital tasks that keep bacteria alive. Pathogens wrapped

## Why soap works to kill bacteria and viruses



PEOPLEIMAGES Getty Images

Washing with soap and water is one of the key public health practices that can significantly slow the rate of a pandemic and limit the number of infections, preventing a disastrous overburdening of hospitals and clinics.

in lipid membranes include coronaviruses, HIV, the viruses that cause hepatitis B and C, herpes, Ebola, Zika, dengue, and numerous bacteria that attack the intestines and respiratory tract. When you wash your hands with soap and water, you surround any microorganisms on your skin with soap molecules. The hydrophobic tails of the free-floating soap molecules attempt to evade water; in the process, they wedge themselves into the lipid envelopes of certain microbes and viruses, prying them apart.

“They act like crowbars and destabilize the whole system,” said professor Pall Thordarson, acting head of chemistry at the University of New South Wales. Essential proteins spill from the ruptured membranes into the sur-

rounding water, killing the bacteria and rendering the viruses useless. In tandem, some soap molecules disrupt the chemical bonds that allow bacteria, viruses and grime to stick to surfaces, lifting them off the skin. Micelles can also form around particles of dirt and fragments of viruses and bacteria, suspending them in floating cages. When you rinse your hands, all the microorganisms that have been damaged, trapped and killed by soap molecules are washed away. On the whole, hand sanitizers are not as reliable as soap. Sanitizers with at least 60% ethanol do act similarly, defeating bacteria and viruses by destabilizing their lipid membranes. But they cannot easily remove microorganisms from the skin. There are also virus-

es that do not depend on lipid membranes to infect cells, as well as bacteria that protect their delicate membranes with sturdy shields of protein and sugar. Examples include bacteria that can cause meningitis, pneumonia, diarrhea and skin infections, as well as the hepatitis A virus, poliovirus, rhinoviruses and adenoviruses (frequent causes of the common cold). These more resilient microbes are generally less susceptible to the chemical onslaught of ethanol and soap. But vigorous scrubbing with soap and water can still expunge these microbes from the skin, which is partly why hand-washing is more effective than sanitizer. Alcohol-based sanitizer is a good backup when soap and water are not accessible. In an age of robotic

surgery and gene therapy, it is all the more wondrous that a bit of soap in water, an ancient and fundamentally unaltered recipe, remains one of our most valuable medical interventions. Throughout the course of a day, we pick up all sorts of viruses and microorganisms from the objects and people in the environment. When we absentmindedly touch our eyes, nose and mouth – a habit, one study suggests, that recurs as often as every 2 1/2 minutes – we offer potentially dangerous microbes a portal to our internal organs. As a foundation of everyday hygiene, hand-washing was broadly adopted relatively recently. In the 1840s Dr. Ignaz Semmelweis, a Hungarian physician, discovered that if doctors washed their hands, far fewer women died after childbirth. At

the time, microbes were not widely recognized as vectors of disease, and many doctors ridiculed the notion that a lack of personal cleanliness could be responsible for their patients’ deaths. Ostracized by his colleagues, Semmelweis was eventually committed to an asylum, where he was severely beaten by guards and died from infected wounds.

Florence Nightingale, the English nurse and statistician, also promoted hand-washing in the mid-1800s, but it was not until the 1980s that the Centers for Disease Control and Prevention issued the world’s first nationally endorsed hand hygiene guidelines.

Washing with soap and water is one of the key public health practices that can significantly slow the rate of a pandemic and limit the number of infections, preventing a disastrous overburdening of hospitals and clinics. But the technique works only if everyone washes their hands frequently and thoroughly: Work up a good lather, scrub your palms and the back of your hands, interlace your fingers, rub your fingertips against your palms, and twist a soapy fist around your thumbs.

Or as the Canadian health officer Bonnie Henry said recently, “Wash your hands like you’ve been chopping jalapeños and you need to change your contacts.” Even people who are relatively young and healthy should regularly wash their hands, especially during a pandemic, because they can spread the disease to those who are more vulnerable.

Soap is more than a personal protectant; when used properly, it becomes part of a communal safety net. At the molecular level, soap works by breaking things apart, but at the level of society, it helps hold everything together. Remember this the next time you have the impulse to bypass the sink: Other people’s lives are in your hands.



# Coronavirus guide

## How to sanitize upholstery and home surfaces without damaging them



ANDREYPOPOV Getty Images/iStockphoto

BY JANET EASTMAN  
*The Oregonian, Portland, Ore.*

Due to the coronavirus outbreak, people are at home and focused more than ever on ways to disinfect household objects, some that may have never been cleaned before, like that colorful leather sofa.

The novel coronavirus that causes COVID-19 may remain viable for hours to days on surfaces, according to public health experts at the Centers for Disease Control and Prevention (CDC).

They recommend cleaning and wiping down frequently touched surfaces with a disinfectant daily during cold and flu season to reduce the risk of spreading infection.

It isn't possible to remove bacteria from everything you touch, but soap and water, household cleaners and U.S. Environmental Protection Agency (EPA)-approved household disinfectants are effective on hard surfaces such as counters, tables, doorknobs, light switches, handles, desks, toilets, faucets and sinks, says the CDC.

Products with EPA-approved, antimicrobial claims can be effective against hard-to-kill viruses, says the CDC. These include Clorox cleaner and bleach products and Lysol disinfectants.

Depending on the surface materials, you can use solutions with at least 70% isopropyl alcohol or diluted household bleach to kill bacteria. Mix four teaspoons of bleach into a quart of water, says the CDC, then rinse with water to avoid discoloration or damage.

Or spray with undiluted household hydrogen peroxide, which the CDC says works on rhinovirus infections, the cause of the common cold and harder to destroy than coronaviruses.

Wear disposable or washable gloves, and open windows to improve ventilation when using cleaning and disinfecting products.

When done, clean your hands with soap and water for 20 seconds. If hands are not visibly dirty, an alcohol-based hand sanitizer that contains at least 60% alcohol may be used.

Dry with disposable paper towels or soak a reusable towel in soapy water to destroy any virus particles that may have

survived, Richard Sachleben, an organic chemist and member of the American Chemical Society, told Consumer Reports.

We researched the safe solutions to remove dirt, bacteria, molds, mildew and virus germs. Our guide relies on the latest edition of Consumer Reports' "How to Clean Practically Anything" publication, manufacturers and other reliable resources.

Follow manufacturer's care instructions, use products with the EPA's Safer Choice logo or just play it safe and use a little dish soap and water.

Here's what we found as the best simple solutions for cleaning special items, room by room:

### ENTRY

**Wallpaper:** Paper or fabric wallpaper coated with vinyl can be dusted with a dust mop and washed with an all-purpose cleanser without bleach and a clean sponge, then rinse with water.

### LIVING ROOM

**Window and mirror:** Dilute ammonia-based window cleaners and wipe with streak-free microfiber cloths.

**Sealed wood and other furniture:** Mix water and a little mild liquid dish detergent and spray onto furniture, then wipe with a damp cloth and dry with another clean, lint-free cloth. Dust oiled or untreated wood paneling

with a vacuum cleaner's soft brush attachment or a ceiling brush. Remove fingerprints with a damp cloth dipped in a mild detergent solution.

**Carpet, rug, drape, cushion and other soft, porous surface:** Clean with products such as Purell Multi-Surface Disinfectant or Sani-Spritz Spray. Launder using the warmest appropriate water setting and then dry completely. Dust with a vacuum cleaner's soft brush attachment or with a soft, long-handled broom with synthetic fibers. Check the label to read the recommendation: W means water-based cleaner, S is solvent cleaner and X is vacuum only.

**Leather upholstery:** Vacuum crevices and dust with a soft, white cloth dampened with water and a little dish soap. Test before using saddle soap or another leather cleaner, which may remove some color.

**Floor:** Sanitize a hardwood floor with a mop dampened with a half cup of distilled white vinegar diluted with one gallon of water. Have porous concrete sealed and wash with a phosphate-free detergent. Mop or sponge sealed cork with only hot water and buff with a dry mop or cloth.

**Fireplace:** Have a professional clean the chimney of a wood-burning fireplace to remove built-up soot and flammable creosote once a year. Also clean the flues of wood-

burning and solid-fuel stoves.

### KITCHEN

**Grease:** Use dish soap or don goggles and add eight parts water to one part ammonia.

**Garbage disposal:** Shake in deodorizing baking soda, which is mildly abrasive and counteracts smelly acids poured down the drain.

**Cutting board:** Remove mildew and clean up raw meat, poultry or fish with bacteria-killing bleach (never mix with ammonia or any other cleanser).

**Laminate cabinet:** Use a handheld vacuum to remove dust then wipe up dirt and grease with a mild solution of dish-washing liquid mixed with clean, warm water. Wipe down with a clean, damp cloth and dry with another clean, soft, lint-free cloth or a microfiber cloth to avoid scratching laminate and high-gloss cabinetry, according to MasterBrand Cabinets.

**Counter:** Use a clean, soft cotton cloth with water and a mild, non-chemical liquid detergent to wipe down Formica laminate. Don't let water penetrate the seams, which can cause the substrate to swell. Don't use cleaners containing acid, alkali or sodium hypochlorite that will mar, etch, corrode and permanently discolor the laminate surface, says the Formica company.

**Granite:** Clean with a sponge dipped in water

and mild detergent, and use a plastic scrub pad to gently remove stubborn dirt.

**Stainless-steel appliances:** Use a specially formulated, non-abrasive stainless-steel cleanser that won't leave scratches.

### BATHROOM

**Floor:** Microfiber mops are most effective at removing dirt and bacteria, say experts. If you need a multipurpose bucket, Ikea has the Borstad Rinsing Tub for \$19.99.

**Marble counter:** Use a clean cloth or a sponge with warm water and mild liquid detergent, rinse and then dry with a soft cloth.

**Sink and tub:** Use a sponge with hot water and liquid detergent instead of abrasive scouring powders. Rain-X glass treatment will repel water on clean shower doors.

**Toilet bowl:** Clean and disinfect with a toilet bowl cleaner. Use harsh cleaners to remove rust and stains sparingly.

### BEDROOMS

**Pillows:** Fluff them every day to remove dust. About every month, hang them outdoors or run foam and latex pillows on the dryer's no-heat cycle. Twice a year, clean down, feather and polyester pillows in the washing machine's gentle cycle and dry them completely, or take pillows to the dry cleaners. Launder pillow covers, pillowcases and sheets once a week.

### LAUNDRY ROOM

**Cleaning supplies:** Use a disinfectant wipe on soap dispenser pumps. Wash cleaning rags, shake out dusters and brooms, and microwave the kitchen sponge for two minutes daily then replace it every two weeks.

**Washing machines:** Better Homes and Gardens recommends rinsing non self-cleaning washing machines with distilled white vinegar every six months to remove bacteria and mildew odors. Run a regular cycle with hot water and two cups of white vinegar in an empty washing machine. Then wipe down the interior to eliminate buildup and run a cycle of hot water to rinse.

**Dryer:** Wash the baked-enamel exterior with mild detergent and water, then wipe with a damp sponge; or use any all-purpose cleaner without abrasives. Clean the lint filter every time you run the machine.

### EQUIPMENT

**Coated glass:** Use a damp microfiber cleaning cloth or screen wipes for eyeglasses, phones, cameras lenses, computer screens, ear buds and remote controls. Rubbing alcohol can cause damage as can spraying liquid directly onto them. A specialized UV light sterilizer and sanitizer can also be used to clean a smartphone, toothbrush, jewelry, eyeglasses, toys, keys and money.

**Audio equipment:** Use a soft, anti-static dust cloth that can be dampened with rubbing alcohol to remove fingerprints.

**Video games consoles:** Only use a dry, lint-free cloth.

**Sports gear and equipment:** Use Clear Gear Sports Spray.

### MORE CLEANING TIPS

Office cleaning company Stratus Building Solutions uses electrostatic sprayer disinfectant systems to attack germs in difficult-to-reach spaces. The Portland group offers these cleaning tips:

**One-way wipe down:** Wipe down a surface in one direction and don't go back over it in the opposite direction to avoid leaving germs.

**Color code cloths:** Identify cloths for specific spaces so you don't contaminate the kitchen with the bathroom cloth.

## Combining these common household cleaning chemicals could make you sick or worse

BY JULIA BAYLY  
*Bangor Daily News, Maine*

As confirmed cases of the novel coronavirus, or COVID-19, continue to rise, the United States Centers for Disease Control and Prevention recommends daily frequent disinfecting of repeatedly touched surfaces and objects like tables, countertops, light switches, doorknobs, cabinet handles, cell phones, computer keyboards and appliances.

But even in a pandemic situation, more is not better when it comes to cleaning solutions. The CDC recommends cleaning surfaces with

plain soap and water. To disinfect surfaces, the recommendation is a simple solution of bleach and water at a ratio of one-third-cup of bleach to a gallon of water; alcohol solutions with at least 70 percent alcohol; or commercial household cleaners and disinfectants.

And while it's tempting to mix your own batch of cleanser or disinfectant or increase its potency, the results can be dangerous or deadly. Here are five household chemicals and their combinations to avoid at all times: **Bleach and ammonia:** This combination forms the toxic vapor chlora-

mine that burns your eyes and respiratory system. If there is enough ammonia, the combination can produce hydrazine which is not only toxic, it's a potential explosive. **Bleach and rubbing alcohol:** Bleach reacts with the chemicals in rubbing alcohol to produce chloroform. Breathing enough chloroform can lead to unconsciousness and, in extreme cases, death. The mixture can also burn skin. **Bleach and vinegar:** Mixing any weak acetic acid product — vinegar or lemon juice for example — with bleach forms chlorine gas. This gas

can harm the skin, mucous membrane and respiratory system. High concentrations can be deadly. **Vinegar and peroxide:** Any weak acetic acid mixed with peroxide will produce peracetic acid. The corrosive creation can irritate the eyes and nose and cause chemical burns to the skin. For now, the safest course is to stick to the CDC recommendations and always use commercial products according to the manufacturer's instructions printed on the labels.



# Coronavirus guide

BY MIKE STOBBE  
Associated Press

NEW YORK

Can my kids go on a play date? Is it OK if I visit the gym?

In this time of coronavirus, once-easy questions have suddenly become complex.

Here are some questions and answers about the “social distancing” efforts to slow the epidemic in the U.S.

WHAT IS SOCIAL DISTANCING?

Social distancing are practices implemented by public health officials to keep contagious diseases from spreading.

The measures are aimed at trying to cut down the amount of virus spreading around, and ultimately protect those most vulnerable, including the elderly and people with weakened immune systems.

WHAT MEASURES HAVE BEEN TAKEN?

Governments have closed borders, and millions of workers and students have been ordered to stay home. On Monday, U.S. officials recommended that older people and those with underlying health conditions “stay home and away from other people.” The U.S. is also telling people not to gather in large groups.

And experts also recommend people try to stay at least 6 feet (about 2 meters) away from each other.

WHY 6 FEET?

Experts believe the virus is mainly spread through droplets that come out of your mouth and nose. When an infected person speaks or exhales or coughs or sneezes, the droplets travel about 3 to 6 feet (1 to 2 meters) before gravity pulls them to the ground.

“They fall pretty quickly,” said Dr. Jill Weatherhead, an infectious disease expert at the Baylor College of Medicine in Houston.

It’s important to try to block coughs or sneezes with a tissue or your sleeve, so as to not send those droplet flying directly toward someone nearby.

CAN I GO OUTSIDE AT ALL?

Yes, with some excep-



SUSAN WALSH AP

Friends, from left, Erin Carroll of Severna Park, Md., Clay Colehouse of Crownsville, Md., Jessica Goblin of Severna Park, Md., Travis Victorio of Millersville, Md., Mary Fitzell of Millersville, Md., and dog Marty, enjoy lunch during a visit to Annapolis, Monday. Officials are urging people to observe social distancing — not gathering in large groups — in an effort to slow the spread of the coronavirus.

## SOCIAL DISTANCING

### How it works and what it means for you

EXERCISE IS IMPORTANT. BUT MAYBE STICK TO THE MACHINES AT YOUR GYM, WIPING THEM DOWN BEFORE AND AFTER YOU USE THEM, AND SKIP GAMES OF BASKETBALL OR OTHER ACTIVITIES THAT PUT YOU IN CLOSE PHYSICAL CONTACT WITH OTHERS. IF POSSIBLE, CUT BACK ON THE GYM AND GO FOR JOGS, WALKS OR BIKE RIDES INSTEAD, EXPERTS SAID.

tions. And the guidelines vary based on where you live.

“We’re not being told to stay at home and lock the doors,” said Dr. Willam Schaffner, a Vanderbilt University infectious diseases expert. “We’re not there yet, and I don’t think we’ll get there.”

People who have coughs and sneezes should stay home as much as possible, and call ahead to the doctor’s office if they’re planning to get their illness checked out, he added.

People who have confirmed coronavirus illness

should stay home, as should those who were in close contact with a confirmed case.

WHERE CAN I GO?

Options are becoming limited, with school, gym and restaurant closures in some places, and work-from-home edicts.

Officials in six San Francisco-area counties on Monday told nearly 7 million people to stay inside and venture out only for necessities.

If you live someplace without such restrictions, it’s best just to use good

judgment. If restaurants are open, it’s OK to go to eat. But go in a small group and try to get a table away from others.

It’s necessary to buy food. But try to go to the supermarket at times when it’s less crowded, stay 6 feet away from other shoppers as much as you can, and wash your hands thoroughly when you get home.

CAN I GO TO THE GYM?

Exercise is important. But maybe stick to the machines, wiping them down before and after you

use them, and skip games of basketball or other activities that put you in close physical contact with others. If possible, cut back on the gym and go for jogs, walks or bike rides instead, experts said.

WHAT ABOUT SOCIAL GATHERINGS?

The CDC on Sunday recommended that for the next eight weeks, organizers put off events that would draw at least 50 people. On Monday, the number was reduced to 10.

That could ice a lot of

weddings, family reunions and birthday parties.

Dr. Deborah Birx, who is coordinating the federal response to the virus, said the change from 50 to 10 was influenced by research that tried to estimate the impact of different possible steps.

A CDC official, Dr. Jay Butler, said Monday there’s no hard-and-fast rule. Officials are simply trying to set a reasonable parameter to “increase social distancing while not creating social isolation,” he said in an interview streamed by the Journal of the American Medical Association.

CAN I GO ON DATES? OR SEND MY KIDS ON PLAY DATES?

There’s some debate among experts about dates and play dates.

Adults who are not sick or considered to be at risk can still date, Schaffner said. But skip the bars, concerts and crowded theaters, and instead think about an intimate dinner at home.

For kids, play dates can be OK, especially if they’re outside in parks and involve a small number of kids, he said. Of course, kids who are sick or who are particularly vulnerable to respiratory illness should not go, he added.

Weatherhead had different advice, saying play dates are not recommended. Children generally have had more mild COVID-19 illnesses and therefore might spread the disease before anyone realizes they are sick.

WILL SOCIAL DISTANCING WORK?

It will be tricky to prove these measures made a difference.

Testing for the coronavirus was delayed in the U.S., but it is now starting to become more widely available. That means a lot of new cases may be diagnosed in the coming days, as labs finally find infections that happened weeks ago.

“We’re going to see increasing (case) numbers, and that’s going to be frustrating to people who are doing social distancing. But that doesn’t mean social distancing isn’t working,” Weatherhead said.

## To combat coronavirus, turn hand washing into karaoke with this site

BY CHRISTI CARRAS  
Los Angeles Times

Freeze! Everybody wash your hands.

If you’re trying to prevent the spread of coronavirus, you can now sing DJ Casper’s “Cha-Cha Slide” – or any tune you prefer – while scrubbing your hands thanks to a popular new website called “Wash Your Lyrics” (washyourlyrics.com).

The site, which generates a how-to hand-washing poster tailored to song lyrics of the user’s choosing, has also spurred a viral meme on social media, inspiring people to brainstorm tracks with the best 20-second excerpts

for hand-wash karaoke.

Based on a real diagram released by the United Kingdom’s National Health Service, the generator replaces proper hand-washing instructions with lyrics for each stage of the recommended 20-second hand-washing cycle.

And while “Happy Birthday” still fits the healthy interval perfectly fine, the internet has some better ideas, creating posters featuring Smash Mouth’s “All Star,” “Gloria Gaynor’s “I Will Survive,” “High School Musical’s” “Breaking Free” and other catchy sing-a-longs.

“Shakira’s ‘Ciega, Sordomuda’ chorus is exactly 20 seconds long,” one

astute Twitter user pointed out.

“I have tried a few tunes, having got bored of happy birthday,” wrote another. “(Queen’s) Bohemian Rhapsody is always a winner.”

Developer and designer William Gibson, the mastermind behind the generator, promoted his hygienic handiwork Sunday on Twitter, writing, “I made a little site in 24h that generates hand washing instructions accompanied by lyrics from a song of your choice instantly – check it out!”

Suffice it to say that “little site” has really taken off, even drawing attention from artists such as Miley Cyrus, Blink-182



TNS

Handwashing is essential to keep healthy.

and Troye Sivan, who took the opportunity to promote public health – and their own music – at the same time.

“Wash your damn hands,” Cyrus tweeted on Tuesday, along with a photo of a poster featuring lyrics from her 2009 hit, “The Climb.”

Gibson, 17, has re-

mained active on Twitter since the site launched, keeping followers informed about debugging efforts and retweeting celebrity editions as they come in. He’s even charted and shared which tracks have been used the most, with “Bohemian Rhapsody” by Queen, “Never Gonna Give You

Up” by Rick Astley, “All Star” by Smash Mouth and “Africa” by Toto leading the charge.

“Thanks to everyone who has used the site so far!” he wrote on Monday. “Also sorry for the downtime, didn’t expect the traffic the site received.”



# Coronavirus guide

## TRUE TALES OF QUARANTINED SOCIALIZING

BY CAITY WEAVER, SANAM YAR, JENNA WORTHAM AND MOLLY OSWAKS

New York Times

Where once technology was thought to be the death knell of human social interaction, it is now bringing us together under quarantine. The housebound are nimbly pivoting to virtual social gatherings.

They’re holding birthday parties and bar mitzvahs over video chat, broadcasting DJ sets and streaming concerts (some from the luxurious confines of celebrity homes), and establishing quarantine movie nights on Twitter for “virtual companionship.”

A lot of communal events are taking place on Zoom, a videoconferencing app now being used by many classrooms and businesses (thus transforming it into one of the few companies doing well on the stock market). But

it’s not just Zoom.

There are, for example, a small but highly vocal number of people gathering in the digital plazas, pet stores and pizza shops of Club Penguin Online. There are happy hours being held on Google Hangout, and poker games taking place over FaceTime. There are flute meditation sessions on Instagram and thousands of people participating in dance raves that are broadcast on Twitch.

It’s a lot for the internet. On Monday, Discord, the chat app popular with gamers, announced that it would increase its capacity by 20% to keep up with demand; it crashed shortly thereafter.

### A VIP GAME NIGHT IN HOLLYWOOD

Jeff Baena, a film director, loves organizing social activities; it was at one of his game nights, in fact, that he met his girlfriend, actress Aubrey Plaza. The

couple have been in self-quarantine since March 11 and were feeling extremely antsy.

“Our house is one of those hubs where people are always over and hanging out,” Baena, 42, said by phone this week. “It’s strange to not be able to do that. I was kind of jonesing.”

So he got people together virtually. At 9 p.m. on March 14, a dozen friends – including actress Alia Shawkat, who said she left the set of a television series she was working on early, before it had been officially shut down because of the new coronavirus – joined a group chat for a few hours of Quiplash and other games by Jackbox, an internet game company.

In order for remote players to see the game screen, Baena joined FaceTime from two devices, with one camera aimed at his TV.

Of course, the pandem-

ic loomed large over the course of the night. At one point, someone coughed and a chorus of concerned voices wondered who it was.

“It was me!” said Almitra Corey, 40, who is currently working as the production designer for the final season of the Netflix show “GLOW.” (Filming was paused, as for all other Netflix shows, last Friday.)

“I just smoked weed,” she said. “Relax.”

### A REMOTE RAVE FOR 5,000 GUESTS

In New York on March 15, the city’s hottest nightclub was a virtual day rave. Nine hours of electronic music were streamed from an empty warehouse in Brooklyn to nearly 5,000 guests from around the world, including some in Berlin and Seattle, all of whom were watching on Twitch.

The event, which showcased nine electronic

musicians, was put together by Christine McCharen-Tran, a founder of Discwoman, a talent agency in Brooklyn and collective of femme and nonbinary DJs and music producers.

“I texted all the DJs that I know that need support right now,” McCharen-Tran, 31, said. After gatherings of more than 500 were banned in New York on March 13, she said, “I was seeing so many artists being affected directly.”

So last Friday, she reached out to a lighting designer friend, Michael Potvin, who provided a physical space and a domain name (harrisonplace.nyc). McCharen-Tran got to work building out the site and booking artists.

By the afternoon, harrisonplace.nyc was live and vibing.

“For all of the talk about tech distancing us, it felt very intimate and joyful,” said Jess Ramsey,

35, in a phone interview. Ramsey, who works on hardware and gaming partnerships at Spotify, projected the rave onto her living room ceiling.

“We’re the most stressed we’ve probably ever been, and there’s no place to go, but you can dance in your living room,” she said. “It was the first time we had danced in a week, and it felt really special.”

Strict safety and hygiene protocols were in place even in the empty warehouse. All DJs wore latex gloves and had access to disinfectant wipes and soap. The suggested size of gatherings has shrunk daily and rapidly, from 500 people to 50, and most recently to 10. At the time, McCharen-Tran’s 10-person maximum was out of an abundance of caution; now it would be pushing the limit.

SEE TALES, PAGE 20



SAUL MARTINEZ / NYT

Families visit a drive-in movie theater March 14 in Fort Lauderdale, Fla.

## How coronavirus-weary Americans seek joy

BY AUDRA D.S. BURCH

New York Times

### FORT LAUDERDALE, FLA.

Americans were sunning themselves on beaches just days ago. They were sipping cocktails at bars. They were cheering on sports teams and working out at the gym. They were chasing culture at museums and cutting a rug at clubs. They were trying to get lucky in Vegas, and romping through Disneyland, the Happiest Place on Earth.

No more. Closed, canceled, quiet.

Americans have shut themselves off from each other in a dramatic fashion in hopes of curbing the global coronavirus outbreak. The days of cutting loose are gone. Unless it’s 6 feet apart.

No ice cream parties. No yoga classes.

No cocktail mixers. No bingo.

No nothing.

But some are redefining what it means to have fun, savoring simple pleasures in the midst of so much gloom.

Empty hours and canceled plans are what led the Kasens to one of America’s remaining drive-in theaters in Fort Lauderdale, for back-to-back nights. Philip Kasen, 68, had planned to catch a Marlins spring training game in Jupiter, and Adrian Kasen, 70, was headed to a spiritual retreat farther north in Fruitland Park.

No spring training.

No spiritual retreats.

“I am in charge of our entertainment. All of a sudden, we had to rethink what we can do,” said Philip Kasen just after pulling their blue compact car into the parking lot for the 8 p.m. showing of “Bad Boys For Life.” The night before, they saw “Onward,” Adrian Kasen announced while unpacking a bag stuffed with hand sanitizer, pretzels and candy.

“There are no sports to watch, which hurts, so we were trying to come up with something we could do without putting ourselves at risk,” said Philip Kasen. “We were looking for a safe space.”

At this frightening and uncertain time, Americans of every generation – from preschoolers to pensioners – are now looking at weeks, possibly months of no recreation, at least not out in the open.

The outbreak has led to questions unimaginable just a month ago: What is fun in the age of a pandemic? What can one do safely indoors or outdoors? How does a play date work 6 feet apart?

“People are trying to navigate this collective challenge by reimagining what fun is while being clear about the serious nature of this,” said Tracy Sturdivant, 43, who runs a social impact firm in Brooklyn and spent much of last week crowdsourcing safe things to do with her family.

Her husband, Victor Hamilton, has rediscovered an activity from his childhood that helps fill the hours: coloring in sketchbooks.

“From the people at the bars who are like, ‘whatever,’ to people behind drawn curtains and everyone in between, we are

just trying to figure out what it means to practice social distancing,” Sturdivant said, ticking off a list of events canceled by the outbreak, including her son’s soccer practice, a birthday party and a gala.

As the virus marched into every state, cities and towns across the country shelved crowd-drawing pastimes to enforce social distancing, the single best way to break the chain of transmission, according to health experts.

The Centers for Disease Control and Prevention has urged people to stay away from crowds of 50 or more. President Donald Trump slashed that number to 10 and asked Americans to avoid bars and restaurants altogether. The message was loud and clear: stay home, stay away from your favorite places.

And yet, the crowds still gathered.

Chicago’s huge annual St. Patrick’s Day parade was canceled but that did not stop partyers from chugging green beer at neighborhood bars and pubs. The white sand

beaches of Florida have remained packed. A former Nevada beauty queen and political candidate defiantly wrote on Twitter about her recent adventure to a hamburger joint.

“I just went to a crowded Red Robin and I’m 30,” wrote Katie Williams, a candidate for the Clark County School District board of trustees in Las Vegas. “It was delicious, and I took my sweet time eating my meal. Because this is America. And I’ll do what I want.”

Those heeding the call to stay inside and “flatten the curve” are improvising, following the rules while trying to savor little moments of joy.

In Italy, the center of the outbreak in Europe, residents in a neighborhood in Rome sang songs from their balconies and windows to cheer each other up. In America, new communities have popped up online, showcasing live musical performances, hosting playwriting competitions, leading virtual dance classes.

Groups of friends are watching their favorite

television shows and movies together over FaceTime. A zoo in Cincinnati has a live video feed of its animal exhibits for children who are now home from school to enjoy.

Megan Ledbetter’s social calendar usually includes evenings and weekends at house music sets, ecstatic dances and art shows. She had plans to go see her favorite DJ spin house music at a downtown Chicago club, but that was before Illinois’ governor began imposing serious restrictions.

“I wanted to support the artists who will suffer, and I am already feeling cooped up,” said Ledbetter, 39, a criminal defense lawyer.

With so much of her entertainment postponed or canceled, Ledbetter spent the weekend with her 7-year-old daughter, Portia, and ex-husband, inside her house, a safe distance from others.

The boredom gave way to a kind of creativity.

They built a fort made of furniture, cushions and blankets. They tried a simple sewing project, stitching a satchel. They came up with a new game using Portia’s collection of stuffed animals.

“I have a young daughter so I have to stay in as we have been advised,” she said. “But the thought of not being able to do the things I do socially, and not knowing when this will be over honestly gives me anxiety.”

Dolores Bsharah went to her last exercise class at a senior center in Livonia, Michigan, last week.

“With everything shutting down, it feels like our world got really small really quick,” said Bsharah, 86, who meets her friends – including a 98-year-old – at the class several times a week. “Of course you are disappointed, but you also understand it had to be done.”

Bsharah plans to fill her days with neighborhood walks and baking Irish soda bread. She has also embraced a bit of spontaneity.

The radio was recently playing pop music when she walked in her family room. No one was watching. She decided to dance.



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## FROM PAGE 19 TALES

Many other bands are performing in empty concert halls for the digital masses. The metal band Code Orange performed a record-release concert with an elaborate multimedia production to an empty room, for example, streaming to more than 12,000 fans.

In order to help fans support the artists in real time, McCharen-Tran and other producers of these events display the Venmo user names of artists at the bottom of the screen during their sets.

**A GOOGLE HANGOUT HAPPY HOUR**

Lauren Ashley Smith, a TV writer from St. Louis who lives in Los Angeles, turned to Google Hangout this March 14 to host a digital happy hour with a few close friends. That turned into 57 close friends, and then, over 60 once her sisters invited friends of their own.

“I know it seems like I invited a lot of people,” Smith, 34, said, “but I did carefully curate the people that were invited.”

To fit the criteria, a guest had to be someone Smith felt “wouldn’t take it too seriously” and who was “more extroverted – or would be willing to talk to a bunch of strangers they didn’t know.”

She knew everybody was just home alone, bored or scared. So, she said, “I made a run of show.”

The activities included a game Smith invented (“in 30 seconds,” she said) called “Who’s That Girl?” She would hold up photos of celebrities (saved on her phone) to the laptop’s camera, and players earned points by being the first person to correctly type the subject’s first and last name in the chat section of the Hangout window.

The celebrities were “obscure, to some,” Smith said. (They included Lala Kent from “Vanderpump Rules,” singer Keke Wyatt, Christine Brown from “Sister Wives” and Esther the Wonder Pig, whom Smith described as “a pig influencer on Instagram.”)

The winner received a prize of \$50 on the cash-sharing app Venmo. It was ultimately donated to the Downtown Women’s Center in Los Angeles, which provides services to currently and formerly homeless women.

After the hangout, Smith said she received “a lot of heartfelt messages” from participants thanking her for including them. She “absolutely” intends to do it again.

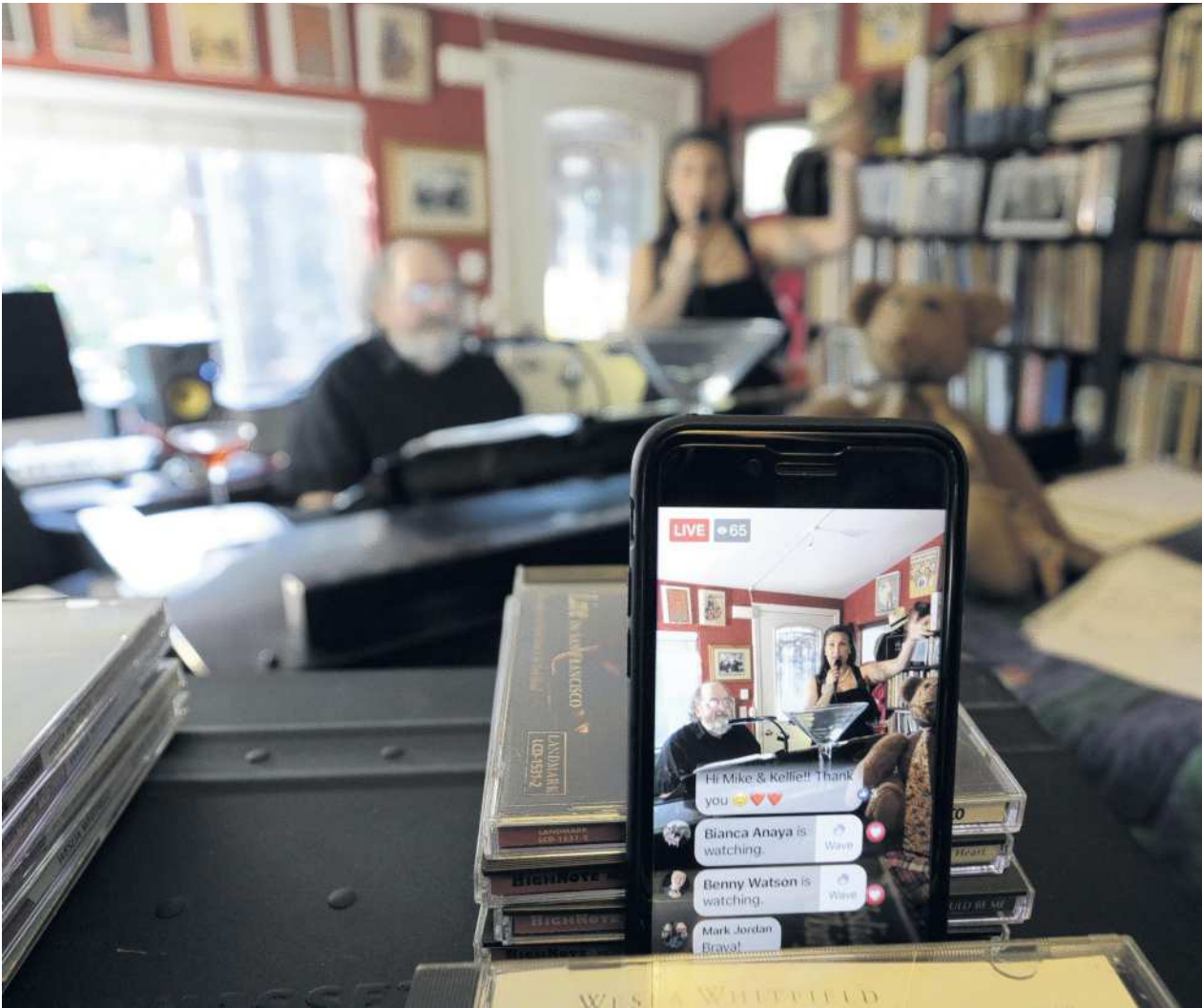
“It’s really easy,” she said. “Social distancing is for the greater good of everyone. And you can still make it really fun.”

Before the event, it struck her that she and her wife had yet to host a party at their new home. “But now I feel like we have.”

**CONSPIRACY THEORIES ON CLUB PENGUIN**

There once was an online Disney media platform called Club Penguin, which was a kid-friendly social media hub where users could interact as animated penguins in a virtual world. It was formally discontinued in 2017.

But the internet being the internet, there are still multiple simulacra of Club



ERIC RISBERG AP

Pianist composer and arranger Mike Greensill join vocalist Kellie Fuller for a “virtual cocktail party piano bar” March 19 on Facebook Live in St. Helena, Calif. All public music venues in the Napa Valley have been closed due to the coronavirus restrictions and the pair held the virtual show as a way to keep performing.



ERIC RISBERG AP

Don Overly and his wife Mardel take part in a live virtual wine tasting March 19 from their home near Reno, Nev., with Bouchaine Vineyards winemaker and general manager Chris Kajani, left, and sales director Brian Allard in Napa, Calif. The winery is presently closed to visitors because of the coronavirus threat, but just started conducting tastings to its customers online. People wanting to taste can select from three different wine tasting kits. The wine included in the kit is shipped to the recipient with instructions on booking an appointment and how to access the virtual contact via the internet.

Penguin around: unlicensed duplications hosted on independent servers, filled with the same population of late-born millennials and first wave Gen Z-ers that flocked to the Disney version by the hundreds of millions.

On March 13, masses of users assembled in a popular iteration of the original pretend world – this one called Club Penguin Online – to share their anxieties, wishes and predictions for the uncertain future, and to ask everyone where they were from. Also, to keep frantically serving one another digital pizza.

There existed eerie similarities between the cartoon penguin world and humanity’s own, under quarantine. The sports stadium was devoid of chatting penguins. The skate park was nearly empty; ditto the dance club.

In other corners of the penguin universe, users delighted in that activity increasingly outlawed by public health officials: congregating in large groups.

Although conversations can be hard to follow on Club Penguin Online – a user’s typed message appears briefly above his or her representative penguin’s head wherever on the screen that penguin

happens to be standing (or dancing), before disappearing forever – the pizza shop became, around midday, a kind of political salon.

One penguin asked another penguin that purported to be from Italy if, in real life, the grocery stores were out of pasta. Other flightless birds lamented the quality of their officials’ responses to the crisis.

A penguin in a chef’s hat approached and said, “They aren’t telling anyone anything,” before walking away to take another penguin’s pizza order.

Outside, in the plaza, a navy blue penguin was spreading disinformation and conspiracy theories. This penguin had presented itself as an expert on the coronavirus, imploring fellow penguins to pose to it any medical questions.

One penguin wondered how likely it was to become infected; the blue penguin replied confidently: “if ur under 60 years old odds are 0,2.”

“Do you think someone created coronavirus?” a coral pink penguin said.

This was the opening the blue penguin had been waiting for. “YES,” it said. “Have u heard of 5g”? It went on to describe (in halting increments, because messages typed in

Club Penguin Online have a limit of 64 characters) an online conspiracy theory that attributes virus symptoms to radiation caused by wireless internet.

The penguins in the plaza did not seem convinced.

### RELAXING GATHERINGS

Online social gatherings are also taking meditative forms. Justine Stephens, 27, guided a live flute meditation on her Instagram account last weekend to help about 40 friends and viewers deal with stress and anxiety during the pandemic.

“Needed this and didn’t know it. Super anxious about the start of the week,” read one comment during the livestream. “Thank you for curing my Sunday scares,” someone else added.

On March 15, Mikael Acatl, an energy worker and shaman who uses the pronoun “they,” held a healing session from their Brooklyn apartment, surrounded by plants, burning copal and bathed in golden-hour light.

And Josh Peck, 39, and Eliza Philpott, 31, who operate a retreat space in the Hudson Valley in New York, livestreamed a sound bath for about a hundred digital partici-

pants. They used two high-end microphones to funnel dual sources of audio to listeners simultaneously, which created the sensation of being in a three-dimensional space.

Other soothing practices included a reading by writer Ashley C. Ford, of poems by Pablo Neruda. More than 100 people tuned in to the half-hour broadcast on YouTube.

There was also free “mom” advice dispensed by Mary Laura Philpott, an author in Nashville, who tweeted that she had “Big Mom Energy to spare. (Seriously, my teenagers are over it.)”

“I was like, Who needs the mom to tell you to drink your water, to wash your hands, that it’s going to be OK, to get off the internet?” Philpott said by phone. (She was surprised that the answer was: lots and lots of people.)

Gamers are getting into it, too. On Twitch, Nick Polom, a streamer with some 400,000 subscribers, took a break from streaming rounds of Apex Legends starting on March 11, to share more timely “Just Chatting” broadcasts.

Each is hours long, with names like “Doomsday cooking stream” (in which he livestreamed his stir fry, grocery rundown, and jokes about frozen chicken tenders) and “Girlfriend and Boyfriend stuck in quarantine!” (in which he livestreamed himself playing virtual reality games with his partner, for a remote audience of thousands).

As novelist Sarah Schulman put it after a reading of hers was canceled in New York (and she offered her own individual readings by phone): “If all the institutional theaters are closed and all the competitive curated spaces are closed, we’re back to just entertaining each other.”

### ONLINE 12-STEP MEETINGS

Alcoholics and drug addicts in recovery frequently warn each other that isolation is a route to relapse; going to in-person 12-step meetings, sharing personal stories and talking with other addicts and alcoholics is a means of connection for many in recovery.

While long-distance 12-step recovery has existed since at least World War II, and moved to email and online chat and video with the rise of the internet, much of 12-step recovery still relies on in-person meeting.

With the health guidance for people to not congregate in large groups, those who rely on Alcoholics Anonymous and other recovery groups have organized quickly. Many meeting chairs across the country are creating regular meetings on Zoom.

“Many of us have been saying in these online meetings that if we were still drinking and using drugs this would be the perfect environment to self-destruct – fear of the unknown, lack of support, isolation, financial insecurity,” said Nanea, who asked to be identified by only her first name in accordance with recovery guidelines.

She created her own version called the Online Recovery Group. In addition, the central offices of regional 12-step groups have jumped in to show what meetings are canceled and which are replaced by chat, video or email.

“We need to have a way to share our experience, strength and hope to new people struggling with addiction and alcoholism,” Nanea said. “I know a lot of people, not just people in recovery, are afraid and feeling isolated right now. I feel very fortunate to have an active community that knows how to support each other.”

### VIRTUAL RELIGIOUS OCCASIONS

On the morning of March 15, the Redemption Church in Costa Mesa, California, set up its first livestream, in part to broadcast two infants’ dedication ceremonies.

Kristin Castillo, 30, a brand and marketing consultant, and her husband, Nate, 30, had originally planned to gather their family, friends and loving congregation (about 200 members strong) to witness and participate in the religious service, which would officially welcome their newborn son into the church. Afterward, there was to be a celebratory lunch.

“Obviously,” she said, “that didn’t happen.”

Instead, Kristin and Nate’s in-person guest list was trimmed to one of each of their parents. When the ceremony reached the point where their infant’s “spiritual aunts and uncles” were meant to affirm their support, the family and friends that were asked to accept this duty participated remotely.

“They were texting us in real time: ‘Yes! Yes!’” Kristin Castillo said.

While she found the experience of being on camera “nerve-wracking,” she described their baby, nearly 8 months old, as “surprisingly cooperative.”

“Watching a crazy little guy having a good time, hopefully that lifted someone’s spirits,” she said. “And, ironically, by stripping all of the social trappings away, it helped us focus more on the intent of the actual ceremony.”

Mike Isaac, John Herrman and Taylor Lorenz contributed reporting.



# Coronavirus guide



ANNA ARKAYEVA/TASS TNS

A message reading “Wash hands” is seen in the sky over Sydney amid an outbreak of the COVID-19 coronavirus on March 13. On March 11, the World Health Organization (WHO) declared COVID-19 a pandemic.

BY DEBORAH NETBURN  
*Los Angeles Times*

You’re doing everything right to avoid getting the coronavirus – avoiding handshakes, eschewing large gatherings and, of course, washing your hands several times a day.

And yet, you’re worried. Maybe you sat next to someone who was coughing in a movie theater. Or your spouse just returned from a business trip in Europe. Perhaps someone in your office building was diagnosed with COVID-19.

Now you can’t help but wonder: Do I need to self-quarantine?

It’s an important question. People who have a compelling reason to believe they may have contracted the virus should isolate themselves for 14 days to see if they develop symptoms of COVID-19 – dry cough, fever, shortness of breath. But a fortnight is a long time to be holed up. It’s not an action that should be taken likely.

“We have to keep living our lives, and by and large we should be able to,” said Dr. Nancy Gin, medical director of quality and clinical analysis for Kaiser Permanente in Southern California. “We need to respect this coronavirus, but not fear it.”

## FIRST, A QUICK DEFINITION AND A DISTINCTION

Self-quarantine is when you feel fine, but you separate yourself from others because there’s a high chance you’ve been exposed to the disease. Isolation is when you

# SELF-QUARANTINE: WHEN TO DO IT

avoid people because you have symptoms of a disease and you don’t want to get others sick.

In practice however, they look pretty similar. “They have the same end game, which is that you are sequestered from the rest of the public for a period of time,” said Dr. George Rutherford, an infectious disease specialist at the UC San Francisco School of Medicine.

## WHEN SHOULD YOU SELF-QUARANTINE OR ISOLATE YOURSELF?

The Centers for Disease Control and Prevention recommends that you self-quarantine if you have a medium or high risk of having recently contracted the coronavirus.

As of March 12, the CDC has identified just two scenarios that it considers high risk for coronavirus exposure:

- If you recently traveled back from China’s Hubei Province.
- If you live with, or are intimate with, someone who has been diagnosed with coronavirus and you have taken no steps to protect yourself.

The health agency has also described a few medium-risk situations, including recent travel to Iran or another country with sustained community

“**IN GENERAL, YOU SHOULD STAY HOME IF YOU HAVE SYMPTOMS AND NOT IF YOU DON’T HAVE SYMPTOMS. THINK ABOUT HOW YOU WOULD MONITOR YOURSELF FOR THE FLU.**

*Dr. Nancy Gin, medical director of quality and clinical analysis for Kaiser Permanente in Southern California*

transmission, close contact with someone with a laboratory confirmed case of COVID-19, or living with someone with confirmed COVID-19 and taking some precautions.

In these cases, experts recommend that you stay away from others for 14 days to see if any symptoms of the virus develop.

If you are feeling sick – sore throat, fever, even just a cold – you should stay home as well.

“In the setting of the global pandemic, I think it is important for individuals who experience cold or flu-like symptoms to self-isolate themselves,” said Dr. Amesh Adalja, a senior scholar at Johns Hopkins Center for Health Security.

## WHEN IS SELF-QUARANTINE UNNECESSARY?

Healthy Americans who do not fall in the high- or

medium-risk categories do not need to self-quarantine at this time.

“In general, you should stay home if you have symptoms and not if you don’t have symptoms,” Gin said. “Think about how you would monitor yourself for the flu” and do that, she said.

So even if you live with someone who has flu-like symptoms, it is not necessary to self-quarantine.

Even if someone in your office has been diagnosed with COVID-19, you do not need to self-quarantine.

Even if you went to a conference where someone was diagnosed with COVID-19, you do not have to self-quarantine.

Even if you flew on a plane, you do not have to self-quarantine (unless someone within two seats of you was diagnosed with COVID-19).

In all these cases, the

advice is the same: “Monitor yourself for symptoms and then self-isolate if they develop,” Adalja said.

## HOW LONG SHOULD YOU SELF-QUARANTINE IF YOU DO NOT HAVE SYMPTOMS OF COVID-19?

Health officials advise that if you do need to self-quarantine, you should expect to do it for a full two weeks to be safe.

In a study of 181 people who contracted the new coronavirus, most people developed symptoms within six days of becoming infected, and 98% of them had symptoms by day 12.

The authors of the study calculated that only 101 out of every 10,000 patients will take longer than that to begin showing symptoms.

## HOW LONG SHOULD YOU REMAIN IN ISOLATION IF YOU DO HAVE COVID-19 SYMPTOMS?

If you have cold and flu-like symptoms, you should isolate yourself from others for the duration of your symptoms, which could be up to 14 days.

## SHOULD YOU TELL YOUR HEALTH CARE PROVIDER IF YOU DECIDE TO SELF-QUARANTINE OR TO ISOLATE YOURSELF?

It’s a good idea to notify your health care provider before you begin either one. He or she can give you tips on how to stay safe and protect those around you, as well as what red flags to look for that would indicate you need to see a doctor or nurse in person, or be moved to the hospital.

## HOW CAN YOU KEEP THE PEOPLE YOU LIVE WITH SAFE?

If you do have to self-quarantine or isolate yourself, you should have as little contact with others as possible. Ideally, you would stay in a private room that other members of the household do not enter.

However, since that is not always realistic, you should wear a mask to protect others.

“It is not necessary for the family to wear a mask, only the sick person,” Gin said.

## CAN YOU WALK YOUR DOG IF YOU ARE IN SELF-QUARANTINE?

Yes. You can also accept a food delivery or sign for a package. That also goes for people who are self-isolating.

“It’s 15 minutes of close face-to-face time that puts people at risk or two hours or more of contact in a contained environment,” Gin said. “If you walk your dog and pass your neighbor, that’s fine.”

# How to clean the bundle of germs that is your phone

BY TALİ ARBEL  
*Associated Press*

NEW YORK  
You’re washing your hands countless times a day to try to ward off the coronavirus.

You should also wash that extension of your hand and breeding ground for germs – your phone. Tests done by scientists show that the virus can live for two to three days on plastic and stainless steel. The Centers for

Disease Control and Prevention recommends cleaning all “high-touch” surfaces daily, including phones, keyboards and tablet computers.

But cleaning your phone improperly can damage it. You want to avoid getting

moisture inside it or scratching the surface. Don’t spray cleaners directly on the phone, don’t dunk it in cleaning solutions, don’t spray it with compressed-air devices used to clean keyboards and avoid rubbing it with abrasive materials.

Instead, start by turning off the phone and unplugging all cables. Your phone shouldn’t be charging as you clean.

You can use Clorox wipes or wipes with 70%

alcohol, which you can get at the drugstore, to wipe down your phone. Apple, which has cautioned against using household cleaners on its phones, says to do that “gently.” AT&T has further recommended wringing out disinfectant wipes before using them on a phone.

You can also use soft cloths to clean the phone, like a microfiber cleaning cloth or the cloths used to clean your glasses. Google says you can dip the cloth

in soap and water, as long as you’re careful not to get moisture in the phone. AT&T says paper towels work, too. You can spray them with disinfectant. Again, don’t spray the phone itself.

The phone-cleaning step is one of many measures public-health authorities are recommending to try to slow the spread of the virus.



# Coronavirus guide



ANDREW BURTON NYT

Kate Mannle, who recently traveled through South Korea on her way home from a trip to Myanmar, quarantined herself in her home in Seattle.

# HOW TO QUARANTINE YOURSELF

BY RONI CARYN RABIN  
New York Times

Stay home unless you must see a doctor. No work, school or shopping. If you must come out of your room, wear a mask. And don't share towels.

If you are among the thousands of Americans now self-quarantined because of possible infection with the coronavirus, these are a few of the new house rules, courtesy of your local health officials and the Centers for Disease Control and Prevention.

Among people told to self-quarantine, isolate themselves or stay home are people returning from parts of China and Iran, those who developed symptoms after spending time in other countries with sustained community transmission, and those with no known exposure who are sick.

But many individuals who don't fit neatly into any of these categories and weren't asked to stay home are choosing to seclude themselves anyway because they don't want to put others at risk. California has more than 5,500 people in self-quarantine. More than 2,700 are in seclusion in New York City alone.

It may sound like a vacation from reality, an ideal time to binge on Netflix and catch up on sleep. In fact, it's not easy to lock yourself away from family and friends. There are practical and logistical challenges and yawning gaps in the official advice that make it even harder.

The terms of home isolation can be onerous and may last for two weeks, which is the presumed incubation period for the virus. It is especially challenging if you have young children or elderly relatives to care for, or live in cramped quarters with a lot of roommates.

**ISOLATION**

If you are infected or



MIKE SIEGEL TNS

To protect themselves from COVID-19, Judith and Jan Kyle, seen here on March 6, are self-isolating themselves at their Everett, Wash., home because of age and underlying health conditions.

have been exposed to the coronavirus, you must seclude yourself from your partner, your housemates, your children, your elderly aunt. You shouldn't even pet your dog. And definitely no snuggling with your pet (no licking).

If you don't have your own room, one should be designated for your exclusive use. You should use a separate bathroom, if you have one.

No visitors and no staff, unless it's absolutely essential. Don't take the bus or subway, not even a taxi.

**MASKS**

If you must be around other people – in your home, or in a car because you're on your way to see a doctor, and only after you called first – you should wear a mask, and everyone else should, too.

But first, you or one of your friends or family members have to find masks, which are sold out almost everywhere.

**HYGIENE**

If you cough or sneeze, you should cover your mouth and nose with a tissue and discard the

used tissue in a lined trash can. Then you must immediately wash your hands with soap and water for at least 20 seconds.

You can use sanitizer, if you can find it, but soap and water are preferred.

Even if you haven't coughed or sneezed, you should wash your hands frequently and avoid touching your eyes, nose and mouth if you haven't just washed them.

**DISINFECT**

Don't share dishes, drinking glasses, cups, eating utensils, towels or bedding with anyone (including your pets). Wash these items after you use them.

Countertops, tabletops, doorknobs, bathrooms fixtures, toilets, phones, keyboards, tablets and bedside table are considered "high-touch surfaces"; wipe them often with a household cleanser.

Frequently wipe down surfaces that may be contaminated by bodily fluids, including blood and stool.

**MONITORING**

Keep an eye on your health and call a doctor if

your symptoms are getting worse. Make sure to tell the medical staff you are being monitored for the coronavirus.

**HOUSEHOLD MEMBERS**

Family members and other occupants should monitor the patient's symptoms and call a health provider if they see a turn for the worse.

Housemates can go to work or school, but it's going to be their job to stock up on groceries, pick up prescriptions, take care of the quarantined and keep the place clean. They'll be wiping down doorknobs and countertops, doing loads of laundry and washing their hands – a lot.

When around the patient, household members must wear a face mask, and both mask and gloves if they have contact with the patient's bodily fluids. These should be thrown away immediately, never reused.

Elderly members of the household and those with chronic medical conditions are at particular risk if they are infected. Contact with the secluded individual should be mini-

mized.

Other occupants of the home should wash their hands frequently and avoid touching eyes, nose and mouth with unwashed hands. They should stay in a room separate from that of the exposed or sick individual. If feasible, other members of the household should not share a bathroom with the secluded person.

They should monitor their own health, too, and call a doctor if they develop a cough, fever or shortness of breath.

**UNANSWERED QUESTIONS**

No one pays you for self-quarantine. There is no reimbursement for products you may need, no government-paid nurse to stop by the home and help out. Self-quarantine is a hardship for both those who have families and those who live alone.

Not everyone can work remotely. A two-week absence from work can take an enormous financial toll on hourly wage workers who have to clock in and show up to get paid or who are part of the gig economy with no single

employer.

Many Americans, maybe most, live paycheck to paycheck.

"We have to have social interventions to incentivize and support isolation, or we are doomed," said Arthur Caplan, professor of bioethics at the New York University Langone Medical Center.

People with no health insurance, inadequate insurance or no regular doctor will be reluctant to seek care if they have symptoms, fearing steep medical bills, he noted. Individuals living in the country illegally, fearful of being discovered and deported, may avoid diagnosis and care.

"I don't see the state or federal government preparing for this in any way," Caplan added.

Sen. Patty Murray, D-Wash., and Rep. Rosa DeLauro, D-Conn., have introduced legislation that would require all employers to let workers accrue seven days of sick leave, while providing another 14 days for immediate use during a public health emergency.

Providing for people who make sacrifices for the greater good is crucial, said Lawrence Gostin, a law professor at Georgetown University and director of the World Health Organization Collaborating Center on National and Global Health Law.

"We ought to have a social compact: If you're sick, whether you've got COVID-19 or not, you should separate yourself from society," Gostin said. "That's your part of the bargain; you're doing it for your neighbors, your family and your community."

"In exchange," he said, "we as a nation owe you the right to a humane period of separation, where we meet your essential needs like medicine, health care, food and sick pay."



# Coronavirus guide

## CAN YOU BE FORCED INTO QUARANTINE?

Your questions answered



Getty Images/iStockphoto

BY NEIL MACFARQUHAR  
*The New York Times*

Government-imposed quarantines were fairly common in ancient times, before medicine stemmed the ferocity with which contagious diseases spread. The very word quarantine is rooted in the Italian words *quarantena* and *quaranta giorni*, or 40 days, the period of time that the city of Venice forced ship passengers and cargo to wait before landing in the 14th and 15th centuries to try to stave off the plague. Since then, quarantines have often generated tensions between protecting public health versus respecting individual rights.

Here are answers to some common questions about how quarantines are imposed and enforced in the United States in the wake of the coronavirus.

### **Q: Can the government impose a quarantine on anybody?**

**A:** The legal authority to impose quarantines on individuals is rooted in the “police powers” granted broadly to states, counties and cities to protect public health. That means for most Americans, a state or local quarantine imposed to prevent the spread of the coronavirus will be far more important than any federal order.

When it comes to the federal government, it can impose quarantines under the Public Health Service Act for two main reasons: to prevent the spread of communicable disease into the United States or between states. That is why, for example, the Centers for Disease Control and Prevention ordered Americans flying home after visiting mainland China or Iran to fly into one of 11 major U.S. airports that had the ability to screen passengers.

Quarantines are considered a measure of last resort when no preferable means is available to halt the spread of a deadly communicable disease. Those subject to quarantine should be either infectious or have been exposed to the disease,

experts said.

“We do not want to restrict people’s liberty unless it is necessary, unless we cannot achieve the public health end with less draconian measures,” said Wendy Parmet, the director of the Center for Health Policy and Law at Northeastern University.

### **Q: So there is no blanket law?**

**A:** No, the laws vary by state and even locality. Some 40 states updated their quarantine laws after fears spread over a possible broad anthrax attack in the months after the Sept. 11 attacks, according to Lawrence Gostin, a professor at Georgetown University Law School who specializes in public health law. He is the author of a legal template called the State Emergency Health Powers Act, which many states adopted in whole or in part. Some states retain antiquated regulations on their books.

### **Q: Are quarantines, including self-isolating at home, voluntary or mandatory?**

**A:** It is a bit of a gray area. It often seems voluntary until the person involved tries to leave, at which point health officials are likely to make it compulsory, experts said. The rules are notoriously hard to confirm because county governments often do not publish their regulations online.

When one of the Americans flown home from Wuhan, China, tried to leave a California military base where the group was quarantined, for example, Riverside County mandated the quarantine.

The bottom line, however, is that if a quarantine is not enforced and other people catch the fatal disease as a result, the local government could be held liable, Gostin said. “Thinking about this as purely voluntary is wishful thinking.”

### **Q: Is it a crime to evade a quarantine?**

**A:** Again, laws vary by state, but those who ignore the rule could face fines or jail time. Logic

dictates that draconian enforcement would be difficult and often counterproductive. No local law enforcement agency would likely compound its problems by throwing a quarantine scofflaw with a deadly communicable disease in among its jail population.

Local authorities often have some form of enforcement power, but usually try gentle persuasion to persuade people that it is for their good and the good of the community. An infected person blatantly ignoring an order might be forced to go into medical isolation — that is, some form of locked hospital ward.

Experts worry that many Americans might think they have the right to go someplace local like the supermarket without considering the consequences for others. “We have lost this tradition of the common good and social responsibility to each other and that could be a big problem in America,” Gostin said.

### **Q: Is there a right to appeal?**

**A:** States should have some manner of appeal process, and some require a court order from the outset. If there is no medical tribunal or other means for a second opinion, ultimately anyone could challenge a quarantine order in court through a writ of habeas corpus.

Quarantine laws tend to be controversial because they are akin to jail time, using the coercive power of the state to tell people that they have to stay confined, even if in their own homes.

The CDC rewrote its quarantine guidelines in 2017 and they have never been tested in court. The Supreme Court has also never dealt with an infectious disease quarantine case, Gostin said.

Under CDC rules, the federal government must test those confined within 72 hours and define the length of stay from the outset — two weeks for the coronavirus because that is the incubation period for the disease.

The most famous recent

test case was Kaci Hickox, a nurse who was initially quarantined involuntarily at Newark Liberty International Airport in 2014 upon returning from West Africa, where she had worked with Ebola patients.

After a few days, she was allowed to return to her home state of Maine but ordered to remain in isolation. Having tested negative for the virus, Hickox sued and the judge rejected the quarantine order.

With the help of the ACLU, Hickox also sued New Jersey, which resulted in a settlement that gave arriving passengers more rights, including the right to appeal the decision and to seek legal advice.

### **Q: What does the government provide during a quarantine?**

**A:** The most glaring hole in American quarantine laws, experts said, is that there is no guaranteed salary. An employer could even fire a quarantined employee. President Donald Trump has said that his administration would address financial relief for people quarantined.

If you are separated from the community for the public good, the government should provide medical service, essential medications, food and other social support if you need it, Gostin said.

Secretary of Defense Mark Esper selected more than 1,350 total rooms on 13 bases to house American travelers or U.S. government personnel under federal quarantine, with three bases currently hosting some 600 people, said Lt. Col. Chris Mitchell, a Pentagon spokesman. Aside from offering housing, military personnel are not involved, he said, with the Department of Health and Human Services deciding who goes where and providing services.

### **Q: Are quarantines effective?**

**A:** They generally help slow the spread of the disease but sometimes do not depending on the disease and the conditions of

the quarantine, experts said. In China, that seemed to decelerate the exponential spread of the virus, they said, whereas holding passengers on the Diamond Princess cruise ship in Japan appeared to create a kind of petri dish with more people infected.

### **Q: Could there be broad quarantines in the United States like those imposed by China or Italy?**

**A:** The United States government lacks the broad authority to impose the sweeping quarantine seen in China, where some 70 million people were confined in the largest such effort in history. Italy, which has a more centralized government, attempted to lock down the entire country. But in the United States neither federal nor state law contains the powers for such expansive measures, Gostin said.

In addition, the United States does not really have the logistical systems in place to guarantee the distribution of medical services, food and other necessities to people under quarantine.

New York state decided to deploy the National Guard in New Rochelle, a New York City suburb and the center of a significant outbreak, to help provide those kinds of services and to help scrub public spaces clean. The center of the city is considered a “containment zone,” but it is not under quarantine.

### **Q: Is there any history of quarantines in the United States?**

**A:** The measures being implemented now around the globe are the most sweeping since the 1918 influenza pandemic.

In the United States, quarantines have been extremely rare. The last federal quarantine was in the early 1960s against a suspected smallpox outbreak. Instead the CDC tends to issue health warnings, like advising pregnant women to avoid Southern Florida in 2016 during an outbreak of the Zika virus.

In earlier times, there were frequent legal quarantines, dating back to at

least the early 18th century. The fact that they often targeted minority immigrant communities is a key reason that civil libertarians are leery about giving the government wide powers today. Two of the most notorious cases occurred during the late 19th and early 20th centuries.

**A:** 1900, the city of San Francisco tried to impose a quarantine on Chinatown, arguing that a diet of rice made people more susceptible to bubonic plague than the more American diet of meat, and demanded that its residents submit to an unproven vaccine, according to Howard Markel, the director of the Center for the History of Medicine at the University of Michigan. Residents sued under the 14th Amendment, which guarantees due process and equal treatment under the law, and won.

**A:** New York City, which once deployed health police armed with billy clubs and powers of arrest, an outbreak of typhus among Russian Jewish and Italian immigrants on the Lower East Side prompted the authorities to confine some 1,200 people on North Brother Island off the Bronx for several months in 1892.

Perhaps the island’s most infamous resident ever was Mary Mallon, known as “Typhoid Mary,” an Irish-born cook who infected dozens of people in New York, killing some of them, by changing jobs frequently and refusing to stop working as a cook.

Markel cited in his book “Quarantine” an example of the sense of sweeping power held by the authorities at that time, when they thought it was in the public interest to impose a quarantine.

Asked to testify in Congress about quarantining hundreds of immigrants on the island in 1892, Cyrus Edson, the New York City’s sanitary supervisor, responded, “We may take possession of the City Hall forcibly and turn it into a contagious disease hospital if in our opinion it is necessary to do so.”



# Coronavirus guide

BY KATIE HAFNER  
*New York Times*

Amid the uncertainty swirling around the coronavirus pandemic stands one incontrovertible fact: The highest rate of fatalities is among older people, particularly those with underlying medical conditions.

Of the confirmed cases in China as of March 15, nearly 15% of patients over 80 have died. For those under 50, the death rate was well below 1%.

There is no evidence yet that older people are significantly more likely to acquire the coronavirus than younger people. But medical experts say that if people over 60 are infected, they are more likely to have severe, life-threatening disease, even if their general health is good. Older people with underlying medical conditions are at particularly high risk. Experts attribute some of the risk to a weakening of the immune system with age.

This leaves older people and their families wondering what extra precautions they should take. Several best practices have been recommended by the Centers for Disease Control and Prevention, the World Health Organization, geriatricians and infectious diseases specialists.

Familiarize yourself with guidelines and follow them.

Geriatricians recommend their patients adhere to current recommendations from the CDC and WHO, a litany of advice that has become all too familiar: Wash your hands frequently with soap and warm water for 20 seconds or clean them with alcohol-based hand gel; avoid handshakes; stay away from large gatherings; clean and disinfect objects that are touched frequently; and avoid public transportation and crowds. Stock up on supplies.

Cruises are out, as is nonessential travel. Visits with grandchildren are ill-advised.

"I've had this conversation about a hundred times in the last week," said Dr. Elizabeth Eckstrom, chief of geriatrics at Oregon Health & Science University in Portland. Eckstrom said most of the patients she sees in her clinic are over 80. All of them have made their worry plain.

And all of her patients, Eckstrom said, have at least one chronic condition. "Most of them have three, four, five or more," she added.

People are wrong to assume that if an underlying condition is well managed with treatment, they're out of danger. Even those with conditions that are stable should take extra precautions.

"These conditions can limit underlying reserve and lead to worse outcomes when older people become severely ill, which taxes all organ systems," said Dr. Annie Luetkemeyer, an infectious diseases specialist at Zuckerberg San Francisco General Hospital.

"For example, diabetes can make it harder to fight infection, and underlying heart or lung disease may make it more difficult for those organs to keep up with demands created by a serious COVID-19 infection," she said, referring to the syndrome caused by the new coronavirus.

# How to protect older people from the coronavirus



DARRYL DYCK AP

An elderly woman sits in a room at the Lynn Valley Care Centre seniors facility in North Vancouver, British Columbia, on March 14. Amid the uncertainty swirling around the coronavirus pandemic, some experts recommend that older adults at risk cancel nonessential doctor's appointments, including wellness visits, and instead consider using Telemedicine sessions, if available, as a reasonable substitute.

Dr. Daniel Winetsky, an infectious diseases fellow at Columbia University in New York, said his advice to his own parents, who live across the country in San Francisco, has shifted dramatically. A week ago, he said, he was reassuring them about their safety, even encouraging them to go ahead with a trip they were planning to the Florida Everglades with a small tour group.

Over the weekend, his fears about the pandemic rose, and by Tuesday not only was he telling them not to go, but he also was advising them to reduce to a minimum the number of people they came into contact with. Visits with grandchildren are verboten.

Winetsky told his mother, Carol, who is 73 and has asthma, to stop meeting with her biweekly knitting group. And he instructed his father, Hank, who has had two coronary stents, not to attend either of his two book group meetings.

His mother continues to go to the grocery store, while avoiding crowded places like Costco. With her son's permission, she still goes to physical therapy for a back injury, but she is careful to make sure the therapist washes her hands and that the equipment gets wiped down with disinfectant.

What about nonessential doctor's appointments?

ments?

Some experts are recommending that older adults at risk cancel nonessential doctor's appointments, including wellness visits. Telemedicine sessions, if available, are often a reasonable substitute.

Eckstrom generally agrees, but with caveats. While it might be prudent to cancel wellness and other visits that are not urgent, she said, "many older adults have issues that require regular follow up, such as dementia, Parkinson's disease, falls, heart problems." She worries that skipping visits might allow these conditions to spiral out of control, but agrees that telemedicine can usually bridge the gap.

Another helpful step: talking to your doctor about stockpiling two or three months of any critical prescription medications.

## BEWARE OF SOCIAL ISOLATION

Experts warn that social distancing, the cornerstone of epidemic control, could lead to social isolation, already a problem in the older population. According to a recent Pew Research Center study of more than 130 countries and territories, 16% of people 60 and older live alone. Loneliness, researchers have found, comes with its own set of

health hazards.

Winetsky is aware of the danger, and has suggested to his parents that they switch to virtual meetings with friends and relatives, with the benefits of social engagement in mind. "I've tried to frame it as, 'Don't cancel these things, but change to Zoom or Skype or FaceTime,'" he said.

April Vollmer, 68, an artist who lives in New York, flew to California in November for an extended stay with her 91-year-old father, who lives in Santa Cruz. She has yet to leave.

Just when she was planning last month to fly back to New York, she said, where she has a husband, friends and a rich cultural life, the coronavirus hit. Now she oversees her father's home health aides and takes long walks along the bluffs above the Pacific, a "virus-free" activity.

Recently, Vollmer got an email from a friend of her father's who last year decided to move to assisted living. "The home has canceled group events, and residents are eating alone in their rooms," Vollmer said. "Seems like a bigger change there than for someone living at home."

## HAVE A TALK WITH HOME HEALTH AIDES

The National Association for Home Care &

Hospice estimates that 12 million "vulnerable persons of all ages" in the U.S. receive care in their homes, delivered by a home care work force of approximately 2.2 million people. For many older adults, that means a steady parade of home health aides trooping through the door, some more mindful of hygiene than others.

People should have conversations with their caregivers about hygiene, suggested Dr. David Nace, president-elect of the Society for Post-Acute and Long-Term Care Medicine, a professional group that represents practitioners working in long-term care facilities.

Double-check that aides are washing their hands or using hand gel. Any equipment they bring in should be wiped down with disinfectant. And make sure they are feeling healthy.

"If you're by yourself, you may be in a very vulnerable position because you're dependent upon that person," Nace said. "It can feel intimidating. But hopefully there's a good enough relationship that you can open the conversation."

Adam Henick, an investor who lives on the Upper East Side in Manhattan, said his father, 92, and mother, 88, live in an apartment a block away, and aides come through every day. Only one wears

a mask, he said.

"In a perfect world, no one would enter the apartment without putting a mask on," Henick said. "But it's better than being in a nursing home."

## THE NURSING HOME CONUNDRUM

Some 1.7 million people, mostly older, are in nursing homes in the U.S., a fraction of the 50 million Americans over age 65.

Given the rash of deaths at a nursing home in Kirkland, Washington, hit hard by the virus, nursing homes are on high alert. Many have gone into full lockdown mode.

The federal government is telling nursing homes to bar all visitors, making exceptions only "for compassionate care, such as end of life situations."

Curtis Wong, 66, a retired Microsoft researcher who lives in the Seattle area, used to visit his parents often. They are in their 90s and live in an assisted living facility in Sierra Madre, California.

On Thursday, the facility prohibited all non-medical visits and said it was changing its building entrance codes. In an email announcing the measure, the facility's management offered to put residents in touch with family members via FaceTime.

Three days ago, Wong said, during a video chat with his father, "I worried I might not see him again. Things got very emotional."

Cathy Johnson, who lives outside of Boston, is trying to take matters into her own hands. Johnson is the primary caregiver for her 96-year-old father, who lives nearby in an independent living facility with 2,200 residents. Two cases of coronavirus have been reported in the area and Johnson, worried that the facility might shut its doors to visitors, has been planning to extract her father and bring him to live at her house.

"I actually think that's not unreasonable, if it's in your community and you have the ability to care safely for that person in your house," Nace said.

But so far, Johnson's father, wedded to place and routine, is refusing to leave the facility.

## STAY ACTIVE, EVEN IN A PANDEMIC

Geriatricians fear that social distancing may affect routines in ways that can compromise the vitality of older adults. They emphasize the importance of maintaining good habits, including sufficient sleep, healthful eating and exercise.

Exercise may be beneficial in fighting the effects of coronavirus. It can help boost the body's immune functions, decrease inflammation and have mental and emotional benefits. A patient who relies on daily exercise at the gym but is trying to avoid risky situations might simply go for a walk.

On Wednesday afternoon, Hank Winetsky, 80, had just returned from a round of golf with a small group. His foursome ranged in age from 70 to 81. "Golf is pretty safe when it comes to human contact," he said.

But even golf proved not to be a contact-free sport. "There was a bottle of water on the cart, and everybody thought it was their own bottle," he said. "All four of us drank out of it. Now we're all freaked out."



# Coronavirus guide



CRAIG MITCHELLDYER AP

Lynn Reynolds, left, and Renee Collins, right, observe as their children, ranging in age from 6 to 10, work on a science project in Vancouver, Wash., on March 17. Collins is a teacher at Thomas Jefferson Middle School and has created a curriculum for some of the neighborhood kids while the schools are closed.

BY CAROLYN THOMPSON  
*Associated Press*

**BUFFALO, N.Y.**  
After her sixth-grade son’s school in Buffalo, New York, closed amid the coronavirus outbreak, Roxanne Ojeda-Valentin returned to campus with shopping bags to take home textbooks and weeks’ worth of assignments prepared by teachers.

A single mother with a full-time job, she now joins millions of parents around the country – and the world – suddenly thrust into the role of their children’s primary educators, leaving them scrambling to sift through educational resources and juggle lesson plans with jobs and other responsibilities.

“It’s a really big experiment,” Ojeda-Valentin said as she left the school, her second stop after picking up materials from her fourth-grade daughter’s school.

Even in school districts that are providing remote instruction, the burden falls on parents to keep their children on task. In others, parents are left to find educational websites and curricular materials on their own. And while the challenges are daunting for all, they can be nearly impossible to overcome for parents limited by access to technology and their own levels of education.

Across the United States, more than 118,000 public and private schools in 45 states have closed, affecting 53 million students, according to a tally kept by Education Week. While many closures were initially announced as short-term, parents are wondering if schools will reopen this academic year as the outbreak intensifies.

After Kansas became the first state to announce schools would remain closed for the year, a task force recommended from 30 minutes of work a day for the youngest students to up to three hours daily for students in sixth grade and up. California Gov. Gavin Newsom

# ‘A REALLY BIG EXPERIMENT’

## Parents turn teachers amid virus

som also has urged the state’s more than 6 million schoolchildren and their families to make long-term plans, telling them few, if any, schools would reopen before summer.

Los Angeles father Filiberto Gonzalez’s three children have daily contact with their teachers and one to four hours of work they can do on an existing online platform that supplements classes. But he never thought the arrangement would transform from a stopgap measure to permanent situation.

“The news ... was a real shock to a lot of us,” he said.

In Portland, Oregon, Katie Arnold’s 7-year-old son has been spending his days in his mother’s office, keeping

busy on an iPad and her laptop while she’s managing accounts for a catering company.

Oregon has shut down schools through April 28 and some districts have put optional activities online, though they are not meant to replace the regular curriculum. While her son’s district explores virtual learning, she has been combing the internet and tapping friends for suggestions.

“Scholastic had a bunch of free things and I have a friend who’s a teacher, so I’ve gotten a lot of workbook pages for him to do, just to try to keep him busy,” said Arnold, who also has been using educational websites like ABCmouse.

Arnold is making plans

with other parents to teach children in small groups if the closure is extended, and is resigned to the idea that her workdays will be followed by evening school sessions.

“We’ll muster through it,” she said.

Some parents are turning to those with experience homeschooling for guidance, unsure of whether to enforce strict schedules and where to look for academic help. Amid an influx of interest, the National Home School Association dropped its membership fee from \$39 to \$10 for access to tip sheets and teaching materials, executive director Allen Weston said.

The online site Outschool saw 20,000 new students

enroll during a single weekend in March, compared to the 80,000 who have attended class since its 2017 launch, CEO Amir Nathoo said. The company offers live, teacher-led online classes beginning at \$5 each, but has also offered free webinars on running online classes through video conferencing.

Child development researcher Jessica Logan and her husband continue to work full-time from home and have been tag-teaming school-related questions from their 8- and 12-year-old children, home from Columbus City Schools in Ohio.

“I see all these people writing out, ‘Here are the six hours we’re going to spend each day doing homework,’ and was like, ‘Not happening in my house,’” she said. “When am I going to get my work done? I still have my own work to do, so does my husband. Neither of us can take the entire day off to sit with them and do math worksheets or science experiments.”

“All parents are in the same boat,” Logan said. “Your kid is not going to fall behind if they don’t do these assignments every day.”

Nevertheless, Vancouver, Washington, teacher Renee Collins has committed to keeping not only her own 10- and 8-year-old children on track academically, but two of her friend’s children and a second-grade neighbor as well.

“We’re going to do Monday, Tuesday and Thursday with the five kids together and the other days I’ll do individually with (her own kids). So we’ll do five days,” she said.

“The one thing that kind of gives a lot of us comfort,” said Collins who teaches middle-school math, “is that it’s not just our state. It’s our entire nation. It’s not just going to be the state of Washington that’s behind. It’s not just going to be my children that are going to be behind. It’s going to be everybody.”



CRAIG MITCHELLDYER AP

Katie Arnold, left works at her office while her 7-year-old son Rowen Arnold, a first-grader, plays educational games on her iPad in Portland, Ore., on March 17.

“ALL PARENTS ARE IN THE SAME BOAT. YOUR KID IS NOT GOING TO FALL BEHIND IF THEY DON’T DO THESE ASSIGNMENTS EVERY DAY.”

Child development researcher Jessica Logan



# Coronavirus guide

Mayo Clinic News Network

COVID-19 has become a source of daily conversation. As a caregiver, you may be wondering how to support your child’s developmental needs and understanding of the coronavirus.

Jennifer Rodemeyer, manager of the Child Life Program at Mayo Clinic, offers these suggestions to help kids cope through this experience.

Define terminology associated with COVID-19.

Kids are hearing about this virus daily. Take the time to sit down with your children to define what coronavirus/COVID-19 is using language that supports their development. Start your conversation by asking your children, “What do you think coronavirus or COVID-19 is?” This gives you an understanding of what your children knows, think they know or how they interpret the illness.

Throughout your conversation pay attention to defining:

COVID-19

COVID-19 is a virus that can cause their body to feel sick. Most people who have COVID-19 say they feel sick, and have a cough, fever, the chills (feeling cold) and body aches. The most common way the COVID-19 can enter people’s bodies is by the virus being on those people’s hands and then they touch their mouth or eyes. A virus is so tiny, that you cannot see it. This is why it is important to wash your hands often, especially before touching your mouth or your eyes. The reason you are hearing so much about this coronavirus is because it is a new virus that has not been before. Health professionals are learning about it and about ways to stop it from spreading through research daily. Experts around the world are working hard every day to learn about this virus and how to keep people safe.

Quarantine.

When people have coronavirus, or possibly have come in contact with others who have the illness, they are being asked to remain in quarantine. This means you should stay in your house and not be in spaces or places with people other than your family.

Social distancing.

To slow the spread of COVID-19, people are being asked to practice social distancing. This means that when people are in spaces outside of home, they should not

# Helping kids cope with the COVID-19 pandemic



IRFAN KHAN TNS

Joshua Guyton, in face mask as a precautionary measure, arrives at Clifton Middle School in Monrovia, Calif., that was open on March 5 after crews performed a deep cleaning overnight after a parent came in contact with someone exposed to the novel coronavirus.

come into close contact with others. Pretend there is a bike separating you and the person you are standing by. Keep that distance away from people other than your family while social distancing is needed. Instead of giving high-fives, fist bumps or hugs to people outside your family you can smile and wave hello.

Discontinue your children’s access to news and social media regarding COVID-19.

Explain to your children that there are many conflicting resources regarding the coronavirus. Therefore, you are going to monitor and limit their access to external media at this time. Reassure them that you will share any new information you learn regarding COVID-19 that they should know. As a caregiver, use reliable sources such as the Centers for Disease Control and Prevention, the World Health Organization, mayoclinic.org, state health departments, and your school district’s communications, to gather your facts. Be aware of your children’s presence when listening to the news. Although they may not appear to be watching, they may be listening and internalizing the information they are hearing.

Explain to your children the importance of good hand-washing. Bring your children to a sink and practice hand-washing

together. Show them how to “create tiny bubbles” by rubbing their hands back and forth and how to get the soap between all spaces, even to the ends of their fingers. It helps to encourage your children to sing an entire song such as “Happy Birthday” twice during hand-washing so they can be sure they are spending the time they need to get their hands clean.

As a caregiver, hang a sign on your front door such as: “Welcome home. Please remember to wash your hands.” When kids come into the house, this will remind them of the importance of hand-washing when entering your home; before meals; and after blowing their nose, coughing or sneezing.

When events are being canceled, share with your children how this will prevent the spread of COVID-19.

Young children may see canceling an event, a family vacation, school, going to the movies, etc. as a result of something they did wrong. Remind them that the reason you are unable to attend the event at this time is to help prevent the spread of COVID-19 in a large group setting. If it is an option, share with your children future plans to attend the event after you know it is safe.

Remind your children when they are under someone else’s care, to

listen to their leaders.

It is important to tell them to follow directions and instructions of those who are responsible for them in your absence, such as a grandparent, a day care provider, teacher, etc. Directions they share, such as practice good hand-washing, social distancing, cover their mouth with their sleeve when coughing or sneezing, etc. are practices put into place to protect them and keep them safe.

Create new home routines as a family.

Establishing and maintaining routines help kids predict what is planned, allowing them to feel control in situations. Use a white board or paper to display a daily schedule at home. Explain if social distancing continues to be encouraged, the new norm is going to be staying at home. Identifying clear expectations for the day will support and encourage kids to feel accomplished. Consider the following when making a schedule: wake-up and bedtime, meals, school and learning, exercise and outdoors time, play, household responsibilities, etc.

Play, play, play. Kids learn and process through play. As a family, take advantage of being asked to stay home and practice social distancing, and use this time to interact. Play games, provide toys, complete puzzles,

read books, listen and play music, dance, take family hikes, and work on an art project together. For evening times, establish family fun nights, such as movie nights, cooking nights, game nights and ice-cream nights. Even though being stuck at home may seem out of the norm, consider this time together as an opportunity for your family to make good memories.

Provide opportunities to connect with loved ones and friends using electronic devices.

During social isolation, call grandparents, aunts and uncles, cousins and friends you normally would be interacting with, or connect with them via FaceTime or similar apps. This will help children not feel as isolated as they continue to maintain and build relationships with their loved ones. Set up a virtual play date with your child’s friend. Kids can be fulfilled from watching others play. Children can also take part in the same activity by virtually playing with each other, resulting and supporting parallel play. Virtual connections are also a way to support their social development through interacting with others.

If your children become sick, reassure them.

Remind them that you or someone who is caring for them will keep a close

watch on their body at all times. Reassure them that you will be in close contact with your medical care provider if you feel medical advice is needed. And after speaking with your health care provider, instructions will be given how to help them.

If your children hear of a friend or a loved one who becomes infected with COVID-19, reassure your children.

Reassure your children that their friend or loved one has received medical advice and they are being instructed by a medical professional how to help their body during their illness. As a family, send the person who is recovering a note through the mail. You could have your children draw them a picture or write them a story to add to your note. This is a way of letting the recovering person know they are being thought of and a way for your children to feel they are helping their loved one or friend by bringing joy into their day.

It is important to be honest with kids. As a parent, it may go against your instinct to want to share the truth because at times you may feel what you are sharing with your children may cause fear, worry, anxiety or sadness. Being honest with your children and telling them you are going to be honest, builds trust between you and your children.

Remind your children that you will continue to keep them posted and update them when information changes or new information is presented regarding COVID-19. This way, as new information is presented, they are hearing it from you. Have these conversations daily with your children. This will allow the opportunity for them to ask you questions or help them process any concerns they may have. As a caregiver, it is encouraged to let your child know how you feel about COVID-19 to validate how they are feeling.

You may also feel challenged due to your own questions, concerns, or worries. It is important to let your children know that you are following the guidance of health care professionals. Remind them that these steps are being taken to help prevent the spread of COVID-19 and keep everyone safe. As a caregiver, you are your children’s biggest support and advocate. You can make a significant difference on how your children cope through this ever-changing experience.

# Bored kids can take a virtual field trip via zoo websites

BY SHIRLEY MCMARLIN  
Tribune-Review, Greensburg, Pa.

Spring is the time for school field trips and outdoor activities – but maybe not this year. How to replace those favorite activities for the kids while they’re on their extra-long “spring break”?

One idea comes from zoos around the country.

Kids can take a virtual animal safari via various zoos’ animal cameras and participate in their online animal activities.

Here are offerings from zoos around the country:

## CINCINNATI ZOO & BOTANICAL GARDEN

While the grounds are closed temporarily, zoo patrons can stay connected to their favorite animals through Home Safari Facebook Live sessions, to be offered 3-5 p.m. weekdays starting today. Each session will highlight an animal and provide an activity to do at home.

The first safari will feature the zoo’s popular hippo, Fiona.

**Details:** [cincinnatizoo.org](#) or Facebook

## GEORGIA AQUARIUM

The Atlanta facility is home to a variety of animals whose homes are in the water, from alligators to whale sharks. The website features webcams offering a live look at beluga whales, California sea lions, jellyfish, piranhas, puffins, sea otters, an Indo-Pacific barrier reef and the ocean floor.

**Details:** [georgiaaquarium.org](#)

## HOUSTON ZOO

You can go big or very small with the live cameras at the second-most visited zoo in the United States. Live cameras are trained on tiny leafcutter ants as they go about their work and at the elephants as they roam their expansive yard. Also on view are the chimpanzees, gorillas, giraffes and rhinos.

**Details:** [houstonzoo.org](#)

**MONTEREY BAY AQUARIUM**  
Overlooking the Pacific Ocean in Monterey, Calif.,

the aquarium offers 10 live-streaming cameras from both inside the facility and in the nearby ocean waters. Take a look at resident African penguins, sharks and other fishes, jellyfish, sea otters and aviary birds. Other cameras are trained on the open sea, a coral reef and a kelp forest.  
**Details:** [montereybayaquarium.org](#)

## SAN DIEGO ZOO

The Southern California animal park has a website just for kids, featuring animal profiles, fun facts, stories, videos, activities, games and conservation information. Among current features is “A Tall Tale: Giraffe BFFs,” a story about two young male giraffes. Both were born with health problems, but with special

care, they’ve grown up strong and healthy and are thriving in the larger zoo population. Craft activities include instructions for making sock puppets, animal figures, a pinata and more.  
**Details:** [kids.sandiegozoo.org](#)

## ZOO ATLANTA

Roly-poly pandas and their antics are a perennial animal-lover favorite. The zoo website has a panda page with a live camera, information on a panda keeper’s job and regular panda news updates – like behaviors, the differences between red pandas and giant pandas and how keepers tell individual pandas apart.  
**Details:** [zooatlanta.org](#)



# Coronavirus guide



TED S. WARREN AP

The playground at Lowell Elementary School in Tacoma, Wash., sits empty after the school was closed Tuesday. When you're talking to children about the novel coronavirus, child psychology experts' advice is to be reassuring, focus on proactive steps and do research to truthfully answer children's questions.

BY CLAUDIA LAUER  
*Associated Press*

It was a routine game of schoolyard tag — except the children had dubbed this version “coronavirus.” The kids ran around and tagged one another, but instead of being “it,” they “caught” the virus.

Children like the ones a reporter saw playing recently at a school in Washington, D.C., are becoming more aware of the coronavirus — though they may not fully understand it or know how seriously to take it — as it begins to affect their daily lives with school closures and event cancellations, restrictions on travel, and the NBA nixing the rest of its season.

Many parents are now deciding how to talk to their children about the virus. Some said they are checking in daily, while others worry talking about it could make their kids more anxious or fearful.

“We talk about it a lot. I watch the news every morning, and they’re always watching it, too,” said Nicole Poponi, mother of Clara, 10, and Jane, 12, in the Philadelphia suburb of Audubon, New Jersey.

Both girls said they’ve talked a little about the virus at school, but Jane,

who is a few grades ahead, said she has talked about it much more, including in science lessons.

“I’m not really as scared of it. It’s still not even that many people getting sick here. And it’s less dangerous than the flu,” Jane said. “One of my friends is really scared of it, but she’s honestly really scared of all diseases.”

Beth Young, who lives in Fort Mill, South Carolina, said she has decided to limit the conversation with her four kids, ages 8, 10, 12 and 15.

“I don’t want to doom and gloom them into being afraid of getting sick because, let’s face it, kids get sick pretty often,” she said. “And I don’t need a sniffle to turn into them worrying about dying.”

For most people — including children — the new coronavirus, which causes a disease called COVID-19, results in only mild or moderate symp-

toms, such as fever and cough. For others, especially older adults and people with existing health problems, it can cause more severe illness, including pneumonia.

The vast majority of people recover. According to the World Health Organization, which has declared the outbreak a pandemic, people with mild illness recover in about two weeks, while those with more severe illness may take three to six weeks to recover.

Child psychology experts’ advice is to be reassuring, focus on proactive steps and do research to truthfully answer children’s questions.

In Kathleen McEvoy’s house in Norton, Massachusetts, she and her husband, Thom Daly, decided they wanted to talk with their 8-year-old daughter, Kennedy, before something like a quarantine or school clo-

sure was announced.

“We thought it would be confusing and scary for a kid if they were told that school has to be closed for two weeks,” McEvoy said. “We felt like it was important ... to give her a lot of information about how this might impact her life even if we don’t know exactly how yet.”

McEvoy, 38, works as a paraprofessional at a different school district and said some second graders had talked about how they thought the virus was spread. Some thought they could catch it from eating Chinese food or from touching bats or pigs.

The teacher spent some time searching for an age-appropriate video to help them understand how the virus is actually spread, McEvoy said.

It’s important to reassure children, to ask whether they have questions and to stress safety,

said Dr. Jamie Howard, a clinical psychologist at the nonprofit Child Mind Institute. The institute and the Centers for Disease Control and Prevention both offer tips on talking to children.

Some teachers and coaches are working to dispel any idea that the virus, which was first recorded in China, is tied to ethnicity or race.

Seattle Public Schools posted on its website that misinformation has led to fear and hostility, and it urged students to combat racism and bias.

“We are aware of reports that some of our Asian students have been targeted and discriminated against in connection to COVID-19. This is unacceptable and contrary to our values of racial equity and social justice,” district leaders wrote.

Lacy Hilbrich’s two daughters, ages 14 and 18, are part of an online

school that has students from all over the world. They live near Houston, but some of her daughters’ classmates are in countries where there are quarantines in place.

The virus, she said, has been part of her family’s daily discussion.

“In our family we all talk about it, so it’s pretty open and so they’re not hiding anything from us,” said daughter Ally, 14.

“And I think that’s helped a lot.”

Parents should explain that measures like wearing face masks and closing schools are preventative and temporary, Howard said. She urged them to take a page from Mister Rogers, who taught kids to “focus on the helpers” — what doctors, teachers, parents and scientists are doing to keep them safe.

Whatever the conversation looks like, Howard said, parents should not collude in their child’s anxiety by refusing to go outside or by buying masks.

“In doing those behaviors, you’re saying this is really dangerous and we really are in danger right now,” she said. “And that’s not true, and it will make them more anxious.”

## Why we should keep trying to contain the coronavirus and ‘flatten the curve’

BY MELISSA HEALY  
AND AMINA KHAN  
*Los Angeles Times*

LOS ANGELES

The coronavirus outbreak that has sickened at least 125,000 people on six continents and caused nearly 4,600 deaths is now an official global pandemic. But that doesn’t mean we should give up on trying to contain it, health experts say.

The goal is no longer to prevent the virus from spreading freely from person to person, as it was in the outbreak’s early days. Instead, the objective is to spread out the inevitable infections so

that the healthcare system isn’t overwhelmed with patients.

Public health officials have a name for this: Flattening the curve.

The curve they’re talking about plots the number of infections over time. In the beginning of an outbreak, there are just a few. As the virus spreads, the number of cases can spike. At some point, when there aren’t as many people left for the pathogen to attack, the number of new cases will fall. Eventually, it will dwindle to zero.

If you picture the curve, it looks like a tall mountain peak. But with con-

tainment measures, it can be squashed into a wide hill.

The outbreak will take longer to run its course. But if the strategy works, the number of people who are sick at any given time will be greatly reduced. Ideally, it will fall below the threshold that would swamp hospitals, urgent care clinics and medical offices, said Dr. Gabor Kelen, chair of the emergency medicine department at Johns Hopkins University.

That’s why public health officials will continue the labor-intensive work of recording and tracking new infections,

ensuring that infected individuals stay home, and guarding the borders against the arrival of new cases.

At the same time, they’ll expand their mitigation efforts. The means keeping people away from each other by canceling large gatherings, closing schools and encouraging people to work from home.

In some ways, mitigation is just containment on a larger scale. Instead of focusing on a single infected individual, officials target clusters of infected people. Buildings, city blocks or whole neighborhoods might be identified as infected, then walled off. That’s why New York Gov. Andrew Cuomo dispatched the National Guard to New Rochelle to enforce a “containment zone” around a community with more than 100 infected residents.

Think of the coronavi-

rus outbreak like a fire, Kelen said.

In one scenario, it’s “a red hot forest fire that just rips through all of a sudden and everything burns down,” he said. In another, it’s “a slow smoldering fire that might over time burn everything down but gives firefighters a reasonable chance should they come up with tools to fight the whole thing.”

The World Health Organization’s declaration of a coronavirus pandemic should not be viewed as an admission of defeat, said Michael Osterholm, an infectious disease expert at the University of Minnesota. Rather, it should be seen as a rallying cry to impede the virus’ progress.

But slowing it down is crucial. Even when infections are unavoidable, pushing them into the future could give manufacturers a chance to replenish protective garb and masks for healthcare

workers and increase the chances that a treatment will be available by the time a patient needs it.

“What we have to do right now is to put a lid on this epidemic, to flatten the curve of infection and buy ourselves some time to get a vaccine,” said Georgetown University’s Lawrence Gostin, an expert in public health law.

That’s why “social distancing” measures are so important, Dr. Anthony Fauci, director of the National Institute of Allergy and Infectious Diseases, said at a White House briefing this week. Barring fans from NBA and NCAA basketball tournament games, canceling the Coachella music festival and sending college students home for the rest of the semester may seem like extreme measures, but that’s what it will take to flatten the curve.



# Coronavirus guide

BY MICHAEL ORDOÑA  
*Los Angeles Times*

Like many people, this reporter is holed up at home trying to work remotely – with the kids in the house. While the Twitterverse is full of people joking (I hope) that their small humans have already turned on them, there’s no shortage of things for kids to do – with each other and with their larger humans. And if they’re occupied, they’re less likely to band together against us ... right?

Our house is a media hub, so the kids – 11-year-old twins Winston and Betty – are two nights into their “Social Distancing Film Festival.” The opening-night feature, for perhaps obvious reasons, Steven Soderbergh’s “Contagion,” went over well. Winston said, “I love this movie! Well directed and well written.” Dad was struck by how scientifically accurate it is turning out to be; chillingly so. The second night, they chose to stream “Outbreak,” the Wolfgang Petersen adventure movie from 16 years earlier. Dad remembered it as more thrilling than on this repeat viewing, especially after the Soderbergh film, which made this one seem stilted and conventional. Betty agreed. “It was good, but not as good as ‘Contagion.’”

No nightmares to report. Then again, these kids follow the news, so these movies are hardly as frightening as real life.

Tonight, they’ll take a break from the outbreaks and check out a double feature of “The Usual Suspects” (Win is a Christopher McQuarrie fan from his “Mission: Impossible” work, though Betty chose it) and “The Farewell” (they love Awkwafina, especially after her interview with their dad in The Times).

They’re up to plenty of other things as well – more on that later – but I asked friends what they’re doing with their kids, and their answers were fun and varied.

Scott from L.A.’s Valley Village neighborhood

# QUARANTINING WITH KIDS: MOVIES, GAMES, BAKING AND ... CARPENTRY?



RONG-GONG LIN II / TNS

A news stand in Millbrae, Calif., displays the front page of the San Francisco Chronicle on Tuesday, March 17.

said, “ ‘Farming Simulator ‘19’! My son is virtually farming: He’s got a crop of soybeans coming in, awesome tractors and combines and whatnot. ... He showed it to me earlier. Not sure if on some level it’s comforting to grow one’s own food, or ... ?! But he’s absorbed in it for hours at a time, talking about rainfall, weeds and pests, where to put the hay, etc. It’s kind of fun.”

Kelly from Washington, D.C., said, “My 16-year-old has already made me watch the entire new season of the Netflix series ‘On My Block.’ She insisted this was our bonding activity. Without giving it away, the ending was bittersweet – a bit sad, actually.” Kelly went on to caution that the show isn’t right for all kids: “It’s a bit racy ... sexually graphic at times.”

Matthew in Lafayette, Colo., said his daughter in her early teens was “begging for zombie movies and listening to R.E.M.,” which only makes sense.

Jennifer from Studio City listed the Netflix docuseries “ ‘Cheer,’

‘Lego Masters’ streaming on Hulu/Fox, the film ‘The Peanut Butter Falcon’ for my 11-year-old. My almost-15-year-old wants to go back and watch the old seasons of ‘Survivor’ (huge fan) and has expressed interest in the 1980 ‘Fame’ and we all loved watching ‘Stand by Me.’ We are also listening to a variety of movie and TV show soundtracks for exposure. ‘Stand by Me’ started that and now we are digging ‘Big Little Lies’ (music, not the show, for kids).”

Another Jennifer, also from Studio City, with 11-year-old twin daughters, said, “Games ... a rousing game of Monopoly yesterday. And cooking ... a lemon pie on Pi Day and pulled chicken sandwiches. And (their) choir teacher assigned watching a musical ... so that has been a great assignment.” She said they’re “not big on electronics here, although we all enjoyed ‘Troop Zero.’ Home economics is in full swing though ...”

Of course, that option isn’t available for every-

one. Megan from Iowa City said, “Our local grocery store was SOLD OUT of yeast and flour. Lots of bread baking going to be happening out here! I’ve seen friends post their experiments of giving the kitchen over to their teens to make homemade bagels.”

Phil from Valley Village has a 10-year-old son in the Cub Scouts, and says one of the den leaders is “putting together a virtual Cub Scout challenge. We’re going to challenge all our scouts to earn as many badges as they can, with family, and post the videos of their efforts on social media.”

These tasks include building a carpentry project or, for younger scouts, pointing out two different kinds of birds that live nearby and researching them.

“For many, they will leave the house. Often for a hike to identify a tree, or something like that ... maybe visit a place where someone might show reverence ... like a cemetery or a memorial sculpture. Much of the Cub

Scout program can be completed with only family.”

As to questions of honoring social distancing and flattening the curve, Cubmaster Phil says, “We’re still hammering out details. But most of the out-of-the-house stuff does not require interacting with the public. ‘Take a walk in your neighborhood’ or ‘While on a hike, identify ... ‘ or something like that. Easy to practice social distancing if it’s just you and your kid going for a walk in the neighborhood.”

Danny from Albuquerque, N.M.’s, daughter isn’t a kid anymore, but she’s helping to keep kids busy – constructively: “My daughter, Molly, age 24, is an algebra teacher at a high school in Burlingame, Calif. She’s teaching online and is part of a large group of teachers offering free help for kids who need tutoring.”

Other moms and dads are happily curating their kids’ viewing. Kira from Brooklyn said she just showed her sons “All the OK Go videos ... they

(ages 5 and 2) love them.” She added, “Also, just livestreamed the animal cams at the San Diego zoo! Too cute.”

“Here It Goes Again” is more famous, but this video for “This Too Shall Pass” is amazing as well and seems more fitting for this interregnum.

Tiger in Los Angeles said he’s going to show his daughter Terry Gilliam’s “Time Bandits” (1981): “I showed her the trailer and she bought in. We’ll probably watch tonight. I’m very excited.” That is, he’ll show it when he’s not posting memes of the family in “The Shining” with the caption, “A couple of weeks of isolation with the family. What could go wrong?”

In our house, the kids have worked up wish lists for the Social Distancing Film Festival and to-do lists as well. They tried playing Dungeons and Dragons with friends via Google Hangouts, with mixed success (connection problems Dad didn’t figure out in time), but are game to try again soon.

Betty has specific goals for her art skills, such as wanting to “practice working with shading, drawing horns, painting, origami and lettering.” She’s looking forward to reading a new batch of mystery books picked up just before the pandemic forced this shared isolation. She also wants to “bake a cake,” “paint my nails” and “modify my clothes.” I’m not sure what she means by that last one, but I suppose I’d better find out.

She also hopes to “Make a dinner for Dad! And hopefully not poison him!”

While I was writing this, she and her brother presented me with the following lineup for our film fest: “The Usual Suspects,” “The Farewell,” “Community,” “The Peanut Butter Falcon,” “Silver Linings Playbook,” “Dickinson” and “In Bruges.” Some of those may take some negotiating.

But hey, we’ve got plenty of time to talk about it.

# Home but not alone? Here are four new shows to watch with your kids

BY MIKE HALE  
*New York Times*

With schools in New York and many other places closed or closing soon, there’s a good chance that you and your children are about to spend a lot of coronavirus-mandated time together. And let’s face it, not all of that time will be spent on remote learning. You’ll both need a break, and you’ll probably already be in front of a screen.

There is, of course, a world of classic content you can explore together, from film masterpieces like “Spirited Away” (for rent at Amazon, iTunes, Google Play and other sites) to vital series like “Adventure Time” (streaming on Hulu). But if you would like to try something fresher, here are four shows, new this year, that you can enjoy discovering with your children, or at least tolerate while you nod and check your email. They’re

roughly in order by target audience, youngest to oldest.

### ‘POWERBIRDS’

What “The Powerpuff Girls” did for kindergartners, “Powerbirds” does for parakeets. The premise is simple but cleverly executed. Whenever Max, a comics-obsessed teenager, is hanging out in his room, his pet birds Ace and Polly hop and tweet harmlessly in the background. As soon as he leaves, however, they start to talk – like the pint-size but intrepid crimefighters they are – and zoom down to the Command Coop, donning their superhero tights along the way.

Their missions around the neighborhood are not of the super-dangerous variety – one short episode finds them scrambling to keep leaves from falling into the wet cement of a new sidewalk. But the show, created by Stephen Breen, the editorial cartoonist and author of children’s books, gives the

costumed parakeets a snap, humor and sophistication that you might not expect in a series aimed at preschoolers. That’s especially true with regard to Polly, a plucky dame out of a vintage Hollywood comedy who’s played by the animation veteran Tara Strong, the voice of Bubbles in “The Powerpuff Girls.” (Universal Kids, 10 a.m. Sundays; universalkids.com)

### ‘IT’S PONY’

It’s the story of a girl and her horse, with a few contemporary twists: They live with her parents in a high-rise apartment building, and it’s the pony who’s the nosy, needy, irrepressible attention sponge who constantly gets them into jams. (“I’m friendly,” Pony says. “It’s who I am. It’s never been a problem.”) The girl, Annie, and her friends are a wise and patient group who grudgingly accept Pony’s disruptions as the price of adolescence; the highly driven Annie,

voiced by Jessica DiCicco (“The Loud House,” “Adventure Time”), is a little like a kinder, gentler version of Kristen Schaal’s Louise in “Bob’s Burgers,” with the snark level adjusted for early-tween viewers.

The full-gallop 15-minute stories, involving Pony’s innocent derailment of school projects or the infinite forbearance of Annie’s parents, are brisk and charming. But the real attraction of this standout show, which was created by the British animator Ant Blades, is the art, with its heavily outlined, scribbled, brightly colored characters moving across lulling, watercolorlike backgrounds. “It’s Pony” is an urban tale, and the New York-like cityscapes and apartment interiors are rendered with surprising depth and detail for a Saturday-morning show. And it has an absolutely addictive theme song (“Pony on the sixth floor, pony in the bathroom ...”),

which, for parents, may or may not be a good thing. (Nickelodeon, 11:30 a.m. Saturdays; nick.com)

### ‘THE OWL HOUSE’

Yes, Virginia, there’s still a Disney Channel, even though the streaming service Disney Plus is getting all the attention at the moment. And this supernatural comedy for preteenagers is a good reason to seek it out. It’s a wisecracking, fast-paced, pop-culture-savvy coming-of-age adventure in a classic sitcom style, with hints of Matt Groening (in the imaginative monsters) and Seth MacFarlane (in the lightly cynical repartee, pitched, at a guess, for 10- to-12-year-old ears).

A Dominican-American teenager, Luz (Sarah-Nicole Robles), stumbles into an alternate world where magic and an ambient ooze are facts of life, and humans are looked down on as talentless wastes of space. It’s a setup for mean-girl and gross-out humor, and for positive lessons as Luz struggles for acceptance and tries to learn magic. The show’s irresistible force, though, is the instantly identifiable, bourbon-soaked voice of the wonderful Wendie Malick,

who plays Eda, the impatient witch who takes on Luz as an apprentice and all-around punching bag. (Disney Channel, 8:47 and 9:11 p.m. Friday, then on midseason hiatus; Disney Now)

### ‘KIPO AND THE AGE OF WONDERBEASTS’

This 10-episode eco-fantasy comes from DreamWorks Animation and Netflix, and it has a visual sophistication that separates it from the other shows here. (The show’s provenance also brings in voice actors like Sterling K. Brown, Dan Stevens, Lea DeLaria, John Hodgman and GZA for supporting characters.) Its story, about a 13-year-old who ventures to the surface of a post-apocalyptic earth and finds overgrown urban ruins and a colorful variety of mutant talking animals, is typical teenage-adventure fare. But its artwork, an integration of practical American action and Miyazaki-inflected anime splendor, will keep you in front of the screen after your bored teenagers have wandered off. (Netflix)



# Coronavirus guide

BY DEBORAH NETBURN  
*Los Angeles Times*

It's 1 in the morning and you can't stop reading about the coronavirus.

Maybe you want to know if you should cancel your trip to Hawaii over spring break or whether your kid's school will be closed, or how many people are likely to die.

You look for answers on websites you trust, along with some you're not so sure about. And when you can't find conclusive information, you keep searching, clicking and reading.

If you have descended into a coronavirus rabbit hole, you are not alone.

It's only natural to feel anxious about the evolving coronavirus situation. It is a novel threat that has caused more than 4,200 deaths worldwide.

But experts say there is something else that is adding to our collective anxiety around the potential pandemic: fear of the unknown.

"Our brains are wired to pay additional attention to uncertainty," said David Rock, co-founder of the NeuroLeadership Institute and author of "Your Brain at Work." "It is something we all have an issue with, although it affects some people more than others."

Researchers are still learning how the virus spreads, its fatality rate and how best to treat it. At the same time, information about new cases and deaths come in on a daily, if not hourly, basis.

Things are changing so quickly that it can be hard to know how best to respond to keep yourself and others safe.

And for some, the advice coming from public health organizations like the Centers for Disease Control and Prevention – to wash your hands, cover your cough and stay home if you're sick – may not feel sufficient in the face of what they perceive to be an overwhelming threat.

"That information is not



GINA FERRAZZI TNS

Shoppers exit Costco with their purchases while wearing masks to protect against coronavirus on March 7 in Alhambra, Calif.

## Why you should stop obsessing about coronavirus news, and how to do it

very satisfying to people," said Paul Slovic, a psychologist at the University of Oregon who studies risk perception. "People want a pill, they want a vaccine, they want to feel a sense of control."

Rock said that in the face of an ambiguous situation – maybe fine, maybe bad – our brains automatically bet on it being very bad, just in case.

"It's an insurance policy," he said. "If you think you hear a bear in the woods, it's better to be safe and start running than wait until you see

one running at you."

One way people try to exert control during times of uncertainty is to increase their media consumption, said Roxane Cohen Silver, a professor of psychological science and public health at UC Irvine.

"When there is a lot of ambiguity and a lot of uncertainty, people are drawn to the media," she said. "It's a cycle that is very hard to break out of."

Looking to the media in a time of public crisis can be useful. Trusted sources can help you make informed decisions to protect

your health. They can also counteract harmful rumors and alleviate distress by providing accurate information that puts the threat in context, Silver said. (For example, it's helpful to be reminded that about 80% of those infected with the new coronavirus have symptoms that are mild at worst.)

However, Silver's research over the last two decades has also shown that in times of collective trauma like natural disasters and mass shootings, the nonstop media cycle can also cause people to

overestimate the severity of the threat to their own community – and that leads to psychological and even physical distress.

In the aftermath of the Sept. 11 terrorist attacks, Silver and her collaborators found that increased television exposure to the horrific events was associated with post-traumatic stress and cardiovascular problems three years later.

"These were people who only learned about the attacks on television, and who were really stressed about it," she said. "You didn't have to

know someone who died that day, or know someone who was there to be impacted."

In another study, the same team found that after the Boston Marathon bombings in 2013, people who reported the highest media exposure also reported higher levels of acute stress than those who were actually there.

"The media is a double-edged sword," she said. "It is the mechanism by which we get important, validated information. But at the same time, we need to protect ourselves from the onslaught of the 24/7 news cycle."

So, what's a healthy dose of media that will keep you informed without needlessly stressing you out?

Baruch Fischhoff, a psychologist and decision scientist at Carnegie Mellon University, recommends choosing three print media sources and one local public health agency to follow. Then check in on their coronavirus coverage once a day.

"Remember that the expertise of TV and radio is to keep you listening and to engage you," he said.

Rock's advice is to limit your coronavirus media consumption to 10 minutes a day, not 10 minutes an hour.

"The more we can feel like we are in control, the calmer we'll be," he said. "And one thing you can control is your media intake."

Silver said she reminds her own friends and family to stay informed but to avoid repetitive stories with little or no new information, because they can amplify one's sense of stress and doom.

"Things are very different this week than they were last week, and we don't really know where things will be next week," she said. "It is challenging and stressful to cope with all this uncertainty, but overexposure to media is not likely to help."

## How coronavirus isolation can impact your mood, and what to do about it

BY ALISON BOWEN  
*Chicago Tribune*

### CHICAGO

As more Americans are encouraged to practice social distancing and to work from home, less person-to-person contact can negatively impact mental wellness.

Deciding whether to visit family, have loved ones over, or leave the house for any reason is a real concern since President Donald Trump declared a national emergency over the coronavirus Friday.

Andrea Graham, an assistant professor of medical social sciences at Northwestern University Feinberg School of Medicine, said it is hard to live in a space of uncertainty.

"That's very challenging for people to be wrestling with those kinds of decisions, and whether to be with loved ones," she said. "These kinds of moments can lead to ... waves of ups and downs of emotions."

Joe Sislow, a Chicago

resident, said he and his wife, Lori Gentile, have been going back and forth on whether to visit her mother in northwest Indiana.

"We're totally weighing the calculus on this," he said. "Because odds are in a week, or two weeks, it's going to be worse."

With schools, bars and restaurants closing, so much feels in flux. Gentile runs a comic book store, Amazing Fantasy, in Frankfort, Illinois, that she might have to close for a while, said Sislow.

"She'll probably go stir crazy, she's been doing that for 30 years," he said.

The coronavirus pandemic is eliminating the normalcy of daily activities, and that can be difficult to cope with.

On Sunday, the Centers for Disease Control and Prevention recommended gatherings with 50 or more people be canceled or postponed for the next eight weeks, and that events of any size adhere to the guidelines "for protecting vulnerable

populations, hand hygiene, and social distancing." It also suggested more events go virtual.

"We like to go to estate sales, we like to go to museums, we like to go out to see shows," Sislow said. And now many of those activities are no longer an option for him and his wife.

Graham suggests ensuring regular contact with family members and friends, even if it is not face-to-face. Utilize FaceTime to connect, she said, or make sure to speak on the phone.

"Those are really important ways to buffer against some of that loneliness and sadness that can creep up," she said.

If you're working remotely, use the option to call or video chat with a co-worker. It can help lessen some of the social isolation because, for many, conversations with co-workers are a nice part of the work day.

"We don't typically quantify that when we go into work every day, but

that's part of the routine that's important," Graham said.

Try to view time at home as a positive. Focus on connecting with your family. Pick up that hobby you have been considering, or take on that home project you've put off.

And make a routine.

Wake up at the same time, go to bed at the same time. "Maintaining some kind of schedule can be really impactful in a positive way for our mood," Graham said.

Pay attention to how you are feeling. If you are more anxious, Graham suggests taking a break from the news. "Practice some relaxation activities," she says. Do things you enjoy, such as listening to music, reading a book, or calling a friend.

In the CDC's tips for mental wellness during the COVID-19 spread, it noted that people who might respond more strongly to the stress of a crisis include children and teens, those with preexist-

ing mental health conditions and substance abuse problems, or those helping with the response, such as health care providers or first responders.

Reactions can include fear and worry about one's own health status and their loved ones; changes in sleep or eating patterns; difficulty concentrating; increased use of alcohol, tobacco or other drugs and worsening of chronic health problems.

People with preexisting mental health conditions should continue their treatment plans, the CDC suggested.

The agency also advised avoiding excessive exposure to media coverage and encouraged deep breaths, stretching and meditation. Try to eat well and exercise regularly. There are many online resources for fitness, including YouTube videos for yoga, Pilates and Zumba, for example, or Darabee, which provides a host of in-home workout programs. You can also dig out those weights and elastic bands.

"Remind yourself that strong feelings will fade," the CDC guidance advised. "It can be upsetting to hear about the crisis and see images repeated-

### Coronavirus and stress

*Taking care of yourself, your friends, and your family can help you cope with stress. Helping others cope with their stress can also make your community stronger.*

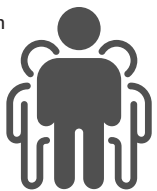
- Take breaks from watching, reading, or listening to news stories, including social media.

Hearing about the pandemic repeatedly can be upsetting.

- Take care of your body. Take deep breaths, stretch, or meditate. Try to eat healthy, well-balanced meals, exercise regularly, get plenty of sleep, and avoid alcohol and drugs.

- Make time to unwind. Try to do some other activities you enjoy.

- Connect with others. Talk with people you trust about your concerns and how you are feeling.



Source: CDC  
Graphic: Staff, TNS

ly. Try to do some other activities you enjoy to return to your normal life."



# Coronavirus guide

## RECOVERY COMMUNITY URGES: EVEN IF YOU SKIP 12-STEP MEETINGS, STAY CONNECTED

BY MARISA GERBER  
*Los Angeles Times*

### LOS ANGELES

It was time for the coveted sobriety chips, so Grace snapped on a pair of plastic gloves and kept a bit of distance as she doled out medallions to members who had gone 30, 60 and 90 days without a drink.

Normally, she hugs the people gathered here in this church on the Westside, but on Thursday she offered them a small namaste bow instead.

This is what an Alcoholics Anonymous meeting looks like during a pandemic.

“AA can’t totally close its doors,” said Grace, a 49-year-old yoga teacher, who asked to be identified by her middle name to respect the group’s anonymity pledge. “We don’t know when someone’s going to crawl in in desperation.”

She started coming to the rooms, as she calls the gatherings, two decades ago and now tries to attend two or three meetings a week, a tiny sampling of the more than 350 groups that meet every day in L.A.

They restored her life, she said, and she can’t help but think about others like her, who at this very moment, were considering whether they had the courage to attend their first meeting. What if, like Italy, we’re headed toward lockdowns?

These were the questions running through the minds of many in the recovery community this week. As the words “Cancel Everything” began to trend on Twitter and people quipped online about how they planned to self-quarantine with three bottles of tequila, some people wondered what would happen to the 12-step meetings they rely on.

What about the people who are understandably panicked and tempted to drink or pop a few pills? What exactly does the mandate to “practice social distancing” look like for people who so intimately know the dangers of isolation?

“We rely on community,” said Rick Manelius, an active member of a 12-step program. “It is very hard for people to white-knuckle it.”

For Manelius, 39, who lives in Colorado and works as a chief technology officer at a start-up, the questions started swirling in his mind last Friday toward the end of his weekly meeting. He’s the youngest member by about a decade, he said, and he noticed that instead of interlacing hands with people beside them during an end-of-meeting prayer some members decided to clasp their own hands together.

He began to think about all the other meetings like this across the country and how, sometimes by design, they’re rather low-tech. A church, chairs in a circle, some coffee. A real room people can walk into and find community.

In the days ahead, if quarantines come, Manelius said, he hopes people



DREAMSTIME TNS

An Alcoholic’s Anonymous sobriety chip lays in the palm of a person’s hand.

will turn to online platforms like Zoom to hold meetings via video chat or maybe download an episode of The Recovery Show podcast to listen to when they’re feeling alone. Still, he worries about older people, who might not be as familiar with technology and who are at the highest risk of dying from COVID-19.

“Our elders are being given an extra dose of fear and anxiety,” he said, and for many people these meetings are like free therapy. “You don’t want to help spread this contagion with a high mortality rate, but at the same time, it’s like your mental and emotional health is on the line.”

He’s been thinking, too, about people who are in the early stages of recovery. There’s the 90-in-90

concept, he explained, in which, early on, people often try to attend a meeting per day to set new habits. If we move toward mandatory quarantines, he fears, that will set up yet another barrier for newbies.

“Anyone who’s on the recovery train knows that the second resistance comes up, it’s like, ‘Eh, I can skip it,’” Manelius said, encouraging anyone who doesn’t yet have a sponsor to get one as soon as possible and check in with them often by phone.

Back in Los Angeles, this week felt like a tipping point.

Before then, you could see signs of concern on the face of the pregnant cashier at Vons who held her breath when she heard a customer sneeze or in the stern scolding

from the mother whose infant child had just gripped the metal pole on the Metro.

But now, the signs were almost everywhere – light traffic, emptied out shelves of thermometers, a tweet saying the L.A. Central Office of Alcoholics Anonymous had told members not to hold hands.

A woman who answered the phone at the L.A. Central Office this week explained that that simply wasn’t true – each group is autonomous, she stressed, and free to make their own decisions. But members had been calling about the coronavirus, she said, and she’d started pointing them to a memo on the national Alcoholics Anonymous site.

Some groups had started discussing precautions,

the memo said, such as avoiding handshakes and cutting back on serving snacks. Others had started creating contingency plans in case they can’t meet in person, the memo said, such as swapping phone numbers, emails and social media accounts so members can check in on one another.

The memo also pointed members to [www.aa-intergroup.org](http://www.aa-intergroup.org), a directory of virtual meetings in different time zones, which are conducted by phone, email, video conference and 24-hour-a-day chat rooms.

There are dozens and dozens of different groups.

For Spanish speakers in rural areas, there’s Grupo Universal de AA, which conducts voice-only meetings through Skype, and

for those who are hard of hearing, there’s Wednesday Text Chat, which conducts meetings via Zoom. There’s the group a Safe Place for members of the LGBTQ community, a Spiritual Recovery for agnostics and freethinkers, and even Sober Stogies for people who stay away from alcohol but still love a good cigar.

For Grace, the yoga teacher, it was comforting to see others start to brainstorm and prepare. She’d been charting the coronavirus’ path closely since January, keeping in touch with a friend who works as an emergency room nurse in Seattle.

“They’re really strapped,” Grace said.

She had started to feel a bit discombobulated, she said, as she read horror stories from Italy and then looked around Los Angeles and saw most people acting rather blasé. Well, either that, she said, or behaving as if Armageddon had already set in and they needed to ransack Trader Joe’s immediately.

There didn’t seem to be a lot of in between.

So, during her Alcoholics Anonymous meeting Thursday, Grace said she decided to make a bit of a show of her heightened precautions. After putting on her gloves, she gave each member who got a sobriety chip a bonus gift: an antibacterial wipe. “We’re living in interesting times,” she told the group, which was about half the size as usual.

Grace has also been thinking a lot about newcomers to recovery and how these next few days could be so fragile for them. She thought back to the weeks before she finally went to her first meeting – back to when she was convinced she was terminally unique.

“You feel like you’re in a desert just gasping,” she said, “and this oasis comes, and you go, ‘Oh, I’m not the only one.’”

These are stressful and unnerving times and fear can be such a big trigger for addicts. For some, Grace said, this will be a breaking point and, for that reason, she’s confident that some meetings will stay open. But she’s hopeful, too, that members will adapt by upping the frequency of their group text conversations or hosting meetings on Google Hangouts.

In many ways, she said, the recovery community is better prepared for this moment than almost anyone.

“We’re taught resilience,” she said. “We’re taught that there is a way through and that we figure it out one day at a time, step by step.”

People in recovery also have a lot of practice channeling their fears and anger into service, she said. If you have two days of sobriety, the mantra goes, you can help the person who has one day, and if you have one day, you can help the person who has one minute.

Right now, she said, the world could use another message her community knows well.

We support one another to survive.



# Coronavirus guide



TERESA CRAWFORD AP

Kitchen staff prepare meals at Batter & Berries in Chicago on March 16. Under the new coronavirus relief package, most workers at small and midsize companies and nonprofits can get paid leave. In most cases, part-time workers will be paid the amount they typically earn in a two-week period.

## Many workers qualify for paid leave under new coronavirus law

BY CLAIRE CAIN MILLER  
*New York Times*

The coronavirus emergency relief package, which became law Wednesday, gives many American workers paid leave if they need to take time off work because of the coronavirus.

It is the first time the United States has had widespread federally mandated paid leave, and includes people who don't typically get such benefits, like part-time and gig economy workers. But the measure excludes at least half of private-sector workers, including those at the country's largest employers.

What type of paid leave does the law offer?

It gives qualified workers two weeks of paid sick leave if they are ill, quarantined or seeking diagnosis or preventive care for the coronavirus, or if they are caring for sick family members. It gives 12 weeks of paid leave to people caring for children whose schools are closed or whose child care provider is unavailable because of the coronavirus.

### WHICH WORKERS QUALIFY?

Most workers at small and midsize companies and nonprofits can get the paid leave, as can government employees, as long as they've been employed at least 30 days.

### WHICH WORKERS ARE EXCLUDED?

Those at companies with more than 500 people – 48% of American workers – are excluded. Workers at places with fewer than 50 employees – 27% of workers – are included, but the Labor Department could exempt small businesses if providing leave would put



DAVID ZALUBOWSKI AP

Workers at large companies with more than 500 employees are excluded from the new law, but 89 % of employees at these companies already have paid leave. Some big companies like Target, have added paid sick leave for the coronavirus.

them out of business. Employers can also decline to give leave to workers on the front lines of the crisis: health care providers and emergency responders.

### ARE PART-TIME AND SELF-EMPLOYED WORKERS ELIGIBLE?

Yes. Part-time workers will be paid the amount they typically earn in a two-week period. People who are self-employed – including gig economy workers like Uber drivers and Instacart shoppers – can also receive paid leave, assuming they pay taxes. They should calculate their average daily self-employment income for the year, then claim the amount they take as a tax credit (they can reduce their estimated quarterly tax payments in the meantime).

### HOW MUCH MONEY DO I GET WHILE ON LEAVE?

If you are sick or seeking care for yourself, you earn the full amount you are usually paid, up to a maximum of \$511 a day. If you are caring for a sick family member or a child whose school or day care is closed, you earn two-thirds of your usual pay, up to a daily limit of \$200.

### HOW DO I GO ABOUT TAKING LEAVE?

The Labor Department must issue guidelines by April 2 to assist employers in calculating how much paid leave their employees should get. After that, you should be able to simply notify your employer, take the leave and get paid the amount specified by the law.

### HOW WILL BUSINESSES AND NONPROFITS AFFORD TO PAY WORKERS ON LEAVE?

They will be reimbursed for the full amount within three months, in the form of a payroll tax credit. (The Trump administration has said it will advance the money earlier for employers that can't wait that long.) The reimbursement will also cover the employer's contribution to health insurance premiums during the leave. It's fully refundable, which means that if the amount that employers pay workers who take leave is larger than what they owe in taxes, the government will send them a check for the remainder. (That goes for self-employed and gig economy workers, too.)

### WHAT IF I WORK AT A BIG COMPANY?

You can take any sick leave your company already offers. Eighty-nine percent of employees at these companies have paid sick leave, but rarely as long as two weeks, and low-wage workers are least likely to have it. (Some big companies, like Walmart and Target, have added paid sick leave for the coronavirus.) Under a 1993 law, you're eligible for 12 weeks of unpaid family and medical leave as long as your company has at least 50 employees, you've worked there for a year, and you meet other qualifications.

### WHY ARE BIG COMPANIES EXCLUDED?

Congressional Republicans and the Trump administration said excluding

THOSE AT COMPANIES WITH MORE THAN 500 PEOPLE – 48% OF AMERICAN WORKERS – ARE EXCLUDED. WORKERS AT PLACES WITH FEWER THAN 50 EMPLOYEES – 27% OF WORKERS – ARE INCLUDED, BUT THE LABOR DEPARTMENT COULD EXEMPT SMALL BUSINESSES IF PROVIDING LEAVE WOULD PUT THEM OUT OF BUSINESS.

large companies was a prerequisite to passing the bill, according to people briefed on the discussions. They also asked for other limits on who could receive leave. For example, the original bill passed by the House would have given workers 12 weeks of paid leave to care for themselves or sick family members, instead of two. Paid leave was the most contentious part of the bill, congressional aides said.

### IS THE PAID LEAVE PERMANENT?

No. It's meant as a response to the coronavirus and expires Dec. 31.

### IS THE GOVERNMENT GOING TO GIVE WORKERS OTHER AID?

Yes. This package included other types of aid, including unemployment benefits, free coronavirus testing and food and medical aid. The Trump administration has asked Congress for \$1 trillion to make direct payments to American taxpayers and to small businesses. And lawmakers are introducing other legislation, including a Democratic plan for more paid leave.



# Cybercriminals seek profit in coronavirus

BY JENNI BERGAL  
*Stateline.org*

WASHINGTON  
An email seemingly from the U.S. Centers for Disease Control and Prevention warns of new coronavirus infections and urges readers to click on a link to see a list of infections in their community.

But the email actually comes from cybercriminals looking to use the crisis to their advantage.

Cybersecurity researchers have identified a growing number of phishing scams in which fraudsters are using coronavirus to entice victims. With phishing, recipients unwittingly click on emailed or texted links designed to trick them into giving their personal information.

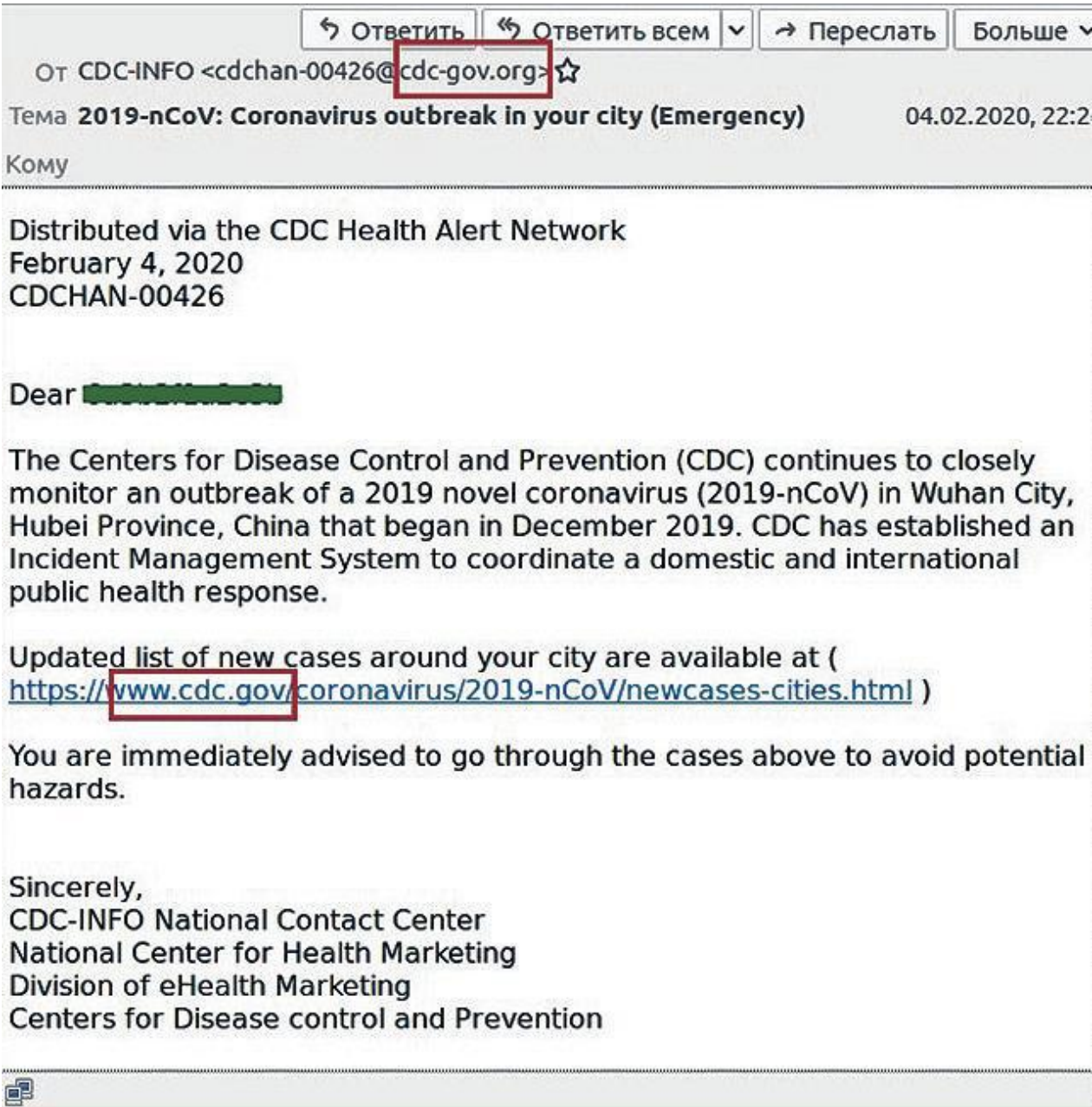
“It is the most clickable lure that an attacker can send out. Everyone has jumped on the bandwagon,” said Ryan Kalember, an executive vice president at Proofpoint, a global cybersecurity company that is monitoring the phishing activity. “Their success depends on getting people to click. Coronavirus drives clicks like nothing else right now.”

Officials in some states have alerted government staffers and the public about that threat. And some states have stepped up monitoring for malicious email involving coronavirus.

In Washington state, the nation’s epicenter of coronavirus, with 750 confirmed cases and at least 42 deaths as of Sunday, the top information security official issued a warning to staffers and the public to be on the lookout for such threats.

Bad actors are using phishing emails that claim to have information about coronavirus infections in the surrounding area and encourage users to click on a link or an attachment to find out more, Vinod Brahmapuram, the state chief information security officer, wrote in a recent blog post.

“Attackers create a sense of urgency, of panic, almost forcing people to take action. The coronavirus



Cybercriminals sent this coronavirus phishing email, which was designed to look like it came from the U.S. Centers for Disease Control and Prevention.

gives them an advantage,” Brahmapuram said in an interview with Stateline. “It’s new. It’s unknown. When there is something unknown, the fear is so high.”

In Connecticut, information technology officials have asked the state’s emergency management department to spread the word about phishing scams related to coronavirus, Chief Information Officer Mark Raymond said.

And in Virginia, state IT workers are flagging keywords in emails related to coronavirus that are coming from outside parties that could be phishing attacks, Chief Information Security Officer Michael Watson said.

“A lot of these malicious parties are trying to

play on your fears and have you make a rash decision,” Watson said. “They’re saying that there is some immediate action you’re going to have to take to protect your own life and safety.”

Criminals often prey on people during natural disasters or crises, exploiting uncertainty and fear. But the difference with coronavirus, cyber experts say, is that the information is constantly changing, and new warnings are expected to be issued for weeks – or even months.

Scammers already are selling bogus products online, offering vaccines they claim will cure the virus or asking for donations for victims, the Federal Trade Commission has warned.

Hackers, too, have got-

ten in on the action, aiming to steal victims’ usernames and passwords or plant malware that will help them get ahold of other personal information.

In one phishing campaign, cybercriminals sent emails that look like they came from the World Health Organization, asking people to click on a malicious link to view coronavirus safety measures.

Last Friday, the U.S. Department of Homeland Security’s Cybersecurity and Infrastructure Security Agency issued an alert warning people to be vigilant about phishing and other scams involving coronavirus.

Phishing attacks can be lucrative for criminals. In 2018, victims of phishing

or similar attacks lost at least \$48 million, according to the FBI’s Internet Crime Complaint Center.

“We’re seeing them exploit this highly topical thing called coronavirus,” said Ekram Ahmed, spokesman for Check Point, a global cybersecurity company. “It’s not uncommon for certain events to be exploited. But we found it far exceeds anything else, in terms of malware.”

Malware is malicious software that infiltrates and damages computers.

Check Point found that 3% of the more than 4,000 coronavirus-related domains registered globally were malicious – a 50% jump over the industry average of 2% for these types of cyber threats. A domain name is

the address of a website at the top of a browser window. Many of those malicious domains probably will be used for phishing attempts, Ahmed said.

“That’s extremely alarming to us,” he said, noting that another 5% of the domains were considered “suspicious.”

Check Point recommends that people be cautious about opening email and files received from unknown senders and beware of look-alike domains that actually are phony websites.

Proofpoint’s Kalember agrees that coronavirus-related email threats have been ramping up.

“It started out as a few small attacks. Each day we’re seeing larger and larger amounts,” he said. “Over five weeks, it’s into the millions of messages.”

People most likely are clicking at an “incredibly high rate,” Kalember added, because the volume of attacks is spiking, and cybercriminals wouldn’t bother if it wasn’t effective for them.

State and local governments need to be especially careful of coronavirus phishing threats because they can lead to ransomware attacks, according to Kalember.

Ransomware typically spreads through phishing emails. It can hijack a governmental computer system and hold it hostage until officials pay a ransom or restore the system on their own.

Last year, there were at least 113 successful ransomware attacks on state and local governments, according to global cybersecurity company Emsisoft.

“State and local governments should be paying more attention to email,” Kalember said, and making sure their staff knows that coronavirus communications aren’t going to come in a zip file or Word document that they’d click on. Their people should be trained to look at things skeptically.”

## Pet advocates give tips on keeping pets safe from COVID-19

BY JOAN MORRIS  
*The Mercury News*

With the nation focused on COVID-19, the novel coronavirus that has infected more than 100,000 people that we know of and killed almost 3,500 around the world, many have become nervous about what it means for our beloved pets.

The first thing to know, says Elena Bicker, executive director of Tony La Russa’s Animal Rescue Foundation in Walnut Creek, is that there is no evidence that companion animals can spread the disease.

There also is no evidence that pets are becoming infected, although it’s wise to keep your pets away from people who

have contracted COVID-19. A dog in Hong Kong apparently tested “weak positive” for the virus, but as the dog had no symptoms, medical and veterinarian experts believe the test results could have been the result of environmental exposure, infection, cross-reaction from other viruses or testing issues.

The East Bay SPCA warns that having your dog vaccinated against coronavirus will not prevent COVID-19. While there is a general coronavirus vaccine, it is not designed to work against this particular virus, so it would be ineffective.

Although the assurances that our pets likely won’t contract or spread the virus are comforting, the pet advocates say being

proactive in preventative measures and having an emergency plan are the best ways to protect you and your pet. Better safe than sorry.

Here are tips offered by ARF and the East Bay SPCA:

Take precautions similar to common flu prevention.

Seek out reliable sources for updated information. The Centers for Disease Control, www.cdc.gov; World Health Organization, www.who.int; and World Small Animal Veterinary Association, www.wsava.org, are good places to go for information on the virus.

If you are diagnosed with COVID-19, the CDC recommends you minimize contact with your

human and animal companions. Identify a family member or friend who can care for your pet.

Have crates, food and extra supplies, including medications, on hand for quick movement of the pet. Two weeks’ worth of food, medicine and other supplies is recommended. A pet first-aid kit is also good to have for any unplanned situation.

Ensure your animal’s vaccines are up-to-date in case boarding becomes necessary.

Document all medications with dosages and administering directions, including prescriptions from your veterinarian if a refill becomes necessary.

Pets should have identification such as an ID tag on their collar and a microchip. But remember, a



DREAMSTIME TNS

A dog in Hong Kong apparently tested positive for COVID-19, but as the dog had no symptoms, medical and veterinarian experts believe the test results could have been the result of environmental exposure, infection, cross-reaction from other viruses or testing issues.

microchip is only as good as the contact information registered to it.

Follow CDC and WHO guidelines: Wash your hands with soap and water for the time it takes to sing “Happy Birthday” twice; avoid touching your face; stay home if you are sick; cough or sneeze into your elbow; wash your hands before and after handling pets.

Pets don’t need masks.

If your companion animal has been exposed to someone diagnosed with COVID-19, contact the public health worker involved with the patient’s care. They will contact state veterinarians and direct you from there. If you are told to bring your pet to your veterinarian, call first so they can prepare isolation areas.



# Coronavirus guide

# RUNNING FROM CORONAVIRUS

## A back-to-basics exercise boom

BY TALYA MINSBERG  
*New York Times*

All road races have been canceled. There was no Tokyo Marathon, no New York Half Marathon. There will be no marathons this April in Boston, London or Northern California.

The racing world, like the rest of the world, is on hold. But you wouldn't know it by looking at public parks, streets and trails across the United States.

A running boom is taking off.

With little else to do — no spinning classes, lap swim hours, boot camps or barre — a lot of people are turning to (or getting back to) running.

It's the perfect sport for a pandemic. All you need is a pair of shoes and a 6-foot buffer from the next person. (Some New York City paths, however, have gotten crowded with runners and walkers, making social distancing even there a challenge.)

Cabin fever is driving out the masses. Kids on scooters are chasing their huffing and puffing parents, some of whom have coaxed their own children to run, with mixed enthusiasm. Teenagers on bicycles are barking at their parents to catch up, like an elite coach prepping an Olympic hopeful.

There are runners in jeans and runners in expensive "ath-leisure" kits that look like they have never seen sweat. There are people wearing classic Converse and Nike Vaporflys and every shoe in between. There are families pulling each other with games of "first one to the light post wins" and friends running with an awkward amount of space between each other.

The newest runners are easy to spot, falling into one of three camps: overexcited, overstriding or overly dramatic about the hill up ahead. But a transformation comes quickly. A few blocks later and it's easy to see the release on the faces of runners who have found their new outlet.

For many regular runners

(I'm looking at you, Lauren, Will, Mary and the older gentleman who usually recites prayers while running and yells, "God bless you, girl!" every time I see him), it feels like the rest of the world has had some epiphany.

As a regular runner, you become addicted to the simple act of putting one foot in front of the other because when you're running hard, that's all you can think about. The lactic acid building in your legs doesn't care about your work calendar or your school assignment or etiquette for video conference calls or the state of the pandemic today. Just get comfortable with being uncomfortable. Get to the next mile, to the next repetition, to the next tree, to the next breath.

We die-hards are occasionally seen as masochistic. Yes, you used to roll your eyes when we woke up before the sun rose or ran home from work or spent hours on the weekend logging double-digit miles only to fall asleep on the couch in the afternoon.

But you get it now, right? There's a reason many refer to the longest run of the week with religious terminology. It's not a Sunday long run, it's "the church of the long run." (For me, it's a synagogue of the long run on Saturday.)

There's an unspoken language among runners — one that's perfectly communicated outside the buffer zone recommended by the Centers for Disease Control and Prevention. The subtle acknowledgment transcends language and borders and athletic ability.

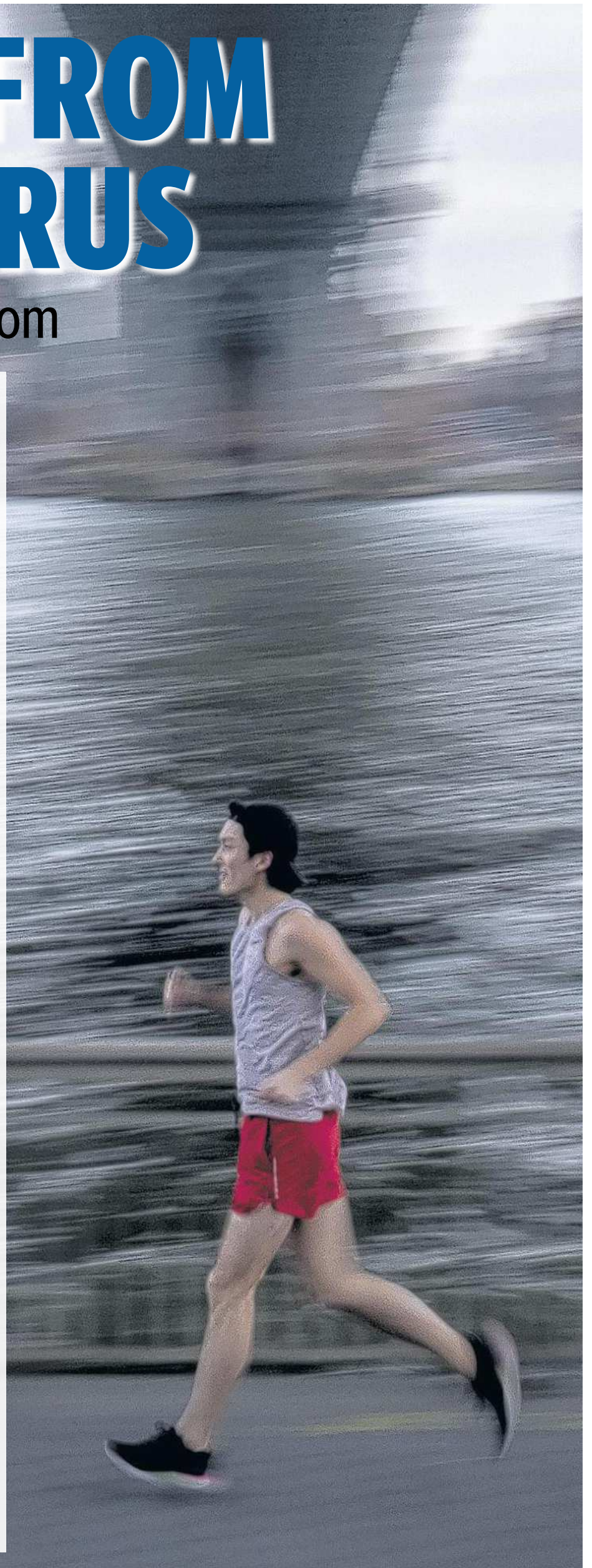
Run in any country, in any park, at any time, spot another runner, and chances are you'll greet each other with the slightest nod. You're out here too.

Sometimes that nod gives way to a wave. When the weather is treacherous, sometimes you'll get a thumbs up. You're still out here too.

In this time, as more and more people hit their parks, streets and trails, make sure to nod at your fellow runner.

We're all still out here.

PHOTO: ASHLEY GILBERTSON NYT



## Gyms and coronavirus: what are the risks?

BY AIMEE ORTIZ  
*New York Times*

It's not the kind of thing you want to think about while you're in child's pose in yoga class, when your nose is close to the mat, but after hearing how you should stop touching your face to guard against the coronavirus, you might wonder: What are the risks of transmission while working out at a gym?

### BE MINDFUL OF EQUIPMENT THAT IS FREQUENTLY HANDLED

The spread of the coronavirus could make even the most ardent gym rats stress out about picking up barbells.

There's a lower risk of

picking up the coronavirus at a gym or health club than at a church service, for example, said Dr.

David Thomas, a professor of medicine and director of the Division of Infectious Diseases at Johns Hopkins University School of Medicine. By comparison, church services may include shaking hands and being in closer proximity to people.

But if you're in a community where there have been cases of the coronavirus, "that's, perhaps, a time to be more cautious with all types of exposures, including a gym," Thomas said.

Sweat cannot transmit the virus but high-contact surfaces, such as barbells, can pose a problem, he said.

Scientists are still figuring

out how the virus exactly spreads but have provided some guidance on how it seems to be transmitted. A study of other coronaviruses found they remained on metal, glass and plastic for two hours to nine days.

Certain objects, like handles and doorknobs, are "disproportionally affected by hands, and those are the surfaces most likely to have viruses for that reason," Thomas said.

### GYMS ARE STEPPING UP CLEANINGS

The owner of a yoga studio in Washington state, where several coronavirus patients have died, according to The Yoga Journal, "says she's seen a direct impact from all the hysteria in the area

on both attendance and business."

Equinox, the luxury fitness club brand, has sent notices to members, reassuring them that additional steps are being taken during the peak flu season and amid growing concerns about the coronavirus.

The additional steps include disinfecting all club areas with a hospital-grade solution three times a day, reminding people to stay home if they are sick and asking instructors to eliminate skin-to-skin contact, like hands-on adjustments during yoga, a spokeswoman said.

Brian Cooper, chief executive of YogaWorks, sent an email to the company's clients, reassuring them that it was stepping up its cleaning processes

"to keep our facilities a safe and welcoming environment for all students and staff."

David Carney, president of Orangetheory Fitness, listed precautions in an email on Thursday. "Wipe down your equipment after every block, and don't hesitate to request a new wipe whenever you need to," he wrote.

### WHAT YOU CAN DO TO PROTECT YOURSELF

Do you know what's in those nondescript spray bottle at gyms that you're supposed to use to wipe down your machine, mat and equipment?

If you're not sure, ask staff members what's in the bottle or take your own wipes to the gym.

"I'll probably bring my own wipes," Thomas said on Saturday of his gym trip planned for later that day. "I'll know that they're the right wipes

and they have the right concentration of alcohol."

Diluted household bleach solutions, alcohol solutions with at least 70% alcohol and several common household disinfectants should be effective against the coronavirus, according to the Centers for Disease Control and Prevention.

The Environmental Protection Agency released a list of disinfectants against the virus.

In addition to avoiding frequently handled machines and equipment, it's recommended, as always, that you wash your hands often and don't touch your face.

And if you're feeling sick, stay home.

"This is mostly about how you keep from getting sick at a gym, but please don't go to the gym if you feel sick," Thomas said. "I'll give it to other people."



# Coronavirus guide



TNS

Stay active with your children while “social distancing.” The CDC recommends keeping up a healthy routine, including healthy eating and regular exercise.

BY COURTNEY KUEPPERS  
*The Atlanta Journal-Constitution*

Businesses and universities across the globe are opting to have employees work from home and students partake in “remote learning” in an attempt to combat the spread of the coronavirus. However, being inside for long periods of time or feeling isolated can be stressful – and boring. Experts at the Atlanta-based Centers for Disease Control and Prevention recommend staving off the anxiety associated with “social distancing” by keeping up a healthy routine, including healthy eating and regular exercise.

If you’re stuck at home, for whatever reason, here are some ways to remain physically active from the comfort of your living room.

**ONLINE YOGA:**

Yoga can be not only good for your physical health, but can improve general wellness by relieving

## 7 ways to stay physically active when you’re stuck at home

ing stress and improving emotional health, sleep and balance, the National Institute of Health notes. It can also relieve low-back and neck pain and help manage anxiety and depressive symptoms. You don’t have to pay big bucks or leave your home to do yoga. Just put on something comfortable and pull up YouTube. Some popular channels include Yoga With Adrienne, Yoga By Candace and Body Positive Yoga.

**SCHEDULE REMINDERS:** When you’re working

from home or just lounging on the couch, it’s easy for time to slip away from you quickly. To avoid spending hours in front of a screen without moving, try setting some reminders on your phone, computer or smart speaker to get up and move, grab a drink of water or do some stretching. Best Health magazine also recommends getting up and walking every time your phone rings, or pings?

**GO FOR A WALK:**

Try taking a break in the day to go for a walk. Experts at the Mayo Clinic

note that walking every-day can help you maintain a healthy weight and improve your mood. “As a general goal, aim for at least 30 minutes of physical activity a day. If you can’t set aside that much time, try several short sessions of activity throughout the day. Any amount of activity is better than none at all,” the Mayo Clinic notes on its website.

**TRY TIDYING UP:**

Cleaning your house can be a win-win. Lifting laundry, going up and down stairs, being on your

feet can all add up to a good amount of physical activity. Then, having a clean space can help with your mental health as well. “Cleaning your house can incorporate a variety of muscle groups without you even realizing it,” personal trainer Rich Gaspari told Everyday Health. **SIMPLE EXERCISES:** You don’t need expensive exercise equipment or access to a gym to do simple exercises like planks, wall sits or squats. There are a variety of

routines you can find online and on YouTube.

**DANCE IT OUT:**

Put on some tunes and have a living room dance party. It’s also a good way to keep kids active, if they are home from school and stuck inside. “Dance is an effective form of exercise and can burn just as many calories as swimming, walking, or bike riding. The amount of calories you will burn depends on the intensity of the dance, the length of dance, how much effort you put in, and how much you weigh,” active.com notes.

**CREATE A CIRCUIT WORKOUT:** The American Heart Association has recommendations on its website for a simple circuit workout that can be done at home, including jumping jacks, high knees, push ups and lunges. It can be modified for individual use.

## If you’re taking your temperature, 98.6 isn’t the normal body temperature anymore

BY KATE THAYER  
*Chicago Tribune*

CHICAGO For centuries, 98.6 degrees Fahrenheit was said to be the average, normal body temperature. It’s not. More recently, researchers have known normal body temperature is actually lower than 98.6 and can vary by gender, size, age, time of day and other factors. But now there’s also evidence that shows we’ve been cooling off since the 19th century when 98.6 was established as “normal.” As the coronavirus, dubbed COVID-19, continues to spread, temperature checks are necessary for those feeling ill, public health officials say. Fever, along with coughing and

shortness of breath, make up the symptoms of the virus, according to the Centers for Disease Control and Prevention. Research published in January in eLife, shows body temperature has not only dropped since German physician Carl Reinhold August Wunderlich’s study in 1851 established the average body temperature as 98.6 degrees, but it has also dropped since the 1970s. The findings indicate that Americans’ average, normal body temperature has dropped about 0.05 degrees Fahrenheit per decade, based on their birth year. “People are stuck on the 98.6 number, but that number has always been wrong,” said Dr. Julie Parsonnet, one of the authors of the study and professor of medicine at

Stanford University. “There’s never been a real number because people vary.” But Parsonnet’s research indicates there are still unknowns when it comes to the continued decrease in body temperature. In the study, Parsonnet and other researchers looked at the temperatures of three groups: data from a study that recorded Civil War veterans’ temperatures from the mid-1800s through 1930, more recent data from the 1970s recorded by the Centers for Disease Control, and temperatures of patients visiting Stanford health clinics from 2007 to 2017. The data showed that the body temperature of men born in the 2000s is about 1.06 degrees Fahrenheit

lower than men born in the early 1800s. And the body temperature of women born in the 2000s is on average 0.58 degrees Fahrenheit lower than women born in the 1890s. Meaning, “it’s not just an ancient change,” Parsonnet said, indicating previous theories that advancements in thermometers or means of calculating research data are not the only possible explanations for the change. It’s unclear what exactly is causing the continued decline, Parsonnet said, or what it could mean moving forward. Some factors could be that people have grown taller and heavier, and that their metabolic rates have slowed. And modern medicine’s elimination of certain

diseases, like syphilis, tuberculosis and periodontal diseases also could affect changes in body temperature, she said. When the original 98.6-degree normal was established, a significant portion of the population would’ve been fighting these diseases, Parsonnet said, which cause inflammation and higher temperatures. It’s important to find out why, she added, because it could affect lifespan. “We are having human cooling, and we don’t know what that means, but it’s good to know that it’s happening.” But doctors say evidence of declining temperature is not likely to change how they treat and assess patients for fever, though Parsonnet said it emphasizes that people

should pay attention to how they feel and not just the number on the thermometer. Dr. Edward Ward, emergency medicine physician at Rush University Medical Center, said he doesn’t give a lot of weight to what could be considered normal temperature, instead focusing on extremes, including above 100 degrees Fahrenheit indicating a fever and below 94 degrees indicating hypothermia. “It’s not surprising that there will be changes (in normal body temperature) since the Industrial Revolution,” he said. “As an ER doctor, I’m looking for abnormalities.” Ward also pointed out that there’s “a difference between having what is medically considered a fever and feeling feverish. If someone is normally 96 and then suddenly they’re 99, they probably feel uncomfortable.” That can indicate illness and the need for medications like acetaminophen or ibuprofen, he said.



# Coronavirus guide



LUCA BRUNO AP

Opera singer Laura Baldassari leans out of her window to sing during a flash mob launched throughout Italy to bring people together and try to cope with the emergency of coronavirus, in Milan, Italy on March 13. Opening up your window and belting out a tune will not only make you feel better, but it will let your neighbors know you're OK.

## COMMENTARY

BY GLENN WHIPP  
*Los Angeles Times*

You may have seen those videos of quarantined Italians, serenading each other from the balconies of their apartment buildings, snapshots of isolated people reaching for a connection. They're singing local anthems, breaking out the folk song "Volare," doing the Macarena (and changing the refrain to "Hey, Quarantena!") and highlighting why more households here in the States need to have tambourines handy in the event of a global pandemic.

Watching these displays of solidarity, shared on social media, has been a balm in these times of social distancing, inspiring people throughout Europe to follow suit. Italians singing "tell me what it is which makes us feel like we're together, even when we're apart" hits home, and even if you don't understand the words, the emotion comes through. We're all feeling lost right now.

I like to sing. And if you've walked by my home in the past couple of weeks around dinnertime, you've probably heard me harmonizing with Linda Ronstadt on "Blue Bayou" or joining in with Stevie

# MUSICAL THERAPY

## Shut inside? Open your window and start singing. You'll feel better

Nicks on Fleetwood Mac's "Dreams." So far, none of my neighbors have joined in, but the way things are going these days, it's probably just a matter of time. And my microphone is ready.

I have no interest in knitting. Same with sewing, embroidery, crocheting. I'm beyond bad at anything involving illustrations, as those who have suffered trying to decipher my awful Drawful doodles know all too well.

But I do excel in one area of crafting — making music playlists on Spotify. And, lately, with the rapidly evolving anxiety surrounding the coronavirus pandemic being almost impossible to escape, I've become a little obsessive about making these playlists, paying particular attention to songs I know by heart and can sing

along with. As much as I love Frank Ocean and HAIM and Tame Impala, what I really need right now is to belt out the comfort food music of my youth.

One reason singing feels so good is that it releases endorphins, neurochemicals similar to morphine that bring about feelings of euphoria and general well-being. Exercise releases endorphins too, but since the gyms are currently closed and we're spending all our time curled up on the sofa, freaking out (i.e. "working from home"), we're not working out as much as we might like. Singing also releases oxytocin, a hormone that can alleviate anxiety, stress and depression, the unholy trinity presiding over these uncertain times.

Now, these hormones and endorphins are in-

creased when you sing together, which is probably one reason I kept going to church long after being beset by doubts over doctrine. The death of my father devastated me; singing "How Great Thou Art" with a hundred other people at his service lifted my spirits.

But you can get these endorphins singing alone too, and you can hear them being released in trickles listening to Elvis Presley's last recordings, made at Graceland in his man cave Jungle Room. Drug-addled and crippled by self-loathing, the simple act of singing buoyed the King's spirits. These aren't the Sun Sessions, but it's Elvis luxuriating in the majesty of his own voice and, yes, since you're asking, I have a Seventies Elvis Spotify playlist, thank you very much, because "Patch It

Up" and "I Just Can't Help Believin'" are supremely satisfying sing-alongs.

And though Late Elvis might not be a good standard bearer for what I'm about to communicate, singing can also be a form of exercise, working your lungs, strengthening your diaphragm and stimulating the circulation needed if you're going to try to emulate, say, Beyonce belting out (let's go with the obvious choice) "Halo."

What you also might intuit while performing is that, in the process of lowering your anxiety levels and tamping down your blood pressure, you're also, according to scientific studies, boosting your immune system, a line of defense we're all thinking about right now.

So, yes, that's why I'm compulsively churning

through Spotify right now, latching onto anything that will lift my spirits. Some of these playlists have been designed more to soothe my soul (Sade: "In the middle of madness, hold on"). Others have been pure exercises in nostalgia, recreating my mother's love for breezy Burt Bacharach ... which led me to "I Say a Little Prayer" ... which then prompted an immersion into Aretha Franklin. And though I can't come within a country mile of her incomparable voice, I do know that singing along with her definitive version of "I Say a Little Prayer" helps me cope. I'm sure it'll be my most-played song of the year.

So that's what I'm doing right now. And you can too. Find the songs you know by heart. Find the songs that help your heart. And sing. Sing out loud. Sing out strong. OK, yes, that's a morsel of advice from an old Carpenters song, and not one that's aged particularly well for many reasons, one of them being that it also instructs you to "sing of good things, not bad" and to "sing of happy, not sad."

Forget that. Sing whatever the hell you want. And make sure the window's open. The neighbors will be happy to know you're OK.



# Coronavirus guide



KENT NISHIMURA 2018 Los Angeles Times file photo

AXS.TV concerts feature “Live from Redrocks” performances from acts such as Alan Jackson, Grace Potter and Cheap Trick from the Red Rocks Amphitheatre in Morrison, Colo.

## 7 ways to experience live music without ever leaving your couch

BY RANDALL ROBERTS  
*Los Angeles Times*

In September, the experimental rock duo 100 geecs premiered a new track to a gathered posse of avatars inside the video game Minecraft. Part of an event called the Mine Gala, it was organized and promoted by a team of real-life creators via an “independent virtual events platform” called Open Pit.

A cheeky reference to the New York art event the Met Gala, the Mine Gala offered many of the amenities familiar to those at an outdoor event: a VIP area for fans willing to pay for access; the freedom to explore various rooms and spaces; a feeling of being part of larger community; and the chance to hear artists or DJs make and mix music. It even featured an art gallery with original work.

Crucially, given the global coronavirus pandemic wreaking havoc on the spring concert season, the humans controlling the hundreds of avatars in attendance never physically interacted, so they couldn’t spread real-life germs.

As the forecast for the 2020 festival season becomes more dire by the hour, fans, promoters and creators are facing an uncertain summer. With the road no longer calling, musicians may be forced to experiment with new modes of self-expression.

Listeners addicted to live music, and those whose livelihoods depend on touring, have options. Even if they don’t scratch the exact same rhythmic itch, fans needing to let loose in the living room can look to screens for immersive musical events. Artists hoping to recover lost touring income can broadcast sets, charge fans a cover and market their T-shirts and records.

Whether through online pay-per-view and streaming portals where thousands of hours of live music events are broadcast and stored, or in the

### Online performances

**Berlin Philharmonic:** [digitalconcerthall.com/en](https://digitalconcerthall.com/en)  
Free for 30 days with code “BERLINPHIL”

**Berlin State Opera:** <https://www.staatsoper-berlin.de/en/>

**Seattle Symphony Orchestra:** <https://seattlesymphony.org/live>  
Performances can be streamed on the symphony’s YouTube ([youtube.com/seattle-symphony](https://youtube.com/seattle-symphony)) and Facebook ([facebook.com/seattle-symphony](https://facebook.com/seattle-symphony)) channels.

**Metropolitan Opera:** [metopera.org](https://metopera.org)  
Starting March 16, The Met launched “Nightly Met Opera Streams,” a free series of encore Live in HD presentations on the company website during the coronavirus closure. All “Nightly Met Opera Streams” will begin at 7:30 p.m. ET and will remain available via the homepage of [metopera.org](https://metopera.org) for 20 hours.

**Chamber Music Society of Lincoln Center:** [chambermusicsociety.org](https://chambermusicsociety.org)  
The website features more than 1,000 archival performances, radio programs, podcasts, artist interviews and more.

**Philadelphia Orchestra:** [philorch.org/performances/live-stream](https://philorch.org/performances/live-stream)  
● Public radio station WKAR has a list of where to find live streaming performances (some may require membership): [www.wkar.org/post/live-streaming-concerts](https://www.wkar.org/post/live-streaming-concerts)

digital realm, where multiplayer online games, platforms such as Twitch and virtual reality headsets allow for a different sort of communal music experience, those looking to sate their live music hunger have a menu’s worth of options. (And, of course, there’s always YouTube.)

Here are some more services, platforms and stations offering COVID-free interactive music experiences.

**STINGRAY QELLO**  
A vast repository of filmed concerts, documentaries and miscellaneous audio-video content, Stingray Qello is the Netflix of music streaming services. Its deep selection is easily browsed by genre. Looking for punk? The great X documentary “X: The Unheard Music” is available alongside concert films by Green Day, the Undertones, Patti Smith, Fall Out Boy, Yeah Yeah Yeahs and dozens more. Similarly rich – if a little dusty – selections can be found by browsing dozens of other genres including hip-hop, Latin, classical, metal,

indie rock, electronic, reggae and folk. **Highlights:** Efterklang, “The Ghost of Piramida”; Cecil Taylor, “All the Notes”; Juan Gabriel, “Mis 40 en Bellas Artes” **Availability:** Amazon Prime, Roku, Google **Price:** \$7.99 per month, \$99 annually

**NUGS.TV**  
Starting March 11, the rap-rock band 311 celebrated 3/11 with a trio of televised performances at the Park Theater in Las Vegas. The price of virtual admission for those logged in to rock music hub Nugs.TV was \$29.99. An offshoot of the Nugs.net archive of full concert audio performances by a variety of acts including the Dead & Company, Pearl Jam, Metallica, Wilco, Leftover Salmon and hundreds more, Nugs.TV offers fans an opportunity to bring the improvised thrill of live performance into your listening room. **Highlights:** the Raconteurs Live at Third Man Records, Bob Weir & Wolf Brothers Live at Sweetwater Music Hall, Rebirth Brass Band at Tipitina’s

**Availability:** Online streaming at Nugs.TV **Price:** A la cart model for downloads and live streams

**STAGEIT**  
For a more intimate experience similar to a concert, the StageIt platform engages with a roster of well known songwriters, rappers, bands and solo musicians to present concerts broadcast from their homes to an audience watching in real time. StageIt’s pitch: “unique experiences that are never archived.” Attendees pay a cover charge calculated in purchasable “notes,” money that goes to the performers. Fans can interact with the performers and tip them extra notes, as well. On March 12, StageIt announced as a way to help artists affected by tour cancellations that it would increase its artist payout percentage to 80%. Singer-songwriter Jason Mann pitched his upcoming event as “social distancing done right,” calling it part of his “no touch concert series.” **Highlights:** past gigs by Trey Songz, Jay Sean,

Ryan Cabrera, Susanna Hoffs, Jimmy Buffett, Common and Bonnie Raitt **Availability:** StageIt.com **Price:** variable; view-able through the purchase of “notes”

**AXS.TV CONCERTS**  
Currently in 50 million homes, the Anthem Sports & Entertainment-owned station offers a bounty of well curated music programming. Founded as HDNet by billionaire Mark Cuban and formerly owned by AEG, the network is heavy on classic rock and country music, and delivers big-time concert events. Although it doesn’t offer simulcast concerts, its 24-hour schedule is filled with filmed sets by Amy Winehouse, Norah Jones, Cat Stevens, Sheryl Crow, ZZ Top and more. **Highlights:** “Live From Redrocks” series featuring acts including Alan Jackson, Grace Potter, Cheap Trick; “Docs That Rock” **Availability:** various cable providers and portals **Price:** free with subscription to Sling TV, Spectrum, DirectTV Now, Philo and others.

**OCULUS VENUES**  
Turn off your mind, relax and slip on your headset: Virtual reality technology has long hoped to revolutionize music performance, and the possibilities are mind-blowing – and don’t spread COVID-19. The Facebook-owned Oculus Venues harnesses the company’s Oculus VR technology to present music events unlike anything imaginable a decade ago. Available in solo or social mode, the experience in social mode presents a level of interactivity with other people (as avatars) similar to a concert. As one attendee wrote on a VR site, “I expected to just be watching alone at home, or silently with others around me. I didn’t realize the high level of interaction on offer, nor how open people would be to interacting with strangers sitting around them. The interface will even let you change seats to move closer to someone, or scroll through an index of people who are currently speaking.” The best feature is one virtually every concertgoer has needed at

some point: A mute button that shuts up the drunk couple who won’t stop talking. **Highlights:** Recent sets by marquee pop artists including Billie Eilish, Post Malone and Empire of the Sun delivered visual effects unhindered by earthly constraints, with communal chats and comments occurring simultaneously. **Availability:** via Facebook’s Oculus Venues **Price:** free with Oculus Quest VR headset (\$399-\$499) or HTC Vive (\$599-\$1,199)

**WAVE**  
Remember when U2 did that concert in Second Life? The architecture of fake worlds has improved, to say the least. As with Oculus and a variety of competitors including NextVR and MelodyVR, the company Wave hosts live virtual concerts, and exploits the infinite design possibilities available in this new headset-accessible reality. Artists can tie melodies to visual accents, can transform settings at will or present themselves in digitally rebuilt old venues. For its part, MelodyVR promises to bring sold-out concerts into headsets that allow viewers to transport themselves into venues. The Wave platform calls its performances “waves.” A recent one by British singer-songwriter Imogen Heap found her singing as if floating through spangled cosmic dimensions. During bridges, she exploded into starlike smithereens. **Highlights:** Tinashe, “Live in Wave”; The Glitch Mob, “See Without Eyes”; “Lindsey Stirling x Wave” **Availability:** the VR app can be downloaded through Oculus Rift and HTC Vive **Price:** free with Oculus Quest VR headset or HTC Vive

**MINECRAFT**  
Last year the marshmallow-headed EDM producer Marshmello drew an astounding 10 million visitors to a concert held within the architecture of the online game Fortnite. Those inside were treated with a hallucinatory good time featuring bouncing Marshmello avatars the size of the Stay-Puft Marshmallow Man. Curiously buxom anime creatures danced, entertaining millions watching alone in bedrooms and man caves the world over. A weirder spectacle, however, occurred in Minecraft courtesy of the Mine Gala promoter-designers Open Pit. Called FireFest, it drew an astounding array of electronic producers who caused real-life buzz. A participant in a Reddit thread on the Open Pit parties touted the event as a must-see. “Diplo has been here before, no joke,” wrote a poster named Dylan Tallchief. “Diplo was at FireFest and he tweeted about Coalchella.” The pitch was enough to convince another participant in the thread to start planning for the next Open Pit adventure, which could happen as early as this summer, with an invitation: “Anyone looking to camp together?” **Highlights:** Coalchella, FireFest, Mine Gala **Availability:** via Minecraft app **Price:** \$6.99



# Coronavirus guide



MICHAEL TERCHA Chicago Tribune via TNS

Shepherd' Pie

BY MARK GUYDISH  
*The Times Leader (Wilkes-Barre, Pa.)*

EDITOR’S NOTE – Requesting equal time, so that his wife and newsroom colleague, Mary Therese Biebel, wouldn’t have all the fun, Times Leader staff writer Mark Guydish earlier this week made a shepherd’s pie in the Times Leader test kitchen, which is actually the Biebel/Guydish home kitchen. Could this be the start of a friendly competition between the spouses?

The first shepherd’s pie I really liked came from the kitchens of the Inn at Jim Thorpe (there is a different restaurant there now), which Mary Therese and I often visit as part of our annual “Jim Thorpe walk” from The Tannery (near White Haven) along the Lehigh Gorge Trail. Of course, it may have been so good because we had to walk more than 20 miles to get there.

Long-time readers may have a dim memory of what happened on our

## BAM!

### Comfort food in uncomfortable times

first Jim Thorpe walk, which we’ve try to repeat each year in late autumn since 2000. I proposed to MT as close as possible to the exact minute of her birth 40 years earlier (we tried the inaugural walk as a birthday celebration.)

In a quest to find a satisfying recipe for home, I surfed the web years ago and found this one, credited to Emeril Lagasse, though a new search of his shepherd’s pie concoctions turns up a variation. Cliched as it may sound, this has been such a success with every guest who got a taste that I’ve never searched for an alterna-

tive.

Emeril’s secret, as far as I’m concerned, has always been a clever combination of spices and flavors. This single-dish repast seasons the meat (I use ground beef) not only with the usual salt, pepper, onion and garlic. It includes cinnamon, thyme, cloves and Emeril’s Essence (it’s on the web and in some stores; I use a homemade version of the original rather than the Italian essence).

While it’s not all kid friendly, if you use a hand masher that’s one task you can give any youngsters who are ready for a

cooking lesson, and if they are old enough maybe let them shred the cheese.

A few tips from my experience: 1) you may want to add a potato if the mash seems too liquid, or add liquid if it seems to stiff; it depends on the size of the spuds and personal preference. 2) I rarely find a recipe that doesn’t benefit from some extra cheese; if you feel the same, keep the grater and cheddar handy until you’re satisfied there’s enough on the top of the taters. 3) Don’t put the casserole in the oven and trust it will take the prescribed 30 minutes. I’ve seen the dish turn golden brown in 20 or so even without taking the last recommended step of finishing with a broiler setting.

Lastly, if you think all shepherd’s pies need gravy, this clearly isn’t for you, though maybe try it anyway. All food is literally a matter of taste, but in our house there is never enough left over for a complete second meal.

### Shepherd’s Pie

Yield: 6 servings

- 5 tablespoons unsalted butter
- 3 large Idaho potatoes (about 2 pounds), peeled and cut into 1-inch cubes
- 2 teaspoons salt
- ½ cup milk
- ¼ cup heavy cream
- ¼ teaspoon plus ⅛ teaspoon freshly ground black pepper
- 1 tablespoon vegetable oil
- 1 cup chopped yellow onion
- 1 teaspoon minced garlic
- 1½ pounds ground lamb or beef
- ¾ teaspoon Emeril’s Italian Essence or other dry Italian seasoning
- ¼ teaspoon dried thyme leaves
- ¼ teaspoon ground cinnamon
- Pinch ground cloves
- 1 tablespoon all-purpose flour
- 1¼ cups reduced-sodium beef broth
- ¾ cup diced carrots
- ½ cup green peas, fresh or frozen (if frozen, do not thaw)
- 2 teaspoons tomato paste
- ½cup grated sharp Cheddar cheese

Grease a casserole dish with 1 tablespoon of the butter and set aside. Position rack in center of oven and preheat the oven to 375°F.

In a medium saucepan, place the potatoes and 1 teaspoon of the salt. Cover with water by 1 inch and bring to a boil over high heat.

Reduce the heat and cook at a low boil until fork-tender, about 12 to 15 minutes.

Using oven mitts or pot holders, drain potatoes in a colander set in the sink and then return them to the saucepan. Add the remaining 4 tablespoons of butter, the milk, heavy cream, 1 / 2teaspoon of the salt, and ⅛ teaspoon of the black pepper. Mash with a potato masher until smooth. Set aside.

In a large skillet, heat the vegetable oil over medium-high heat. Add the onion and cook, stirring, until soft, about 3 minutes.

Add the garlic and cook, stirring, for 30 seconds, then add the ground lamb or beef and cook, stirring to break up the meat chunks, until cooked though, about 8 minutes.

Remove the pan from the heat. Tilt the pan slightly away from you, and with a tablespoon carefully remove as much excess liquid as possible from the pan into a bowl. Discard the liquid.

Return the skillet to medium-high heat. Add the Italian Essence, thyme, the remaining ½ teaspoon of salt, the remaining ¼ teaspoon of black pepper, the cinnamon, and cloves, and cook until the meat is well browned, stirring frequently, about 6 to 8 minutes.

Sprinkle the meat with the flour and cook, stirring, for about 1 to 2 minutes.

Add the beef broth, carrots, peas, and tomato paste, stir to combine, and bring to a boil.

Reduce the heat to medium-low and simmer until thickened, about 5 to 6 minutes.

Transfer the mixture to the prepared casserole dish and spoon the mashed potatoes evenly over the top. Sprinkle with the cheese and bake for 30 minutes.

Increase the oven temperature to broil and cook until golden brown and crisp around the edges, about 4 to 6 minutes.

Using oven mitts or pot holders, remove the casserole from the oven and let it sit for 10 minutes before serving

## Freeze your food to keep your cooking fresh for weeks to come

BY BEN MIMS  
*Los Angeles Times*

Did you overbuy a bunch of produce in a panic fit with healthy eating intentions, only to realize there’s no way you and your bunkered down partner and pets can get through it? You’re not alone. But don’t force feed yourself all that kale: Here’s how to prep it and other fast-spoiling goods so they last just as long as that box of high-protein quinoa spaghetti you reluctantly had to buy because it was the only thing left on the shelf.

There’s no reason to let your supply of vegetables run low just because the frozen varieties are gone or picked over. Buy fresh vegetables and freeze them yourself. All contenders are welcome, especially hearty greens like kale, spinach, swiss chard and mustard/collard/turnip greens, but also cruciferous veggies like cauliflower, broccoli, Brussels sprouts and cabbage, as well as carrots, asparagus, green beans, peas, etc.

A childhood of growing up on a farm left me with this, the most valuable skill for times like we’re in now. We called it “putting up” vegetables for the winter, and it basically entails blanching vegetables, then packing them in containers

to go in the freezer. We’d do this with our two-week harvest of cream peas and would have gallon bags upon gallon bags to tide us over for a whole year. Let me break it down for you:

First, bring a large pot of salted water to a boil. While that’s happening, set up a large bowl of ice water next to it. Next, chop your vegetables into bite-size pieces (this is not necessary at this stage but makes it easier to use them once you’re ready later) and toss them in the water to cook until they’re al dente. This step is called blanching, and you do it to stop the enzymes in the vegetables that would continue to spoil them, even in extreme cold conditions like the freezer (it helps that it also sets the color of vegetables so they’re vibrant and more pleasing to eat). All vegetables have different cooking times, but similar to the way you test pasta, you want to take a piece of veg out every couple of minutes, depending on what it is, of course, and take a bite: It should be firm but yielding, like biting into a fresh cucumber.

Once the vegetables are ready, drain them (pour the whole lot in a colander if you’re doing just one batch or use a slotted spoon to lift the veg out so you can reuse the water)

and plunge them into the ice water to stop them from cooking. Give them a quick stir and let them hang out for about 20 to 30 seconds (no longer or they’ll get waterlogged and soggy), then drain them.

Dry the vegetables well on paper towels (or let them air dry on a kitchen towel if your paper supply is low), then portion them into usable amounts in resealable plastic bags or airtight containers. Place them in the freezer and, voilà, you’ve made your own frozen vegetables to use whenever you need them, whether that’s two days or two months from now.

If you’re like me and never eat a slice of bread that’s not toasted, this should be an easy one. Any loaf of bread, whether it’s the sliced kind from the grocery or an artisanal loaf, freezes well. The key is to slice it first, then place small strips of parchment or wax paper between the slices, so you can reassemble the loaf and the slices won’t stick back together as they freeze. Once reassembled, wrap the loaf tightly in plastic wrap, then once again in foil; it will last this way in your freezer for at least a month.

When you’re ready to revive it, break off a slice and warm it directly in your standing toaster, toaster oven, conventional

oven or, if you’re really lazy, directly over a gas burner set to the lowest setting. One caveat I’ve found in my years as a bread freezer: Revived toast is as good as new only while it’s hot, so get your nut butter and jam or avocado on it quickly and eat it within a couple minutes, before it has a chance to cool to a chewy cardboard texture.

While most fruit, like all the in-season citrus we have now, will keep at room temperature or in the refrigerator for at least a couple of weeks, it doesn’t hurt to get into the habit of freezing fruit too, especially berries, bananas and other soft fruit that will spoil faster. Those who make fruit smoothies on the regular will already know this trick.

First, line a baking sheet with parchment paper, then spread your fruit on it. If you’ve got blueberries and raspberries, leave them whole, but hull and quarter any strawberries. Peel and slice bananas into bite-size pieces. Do the same with mango, papaya, pineapple or any other tropical fruit you like. Once laid out, place the sheet in the freezer and let the fruit freeze completely. Then, pop the fruit off the parchment paper and divide the fruit among resealable plastic bags or airtight plastic con-

tainers, either by type of fruit or a mix of all. They’ll keep this way for at least a month or more.

When you’re ready to thaw, it’s best to do it overnight in the fridge so the fruit maintains some structural integrity. You’re not really going to want to eat a thawed, frozen berry or piece of pineapple the same way you would if it was fresh, so do these things with them instead: fold them into a loaf cake or muffin batter, blend them into a smoothie or with your yogurt and top with granola, bake them into a cobbler or pie, or cook them down with some sugar and a splash of lemon juice for a quick jam that you can spoon over toast, ice cream or into a shaker to mix with booze for a fruity cocktail.

Herbs have the shortest life span of most produce, but that doesn’t mean you should overlook them when stocking up on essentials.

Similar to the greens and vegetables above, you can blanch and freeze herbs (parsley and cilantro work particularly well in this case, but only need to be blanched for quite literally three seconds), but the easiest and best way is to chop them up, distribute them among the divots of an ice cube tray, and cover them with a little olive oil.

The oil protects their flavor and color from oxidation and helps preserve them for months. That way, when your pasta or tomato sauce is ready, you can pop out a frozen cube of herbs and oil and stir it in, letting the heat naturally thaw and revive the herbs so they flavor whatever you’re cooking.

But don’t stop there; apply this principle to onions, scallions, shallots and garlic. But here you get two options: One is to mimic the herb prep exactly by chopping the aromatics, then portioning in ice cube trays and covering with oil before going in the freezer. This is especially helpful if you’re cooking for one or two and won’t need that much chopped onion anyway. Toss a frozen cube or two of chopped onion or garlic into your heating pot and they’ll be sizzling away in no time to flavor the base of your tomato sauce or soup.

The second method is arguably better. First, cook a big batch of sliced onions or scallions or garlic in oil until caramelized and tender, then let it cool completely. Spoon the mixture into ice cube trays or small plastic containers and top with more oil, if needed. This way, when you want that slow-cooked flavor in an instant, you can stir a cube of caramelized onions into your pasta, caramelized scallions into chicken soup or caramelized garlic into mashed potatoes.



# Coronavirus guide

# Coronavirus kitchen: What to stock, cook if you face a 14-day quarantine

BY JESSICA YADEGARAN  
*The Mercury News (Calif.)*

As the novel coronavirus continues to spread and residents consider the possibility of self-quarantine, one can't help but wonder: Am I really going to eat all the protein bars I hoarded at Costco?

Not if you're stuck at home for two weeks, potentially unwell or taking care of someone who is unwell. You did the right thing by stocking up on toilet paper, hand sanitizer and disinfectant wipes. But, remember: This isn't an earthquake stash. Should there be a quarantine – government or self-issued – you will likely have refrigeration, electricity and a lot of time on your hands to nourish yourself and the ones you love.

In other words, you'll want to cook.

"From my standpoint, there's no reason to live on snack bars and meal replacement drinks," says Los Gatos' Marlene Koch, a registered dietitian nutritionist and New York Times best-selling cookbook author. "With a quick stock of your freezer and pantry, you can have the ingredients it takes to not only feed someone who is not feeling well but to feed the whole family."

But what are those ingredients, and how much do you buy? Koch, who pens the health-focused "Eat What You Love" cookbook series, says you should start with simple family favorites – say, slow-cooker Pulled Pork or Sheet Pan Chicken – keeping protein as a top priority.

### FREEZER FORTUNE

Because "protein needs vary widely between men and women, or young kids and teenagers, it's hard to say how much to buy," Koch says.

In general, she recommends 4 ounces of protein per person per day. The USDA recommends 5 ounces of lean meat – the equivalent of 1 cups cooked beans – for a 2,000-calorie daily diet.

"I would stock the freezer with a variety of 2- to 3-pound bags of lean ground beef or turkey, chicken tenders, or even shrimp," she says. "Remember, your quarantine may be for weeks but your bounty will last for months. If they buy too much, these are ingredients that people can be grilling outside come summer."

Also in that freezer: Tortillas, microwaveable rice or quinoa, frozen fruit for smoothies and frozen vegetables to stir into soups, grain bowls and easy pasta dishes.

Not all frozen veggies are created equal – she prefers corn and peas over, say, frozen broccoli – but as long as you get some greens into your meals you're eating well.

"It may also be comforting to know that frozen veggies have the same beneficial nutrient qualities as fresh," Koch adds.

### PANDEMIC PANTRY

Canned and dry goods, too, are no-brainers when it comes to making health-

## Pulled Pork

Serves 10-12

**½ cup vegetable oil**  
**¼ cup red wine vinegar**  
**½ cup firmly packed dark brown sugar**  
**½ cup soy sauce**  
**2 cups ketchup**  
**1 teaspoon garlic powder or garlic salt**  
**1 large onion, coarsely chopped**  
**2 tablespoons Worcestershire sauce**  
**5-pound boneless pork shoulder roast, fat trimmed**  
**Barbecue sauce for serving**

Whisk the oil, vinegar, brown sugar, soy sauce, ketchup, garlic powder, onion and Worcestershire sauce together in a mixing bowl. Pour into a large zipper-top plastic bag. Place the pork in the bag with the marinade, seal the bag and turn the pork to coat. Refrigerate overnight, turning the bag once or twice.

Pour the entire contents of the bag into the insert of a 5- to 7-quart slow cooker. Cover and cook on low for 10 hours, until the pork is fork tender. Remove from slow cooker, cover with foil and let rest for 15 minutes. Meanwhile, skim off any fat from the sauce.

Using two forks, shred the meat, then return it to the sauce. At this point, the pork may be refrigerated for up to 5 days or frozen for up to 2 months. Serve warm, piled into soft rolls with additional barbecue sauce, and a side of slaw or baked beans.

— DIANE PHILLIPS, "SLOW COOKER: THE BEST COOKBOOK EVER"

## Instant Pot Risotto

Serves 6 to 8

**1 tablespoon extra-virgin olive oil**  
**1 pound mixed mushrooms, thickly sliced**  
**1 large onion, chopped**  
**2 cloves garlic, minced**  
**1½ cups Arborio rice**  
**½ cup dry white wine**  
**20 ounces low-sodium chicken stock, room temperature**  
**¼ cup heavy cream, room temperature**  
**2 tablespoons crumbled Gorgonzola cheese**  
**Coarse salt and freshly ground black pepper to taste**

Press the saute button to preheat your Instant Pot. When the word "hot" appears on the display, add the olive oil, then the mushrooms. Cook the mushrooms, stirring occasionally, until the mushrooms have released their liquid and most of it has evaporated, 7 to 8 minutes.

Add the onions and cook until they're opaque and softened, about 5 minutes. Add the garlic and rice. Cook about another 3 minutes, stirring frequently. Pour in the white wine to deglaze the pot and allow most of it to absorb into the rice. Press "cancel" to turn off the Instant Pot.

Pour the chicken stock into the Instant Pot, and close and lock the lid. Press "manual" and adjust the timer to 6 minutes. Check that the cooking pressure is on high and that the release valve is set to "sealing."

When the time is up, open the Instant Pot using "quick pressure release." Stir in the cream and Gorgonzola, adding more cheese to taste. Season to taste with salt and pepper. If you like pepper, go a little heavy here; it works well in this dish.

— KRISTY BERNARDO, "WEEKNIGHT COOKING WITH YOUR INSTANT POT"

## Seven-can Chicken Taco Soup

Serves 4 to 6

**15-ounce can black beans, drained and rinsed**  
**15-ounce can pinto beans, drained and rinsed**  
**14.5-ounce can petite diced tomatoes**  
**15-ounce can sweet corn, drained**  
**12.5-ounce can chicken breast, drained and flaked**  
**28-ounce can green enchilada sauce**  
**14-ounce can chicken broth**  
**1 packet taco seasoning**  
**½ teaspoon ground cumin**  
**½ teaspoon chile powder**  
**½ teaspoon garlic powder**  
**Garnish: Lime wedges, shredded cheese, tortilla chips**

Combine all the ingredients, except the garnishes, in a large pot and bring to a boil over medium-high heat. Lower heat and simmer for 20 to 25 minutes. Serve with lime wedges, shredded cheese and tortilla chips, as desired. Makes about four to six servings.

— B. R. FLANNERY

ful meals without access to a grocery store. Think outside the cupboard when it comes to this category. Sure, you should have on hand your favorite pasta or grain, nut butter, canned tuna or sardines, diced tomatoes, and, of course, beans. But using dried mushrooms instead of fresh mushrooms can yield a divine Instant Pot risotto.

And don't even get Koch started on beans. Pinto, black, garbanzo, kidney or cannelli – you can make meals to last well beyond two weeks, from a hearty Black Bean Chili or this brilliant Seven-Can Chicken Taco Soup.

Here's an even easier one, courtesy of Koch: "Puree a can of black beans with salsa, chicken

or vegetable broth and cumin," she says.

Cumin is among her shaker staples because it is used in many cuisines. Other spices to pep up dishes, or in lieu of the fresh version: Smoked paprika, chile flakes, garlic powder, ground ginger and dried herbs, especially thyme and oregano, which can easily substitute for the real thing when making, say, a roast chicken with the former or spaghetti sauce with the latter.

Here are a few other Koch tricks:

- Combine canned tuna with a low-sodium cream soup, like cream of broccoli, mushroom or celery, and add jarred artichoke hearts and sun-dried tomatoes for a new-age casse-

## Greek-Inspired Sheet Pan Chicken, Potatoes and Delicata Squash

Serves 4

**½ cup fresh lemon juice (from about 2 lemons)**  
**¼ cup olive oil**  
**4 to 5 cloves finely minced garlic (about 1 ½ tablespoons)**  
**1 tablespoon dried oregano**  
**1½ teaspoons kosher salt**  
**1 teaspoon finely minced rosemary**  
**Freshly ground black pepper**  
**Pinch of cayenne or red pepper flakes**  
**4 bone-in, skin-on chicken thighs (about 1½ pounds)**  
**1 large delicata squash (about 1 pound)**  
**1½ pounds Yukon gold potatoes**  
**1 small red onion, thinly sliced (optional)**  
**Fresh parsley or mint, lemon wedges for serving**

Line a sheet tray with foil and place it in the oven to preheat at 500 degrees, while you prepare the marinade and prep the chicken and vegetables.

In a large bowl, combine the lemon juice, olive oil, garlic, oregano, salt, minced rosemary, a few grinds of black pepper and a pinch of cayenne to make a marinade. Add the chicken to the bowl and toss to ensure all the pieces are evenly coated with the marinade. Set the chicken aside while you prep the potatoes and delicata squash.

Cut the potatoes into ½-inch thick wedges (if using small potatoes, you can simply cut them in half). Cut the delicata squash lengthwise. Scoop out the seeds with a spoon, then slice each length of squash in ½-inch thick moons. Toss the potatoes, delicata squash and sliced onions with a light drizzle of olive oil and a sprinkle of salt and pepper.

Using oven mitts, carefully remove the hot sheet pan from the oven. Add the potatoes and delicata squash to the pan, then nestle the chicken pieces, skin-side up, among the vegetables and drizzle with the marinade.

Return the sheet pan to the oven, lower the heat to 425 degrees and roast for 35 to 45 minutes or until the chicken and vegetables are cooked through. Use tongs to flip the potatoes and squash halfway through the cooking time. You can leave the chicken, skin-side up for the whole cook time.

Garnish with parsley, mint and lemon wedges and serve.

## Black Bean Chili

Serves 6

**1 pound lean ground beef or turkey**  
**2 tablespoons vegetable oil**  
**1 large onion, chopped**  
**3 cloves garlic, minced**  
**3 tablespoons chili powder**  
**2 teaspoons ground cumin**  
**1 tablespoon Worcestershire sauce**  
**28-ounce can crushed tomatoes**  
**1 red bell pepper, seeded and chopped**  
**3 to 4 cans (14.5-ounces each) black beans, drained and rinsed**  
**¼ cup chopped cilantro**  
**1 tablespoon canned chipotle chili puree, if desired (see below)**  
**Garnishes: Sour cream, chopped green onions, shredded Monterey Jack**

In a large pot, brown the meat in oil, along with the onion, garlic, chili powder and cumin. When the meat is browned and the onion is translucent, drain the fat. Add the Worcestershire sauce, tomatoes, red bell pepper and black beans. (Adjust the amount of black beans to vary the thickness of the chili.)

Simmer on low for 1½ hours, stirring occasionally. Add a bit of water or beer if the chili begins to stick or thicken too much.

Just before serving, add cilantro and chipotle puree. (To make chipotle puree, blend a can of chipotle chiles along with the adobo sauce in a blender or food processor. The puree can be stored, refrigerated, for a week and in the freezer for several months.) Garnish with sour cream, green onions and Monterey Jack as desired.

— ADAPTED FROM SUNSET MAGAZINE AND JEFF SMITH'S "THE FRUGAL GOURMET COOKS AMERICAN"

## Chickpea and Chorizo Stew

Serves 3 to 4

**2 tablespoons olive oil**  
**½ cup onion or shallots, finely diced**  
**2 cloves garlic, finely chopped**  
**8 ounces Spanish chorizo sausage, chopped into bite-sized pieces**  
**2 teaspoons hot smoked or sweet paprika (optional)**  
**1 teaspoon cumin powder**  
**2 cups red, yellow and/or orange bell peppers, cut into ½-inch dice**  
**Two 16 ounce cans chickpeas, drained and rinsed**  
**14-ounce can chopped or crushed tomatoes**  
**2 cups chicken stock**  
**Salt and pepper to taste**  
**Chopped parsley to garnish**

Heat the olive oil in a medium-sized pot over medium heat. Add the onions or shallots and saute them for 4 to 5 minutes, or until they are softened and golden. Add the chopped garlic to the pan and fry for 30 seconds to a minute.

Add the chopped Spanish chorizo, paprika and cumin and fry for another 1 to 2 minutes.

Add the chopped bell peppers, chickpeas and tomatoes and continue cooking for 2 to 3 minutes.

Taste and season with salt and pepper as needed, then add the chicken stock and bring to a boil. Lower the heat and let the stew gently simmer, covered, for 8 to 10 minutes. Taste and adjust seasoning, if needed, garnish with chopped parsley and serve.

— A LITTLE YUMMINESS (WWW.ALITTLEYUM.COM)

role.

- Leftover potato chips? Crumble on top to add a crunchy topping, she says.

- If a recipe calls for milk or cream, she uses oat milk. "Swirl it into coffee, oatmeal, soups," she says.

"Unlike almond milk it is actually creamy and mimics the texture of dairy milk."

- For a simple yet satisfying plant-based dish, Koch adds a can of chickpeas to fresh-cooked pasta

## America's Test Kitchen Pumpkin Bread

Makes 2 loaves

**Topping:**  
**5 tablespoons packed (2¼ ounces) light brown sugar**  
**1 tablespoon all-purpose flour**  
**1 tablespoon unsalted butter, softened**

**1 teaspoon ground cinnamon**  
**¼ teaspoon salt**

**Bread:**  
**2 cups (10 ounces) all-purpose flour**

**1½ teaspoons baking powder**  
**½ teaspoon baking soda**  
**15-ounce can unsweetened pumpkin puree**  
**1½ teaspoons ground cinnamon**

**1 teaspoon salt**  
**¼ teaspoon ground nutmeg**  
**¼ teaspoon ground cloves**  
**1 cup (7 ounces) granulated sugar**  
**1 cup packed (7 ounces) light brown sugar**  
**½ cup vegetable oil**  
**4 ounces cream cheese, cut into 12 pieces**  
**4 large eggs**  
**¼ cup buttermilk**  
**1 cup walnuts, toasted and chopped fine**

Using your fingers, mix all the topping ingredients in a bowl until well combined. The mixture should resemble wet sand. Adjust oven rack to middle position and heat oven to 350 degrees. Grease two 8½ by 4½-inch loaf pans. Whisk flour, baking powder and baking soda together in bowl.

Using a large saucepan set over medium heat, cook the pumpkin puree, cinnamon, salt, nutmeg and cloves, stirring constantly, until reduced to 1½ cups, 6 to 8 minutes. Off heat, stir in granulated sugar, brown sugar, oil and cream cheese until combined. Let mixture stand for 5 minutes. Whisk until no visible pieces of cream cheese remain and mixture is homogeneous.

In a separate bowl, whisk eggs and buttermilk together, then whisk into pumpkin mixture. Gently fold in the flour mixture until combined (some small lumps of flour are OK). Fold in walnuts.

Scrape batter into prepared pans, smooth tops and sprinkle evenly with topping. Bake until skewer inserted in center comes out clean, 45 to 50 minutes, rotating pans halfway through baking.

Let loaves cool in pans for 20 minutes, then turn out onto wire rack and let cool for 1½ hours before serving.

— AMERICA'S TEST KITCHEN

and throws in a few handfuls of spinach or kale, garlic and broth.

- Craving spice and have some frozen sausage? Try spicy Chickpea and Chorizo Stew, substituting frozen diced red and yellow bell peppers if you don't have the fresh in your fridge.

But not everyone is looking for the quick and easy cook when they're on lockdown. If you're stuck at home and find cooking or baking therapeutic, then, by all means, use that can of pumpkin left over from the fall to make America's Test Kitchen's ultimate Pumpkin Bread.

And don't forget the one fruit that you'll want to overrip in the event you're marooned at home: Bananas. When the world is amiss, there's nothing quite as satisfying as mashing near-black bananas into a recipe for warm, comforting banana bread, especially when it's studded with those chocolate chips you keep trying not to snack on.

It's time – snack on.



# Coronavirus guide



DREAMSTIME TNS

Tickets are plentiful in the resale market at the moment as many fans are nervous about future concerts.

## Ticket refunds: Rules and one surprising tip for postponed concerts, other events

BY CHRIS RIEMENSCHNEIDER  
Star Tribune (Minneapolis)

First comes the toilet paper, food and other essentials. Eventually, though, those of us who had tickets to concerts and other events now sidelined by the coronavirus will have to figure out if, when and how to get our money back.

Here are general guidelines and a few tips on how to handle tickets for sidelined performances.

One suggestion you may find surprising: Now actually could be a good time to buy tickets to an upcoming event even if there’s a chance of it being postponed.

**Canceled events:** Most events that are outright canceled without any plans to reschedule will automatically be refunded to the credit card used to purchase your tickets. This includes “platinum” tick-

ets and other seats with inflated prices bought through Ticketmaster; all refunds are given at the price you paid. Those refunds do include the various fees, too, except for postage if the tickets were mailed.

Ticketmaster, AXS, eTix and other ticket platforms email ticket buyers with specific details on a show-by-show basis. For tickets bought in person with cash or debit card, refunds must be sought at the point of purchase (but there’s no rush to do so; maybe wait a few weeks).

**Postponed events:** For shows that are rescheduled or have plans for rescheduling, ticket holders usually don’t have to do anything if they still plan to attend on the later date. Your tickets to the original event will be good for the makeup show.

If ticket holders wish to ask for a refund for a rescheduled show, they

almost always can. Ticketmaster and other websites have a “Request a Refund” link on their website (often under the “Your Account” dashboard). However, you will have to – and may not be able to! – repurchase tickets to the makeup dates.

**Shows still in limbo:** For updates on concerts not yet postponed or canceled but questionable, news usually comes first from the artists themselves and/or the venues via their social-media sites. Some venues and artists are offering refunds to fans who want out in the meantime, but mostly these tickets are still valid and not voidable.

Tickets bought through resale sites: For events that are canceled, StubHub, VividSeats and similar sites are giving out refunds just like Ticketmaster. StubHub and several more of these sites are also currently offering fans 120% cred-

it toward future purchases instead of refunds for canceled shows. This is actually a good deal if you regularly turn to these sites for tickets. For instance, if you bought \$250 in tickets, you’ll get an extra \$50 toward the next big show.

For events that are postponed, tickets bought through resale sites such as StubHub will still be good on the makeup date, just like Ticketmaster. Ticket holders should expect an e-mail from the site with new information.

However, these sites usually do not offer refunds if the buyer cannot make the rescheduled date, so ticket holders are then told to resell their seats (benefiting the resale site twice over with its selling fees).

**Sports tickets:** For now, teams are listing their games as postponed, not canceled, so no refunds are being automatically given yet. Fans certainly won’t

be shortchanged and can still seek refunds or team credit if and when games are officially canceled or rescheduled.

**Theater productions:** Ticket refunds are generally operating the same as concerts. Refunds should be available for performances that are already canceled – check with the venue for more information. Postponed shows that are trying to reschedule may provide seats to ticket holders for the makeup dates.

Patrons can also get credit for upcoming performances in lieu of refunds – which is especially ideal for the nonprofit theater companies being hit hard by the quarantine.

**Buying for future events:** The shows must go on, and eventually they will. Concert tickets are still being sold to gigs as early as the beginning of next month, and new concerts are being announced for the summer

and fall. If these dates are postponed or canceled, the same rules will apply for refunds as listed above.

There are advantages to buying tickets now. For one, some ill-informed or panicky fans are trying to unload seats via resale sites such as StubHub, so seats for questionable big gigs can actually be had for face value or less.

**Left’s face it:** Hardly anybody is buying concert tickets right now. That means good seats should be plentiful to most upcoming shows.

That also means that many smaller, independent venues and the artists they host are taking big financial hits at the moment. They could benefit from fans pre-purchasing tickets during this downtime. Or consider buying gift cards or merchandise such as T-shirts from these venues’ and artists’ websites as another means to support them.

## Stuck at home with kids? Celebrities will read stories

BY CHRISTI CARRAS  
Los Angeles Times

Once upon a time, famous actors and authors united during a pandemic to ease children’s anxieties through storytelling.

Amy Adams, Josh Gad, Jennifer Garner and more stars are lending their voices to “Operation Storytime” and “Save With Stories,” initiatives aimed at lifting kids’ – and parents’ – spirits amid coronavirus-induced uncertainty.

Here’s how it works: Participants post social media videos of themselves reading various children’s books aloud to

entertain self-quarantined families whose children are no longer in school because of public health concerns.

“In case your day calls for a calming story,” Garner captioned her Instagram post, for which she recited Jan Brett’s winter wonderland tale, “The Mitten,” accompanied by her kid-friendly golden retriever.

Gad – who is accustomed to amusing kids as the voice of Olaf the snowman in “Frozen” – opted to read Shel Silverstein’s classic “The Giving Tree” and offered some support to families who have committed to social distancing.



JAY L. CLENDENIN TNS

Actress Amy Adams, at the 2019 Primetime Emmy Awards in Los Angeles on Sept. 22, is one of several celebrities lending their voices to “Operation Storytime” and “Save With Stories,” initiatives aimed at lifting kids’ – and parents’ – spirits.

“I also want to thank everyone who is in self-isolation right now. I know it’s hard not to be out there socializing with everybody. Trust me, I

immunocompromised, so thank you. And now I’m going to read a book that I have a lot of trouble getting through and haven’t actually read in a long time because I find it a difficult one.”

In addition to partnering with parenting blog Romper for “Operation Storytime,” Garner also collaborated with Adams for “Save With Stories,” a reading initiative started by nonprofit organizations Save the Children and No Kid Hungry. Similar to “Operation Storytime,” “Save With Stories” features Adams reciting Aviana Olea Le Gallo’s “The Dinosaur Princess” to her daughter and Garner reading Ken Geist’s “The Three Little Fish and the Big Bad Shark.”

“We are galvanizing as a community to support a new fund for a combined

effort between SAVE THE CHILDREN and Share Our Strength’s NO KID HUNGRY,” Adams wrote on Instagram. “THIRTY MILLION CHILDREN in the United States rely on school for food. School closures will hit vulnerable communities hard.”

Both actresses also encouraged their fans to donate to Save the Children and No Kid Hungry in order to serve kids “affected by COVID-19,” who are experiencing food insecurity during the pandemic. Anyone who wants to contribute can do so at savethechildren.org/savewithstories or text “SAVE” to 20222 for a one-time donation of \$10.

“All you have to do is watch our stories and please consider donating,” Adams said in a joint video with Garner.



## Coronavirus guide

# SUNFLOWERS FOR THE SOUL

## 6 Google art discoveries for your quarantine

BY JESSICA GELT  
*Los Angeles Times*

Coronavirus closures may mean months could pass before you can stand in front of a museum masterpiece again. If you have time on your hands and a deep need for cultural sustenance and succor, be it for yourself or your children, it's time to get familiar with a resource so obvious it's not: Google Arts & Culture ([artsandculture.google.com](https://artsandculture.google.com)).

This Google project launched nearly a decade ago, and while you likely were forgetting about it, the platform expanded exponentially. It now features thousands of high-resolution images from more than 1,200 museums globally, including the National Gallery in London, the Museo Reina Sofia in Madrid and the State Hermitage Museum in St. Petersburg, Russia.

You can visit Google Arts & Culture as a website on your laptop or desktop, but the project is at its immersive best when engaged via the Google Arts & Culture app (available on Google Play and the Apple App Store), which you can download for free on your smartphone or tablet. The great joy is its ability to transport you into the textural world of a piece of art. Zoom into brushstrokes, skate across oceans of color or a tap on a screen and explore the universe contained in the blue-green pigment of a single painted eye.

Images are accompanied by explanatory text, and you can spend days diving into the collection of any given partner institution.

Here we've rounded up some of our favorite virtual exhibits on the platform. It's also worth noting that the websites of local institutions like the Getty Museum, Museum of Contemporary Art, Los Angeles County Museum of Art and the Natural History Museum of Los Angeles County promise robust online options to help us in our coming weeks of collective isolation.



VICTORIA JONES AP

Google Arts & Culture features thousands of high-resolution images from more than 1,200 museums globally, including "Sunflowers" in the Van Gogh Museum in Amsterdam.

tion. But for now, here are six ways to let Google be your global museum. **Van Gogh Museum, Amsterdam:** Take a virtual trip to the Netherlands and this museum, which offers one of 17 collections of Van Gogh paintings in the Google project. You can see amazingly detailed

images of more than 160 artworks, including sunflowers, self-portraits and his famous "The Bedroom." You also can click into the story, "Which Books Did Vincent Van Gogh Read?" **Uffizi Galleries, Florence:** Take a virtual tour of one of Italy's most famous

museums, featuring up-close looks at the museum's interiors and the stunning masterpieces on its walls, including Michelangelo's "Doni Tondo" and Botticelli's "The Birth of Venus." (The magnification of the latter is so powerful, you can see cracks in the paint of her eyelids.)

Wander placid hallways and corridors, and gaze out a window at the Ponte Vecchio bridge, which straddles the picturesque Arno River. **Guggenheim Bilbao Museum:** Get up-close and personal with a selection of modernist triumphs inside the Frank Gehry-

designed landmark in Spain. "Masterpieces From the Collection" has art from the mid-20th century to the present: Mark Rothko, Jean-Michel Basquiat, Yves Klein and Willem de Kooning, revealed in luminous layers.

**Smithsonian American Art Museum, Washington:** You can take a digital walk through "African American Art: Harlem Renaissance, Civil Rights Era and Beyond," featuring work by black artists from the 1920s through the 2000s. This exhibition explores the Harlem-based portrait photography of James VanDerZee, the lush brushstrokes of James A. Porter and the expressionistic folk art of William Henry Johnson, as well as a trove of others works relating to race, identity, politics, culture and family.

**Museo Frida Kahlo, Mexico City:** "Appearances Can Be Deceiving: Frida Kahlo's Wardrobe" is an intimate study of the fascinating, highly stylized clothing and accessories that defined the look of the famous Mexican painter. Kahlo's life was forever altered by a bus accident that displaced three vertebrae and left her in pain for the rest of her life. Crutches, elaborate leather corsets, a prosthetic leg in a gorgeous red-leather boot embroidered with silk thread – they're all on digital view, as are a slew of Kahlo's traditional Mexican dresses.

**Art Zoom:** Thank Google not only for all of those interactive exhibitions but also for Art Zoom videos that play like mini documentaries, zeroed in on tiny details of famous canvases and narrated by famous musicians including Jarvis Cocker and Maggie Rogers. A prime example: Pieter Bruegel the Elder's "Tower of Babel" as examined by Feist. The Canadian singer-songwriter takes us inside her interpretation of one of Bruegel's most famous works, which she notes stands 5 feet, 1 inch high – almost as tall as the singer herself.

## Here's how to stream TV without paying a dime – with trial periods

BY CHRISTIE D ZURILLA  
*Los Angeles Times*

The reality is starting to set in: Coronavirus has a lot of people stuck at home. Sports are shut down. Some people are temporarily out of work or might be soon. Budgets for luxuries – like premium TV – are tightening.

So how do we stay entertained without breaking the bank with \$20-a-pop movies on demand? Streaming services, of course.

It turns out that if you string together various

streamers' current free-trial offers just right, you can have a pandemic's worth of entertainment without paying a dime.

For those who haven't been streaming yet and think now might be the time to try it out, here are the free deals on the larger services. All require that you sign up with a valid credit card. Remembering to cancel on time? That's on you.

● Acorn TV has extended its usual seven-day free trial to 30 days for new subscribers. The streamer features British, Australian and Canadian televi-

sion shows, foreign-language thrillers and more. After the trial it's \$5.99 a month or \$59.99 for the year.

● Sundance Now is extending its seven-day free trial to 30 days for new customers with the promo code SUNDANCE-NOW30. The streamer features true-crime series, original dramas and exclusive thrillers. After the trial it's \$6.99 monthly or \$4.99 a month with an annual membership.

● Shudder is extending its normal seven-day free trial to 30 days with the promo code SHUTIN. The

streamer features horror movies and shows, plus thrillers and suspense. After the trial it's \$4.99 a month or \$47.88 a year.

● Tubi is a free streamer that gets content from more than 200 partners, including Paramount, Lionsgate and MGM. The catch: It's ad-supported. But – it's free.

● Crunchyroll offers a 14-day free trial of its premium, ad-free, HD incarnation. The streamer features anime and Japanese programming. After the trial it's \$7.99 a month, \$22.99 for three months or \$79.99 for a year.

● Pluto TV is another free streamer that's supported by ads. It offers live TV and movies and TV series on demand. Check out the half-dozen

James Bond features.

● PBS is streaming Ken Burns' four-part film "Baseball" for free on pbs.org and all PBS streaming services. It's almost eight hours of sports-related content, folks.

Amazon Prime Video offers a free 30-day trial, then charges \$13 a month or \$119 per year once the trial is over.

● Hulu offers a 30-day free trial, then charges anywhere from \$5.99 a month for Hulu with ads to \$60.99 a month for ad-free Hulu + Live TV.

● STARZ has a deal for new customers: \$4.99 a month for the first three months. After that the cost increases to \$8.99 a month.

● HBO offers a limited number of free pilots and

series on its website. The HBO Now streaming service offers a seven-day free trial, then it's \$14.99 a month.

● Showtime is offering a 14-day free trial. After that it's \$10.99 a month or \$109.90 per year.

● Apple TV+ offers a free one-year subscription with purchase of an Apple product or a seven-day free trial without purchase. After that it's \$4.99 a month.

● CBS All Access offers a seven-day free trial. After that the price is either \$5.99 or \$9.99 monthly, depending on whether there are commercials. Take about 15% off the price with an annual plan.

● Cinemax's Max Go is not currently offering a free trial.



# Coronavirus guide



CHARLES KRUPA AP

Two young men walk down Main Street under Christmas lights through downtown in Farmington, New Hampshire, on Thursday. As the coronavirus spreads, holiday lights are going back up to provide a bit of emotional and actual brightness.

## Enjoyable at a distance, holiday lights brighten dark times

BY HOLLY RAMER  
*Associated Press*

CONCORD, N.H.

At a time of great uncertainty, even the seasons seem scrambled. Christmas lights in springtime?

Wrapped around a tree trunk in Colorado, fashioned into a heart in Alabama and hung high over Main Street in a New Hampshire town, holiday lights are going back up. As the coronavirus spreads, the displays are providing a bit of emotional and actual brightness. And they're especially easy to enjoy from a safe social distance.

"We live out in the country, but I know you can see them from the highway," said Julie Check, who turned on the white lights that trace the roof line of her home in Eastman, Wisconsin, on Wednesday night. "Anything I can do to make people happy right now, I'm going to try to do."

In Farmington, New Hampshire, a roughly five-block stretch of downtown has been re-illuminated with holiday lights that swoop and zigzag between tall wooden posts. So cherished is the town's 80-year decorating tradition that taxpayers approved spending \$11,500 six years ago to erect the posts after the



CHARLES KRUPA AP

Jason Desjardin, of the Farmington Preservation & Improvement Organization, stands on a ladder Thursday as he turns back on the Christmas lights in Farmington, N.H.

electric company said lights could no longer be affixed to its poles.

"It's a small town; we don't have a lot of traditions. That was one of them, and we just didn't want it to go away," said Lee Warburton, president of the Farmington Preservation and Improvement Organization, which maintains and installs the lights. At his suggestion, the 27 strands totaling 2,000-plus bulbs were tested and turned back on Thursday night.

"It's tough for everybody right now. Everyone is on edge," he said. "We just thought it would be nice to give the folks in town something to smile about."

Police Chief John Drury was all for the idea. He remembers how pretty the lights looked when he first visited the town for a job interview on a December day 20 years ago.

"It was one of the things that actually drew me to this community when I was first looking to be a police officer," he said. "By bringing the lights back, hopefully, it gives people the sense of hope that we're all in this together. We'll get through it."

Many of the posts on Twitter and other social media platforms point back to a Colorado man who tweeted Monday that his mom thought people should put Christmas lights in their windows "to remind each other there is still life and light" while they stay home to avoid the virus.

Rosemary Peterson, the mom in question, said Thursday she made the offhand suggestion after making the wrenching decision to indefinitely postpone the funeral for her sister, Marlene, who died on March 13.

"We know we are not alone. Many are giving up events, experiences, celebrations and milestones," she said. "So in the midst of a lot of darkness, I thought we could all use some light."

Both she and her son were surprised that his tweet took off.

"He told me, 'Mom, there are a lot of people looking at this!' and I said, 'Oh, no! We have to go put out some lights!'" Peterson said. "We ran out and wrapped a tree and had another light string we put around our front window. Nothing too fancy, I'll tell ya."

Since then, others have adopted his #lightsforlife hashtag to share photos of their efforts. In Huntsville, Alabama, Sarah Bang said she usually just winds a string of white lights around the railing of her apartment balcony for Christmas. But after seeing Peterson's tweet, she made a heart shape instead.

"I had Christmas lights because I'm super into Christmas, so I dug them out and decided love was a good thing to spread," she said.



# Coronavirus guide



NETFLIX TNS

“Tuca and Bertie” on Netflix.

BY SEATTLE TIMES STAFF  
The Seattle Times

Due to unprecedented events taking place in the United States and around the world, a lot of us may be finding ourselves staying home more than usual these days. And we'll be needing things to watch – not just movies, which kill maybe two hours or so, but multiseason TV shows in which we can get happily lost. In between washing our hands and monitoring the latest public health news, here's 22 binge-worthy TV shows available for streaming.

## “TUCA & BERTIE”

(AVAILABLE ON NETFLIX)

This unjustly canceled Netflix series about a friendship between anxious perfectionist song thrush Bertie (voiced by Ali Wong) and Tuca, a big-hearted, extroverted toucan in recovery for substance-use issues (Tiffany Haddish), is the only show I've watched and immediately wondered, “Does this take place inside my brain?” The premise – from Lisa Hanawalt, who created the wildly gorgeous anthropomorphized creatures of “BoJack Horseman” – is preposterous: It's an animated show about 30-something bird-women that somehow manages to take on serious content – trauma, mental health, sobriety, workplace sexism – in a cartoon atmosphere that's insistently fun and bubbly. And while the dichotomy between introverted Bertie and brazen Tuca could fall flat if it were just that, I've always seen them as two sides of the same (delightful, complex, vulnerable) personality, and their story as a surreal, comedic metaphor for the way our friends can expand our understanding of our own inner reserves. We all have a little Tuca and Bertie in us. That may be why I've been revisiting the show since the novel coronavirus first entered the news coverage. It helps me turn off my reporter brain, but not my humanity.

## “LOVE IS BLIND”

(AVAILABLE ON NETFLIX)

“Love Is Blind” is not a good TV show. The concept is like “The Bachelor,” with a distinct ar-

# 22 TV shows to binge on as you wait out the coronavirus



APPLE TV+ TNS

“For All Mankind” on Apple TV.

anged-marriage vibe, wherein a bunch of conventionally attractive people talk to each other through a wall and then get engaged without knowing what their (conventionally attractive) partners look like. Surprise! They (mostly) try to give their hot mystery dates a shot, cohabitating and planning weddings at a time when most of us are still only committed to the texting-funny-gifs stage of a relationship. Don't worry, it gets weirder! The “Love Is Blind” contestants are inexplicably shepherded through their stress-inducing journey by the one-time boy-band star and ex-husband of Jessica Simpson, Nick Lachey, and his wife, Vanessa Lachey (previously Minnillo), best known as host of MTV's “Total Request Live.” I've always found “The Bachelor” unwatchable, but there is so much going on in “Love Is Blind” – outdated gender norms, the horrors

of cohabitation writ large, the collision between romance and the allure of one's phone, insecure and avoidant attachment styles and HEAVY emotions expressed in ways both functional and disastrous. It's a bad show and you'll feel bad that you watched it. You also won't be able to stop yourself.

## “THE LIFE OF BIRDS”

(PBS; AVAILABLE ON AMAZON PRIME)

At its root, the anxiety we're all feeling about coronavirus is about fear of death: the horror of the end of our own lives on this planet, sudden and stark and unknowable, as well as terror of the lives of our loved ones taken from us with a cruel finality. We know that statistically, we are almost certainly safe – knock frantically on wood – and yet we dread. It's time to be with the birds, light-boned and feathery and endlessly fascinating in their endless ways, absurd-

looking or elegant, they of industrious nests and miraculous eggs and fuzzy baby chicks. This PBS documentary series is so vividly shot, it's incredible in the literal sense of not to be believed (how do they get the cameras so close to the birds?!), and the narration by the inimitable David Attenborough will soothe even the most existential anxiety (that accent!). Birds are life, flightless or of flight – join them. Also, no viewing material has ever been more edible-friendly.

## “CURB YOUR ENTHUSIASM”

(HBO NOW)

I want to hear Larry David's take on coronavirus because a quarantine sounds like his dream come true. The fictionalized take on the “Seinfeld” creator's life is wrapping up its 10th season now on HBO, so it's the perfect time to wind back across the bridges David has burned in his tireless

quest to be right, no matter the argument (usually one he started). I won't defend L.D.'s petty squabbles with friends, family, Mocha Joe, his dry cleaner, an aggressive swan, Joseph from the Nativity scene and a slew of Hollywood folks, BUT David did once refuse to shake Ben Stiller's recently sneezed-in hand, ruining their relationship while displaying proper outbreak preparedness. For laughs from a man always trying to get away from people, “Curb” is pretty, pretty, pre-tty ... pretty good.

## “MONK”

(USA NETWORK; AVAILABLE ON AMAZON PRIME VIDEO)

It's a jungle out there, all right. Tony Shalhoub won three Emmys for his role as Adrian Monk, the titular sleuth bent by the unsolved murder of his wife and the obsessive-compulsive disorder and phobias that intensified after her death. I fell for

“Monk” in elementary school – it was exciting enough for my older brother and I and not too violent for my younger sister and mom. (Dad napped.) Plotlines dulled as the show trudged on, but there's enough heart in the script – and intrigue about Trudy's murder – to make eight seasons worth watching. “Monk” is easy to start and easy to love, and the protagonist's paranoia over germs has never been more relatable. Fair warning: Randy Newman's theme song will be stuck in your head for weeks.

## “NATHAN FOR YOU”

(COMEDY CENTRAL; AVAILABLE ON HULU)

Nathan Fielder graduated from one of Canada's top business schools with really good grades. He says so at the top of every “Nathan For You” episode before offering businesses ideas that the owners inevitably realize are ludicrous. The fun is in watching them eventually tell Nathan his ideas are terrible and that they don't want to hang out after taping ends. (He often asks.) Over four seasons, Fielder envisions initiatives like a gas-station rebate that requires customers camp overnight on a mountain, a cleaning service that deploys 40 housekeepers at once, a bar that circumvents smoking laws by rebranding as a hyper-realistic play – the list goes on. If you like humor that makes you cringe amid an unending uncomfortable silence, throw on “Nathan For You” with friends ... or by yourself. That's how Fielder intended it to be watched.

## “GREY'S ANATOMY”

(ABC; AVAILABLE ON ABC, NETFLIX, HULU)

I'm not even ashamed to admit it. I have seen Every. Single. Episode. Of. This. Show. Sure, we've lost many characters (Alex! Derek! (ASTERISK) sob (ASTERISK) Arizona! Callie! Yang! Lexie! Mark!) to death, destruction and whatnot. And yes, if this hospital were real and I actually worked there, I would run screaming out the nearest exit because it is cursed with the worst luck of any building in America. How-

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## TV SHOWS

ever, I love this show because, after 16 seasons, these characters have become as familiar as friends. “Grey’s” has always been about relationships – the medicine is just a vehicle to advance the drama! – and how the people around us get us through life’s challenges. Also, it’s set in a hospital full of fictional world-class doctors who somehow always pull out miraculous answers for the most confounding viruses, tumors and medical mysteries. So if it’s hope you need in a time of pandemic, well, pull up “Grey’s” and get acquainted with the doctors of Grey-Sloan Memorial Hospital.

### “FOR ALL MANKIND”

(APPLE TV)

I’m a sucker for space-related TV shows and alternate history, so this new Apple TV series hooked me from the get-go. The premise: What if the global space race had never ended? What if the Russians had beaten the U.S. to the moon? How would that have affected NASA’s space program? One hint: In this alternate universe, we would have celebrated some badass female astronauts a lot sooner than we did. Set in the ‘60s, the show doesn’t shy away from the societal issues of its time (Vietnam, the civil rights movement, the women’s rights movement) and deftly incorporates elements of history into a fast-moving narrative. It’s fascinating to see historical NASA figures come to life too. You’ll meet John Glenn and a very disappointed Neil Armstrong; and one of the female astronauts (Molly Cobb, played by Sonya Walger) is based loosely on real-life pioneer Jerrie Cobb, a trailblazing pilot who was the first woman to pass all the preflight tests that NASA’s original Mercury 7 astronauts took. The show just completed a 10-episode debut season on Apple TV, and I’m dying to know what happens next.

### “KILLING EVE”

(BBC AMERICA; AVAILABLE ON HULU)

Like spy movies, old-school cat-and-mouse chases, lively acting and a peek into the mind of a cold-but-charming female assassin who has a complete lack of empathy for anyone except the female agent trying to track her down? This is the series for you. Based on the novel “Codename Villanelle” by Luke Jennings, this series shines in large part because of its strong casting. In 2019, Sandra Oh won a Golden Globe for Best Actress in a TV Drama for her portrayal of MI5 agent Eve Polastri. Jodie Comer, who plays the assassin Villanelle, won an Emmy Award for Best Actress in a TV Drama this year. So, go ahead. Binge the first two seasons on Hulu and you’ll be all caught up by April 26, when Season 3 begins on BBC America.

### “SIX FEET UNDER”

(HBO; AVAILABLE ON AMAZON PRIME, HULU, HBO NOW)

Beginning in 2001 and ending five seasons later in 2005, this HBO drama was, quite literally about life and death: It centered on the Fishers, a Los Angeles family who owned a funeral home, and every episode began with some-

one’s life ending. Sounds dark, and it was, but this Alan Ball creation was so perfectly cast and elegantly written that I returned for more every Sunday back in the aughts – and have been looking ever since for an excuse to watch the whole thing beginning to end. The characters, not always lovable but having the messy imperfections and annoyances of real life, were always surprising; the message of how those we have lost linger among us was unexpectedly lyrical. Special bonus: one of the greatest finale episodes of all of television, wrapping things up in a perfectly bittersweet bow.

### “ONE DAY AT A TIME”

(NETFLIX)

I idly checked out the first episode of Gloria Calderon Kellett’s reboot of the 1970s sitcom, featuring three generations of a Cuban American family living together in more-or-less harmony, a while back, thinking it would be something pleasantly sitcommy to pass a half-hour. And, just like that, three seasons went by – and all I wanted was more. This show, led by the powerhouse duo of Justina Machado (also great in “Six Feet Under”) and living legend Rita Moreno, is quite possibly the sweetest, funniest streaming experience I’ve had in years; sitcommy, sure, but utterly charming in its depiction of family love. Netflix canceled the show after three seasons, but it’s returning to the airwaves nonetheless: The cable channel Pop TV will present season four, starting March 24.

### “CALL THE MIDWIFE”

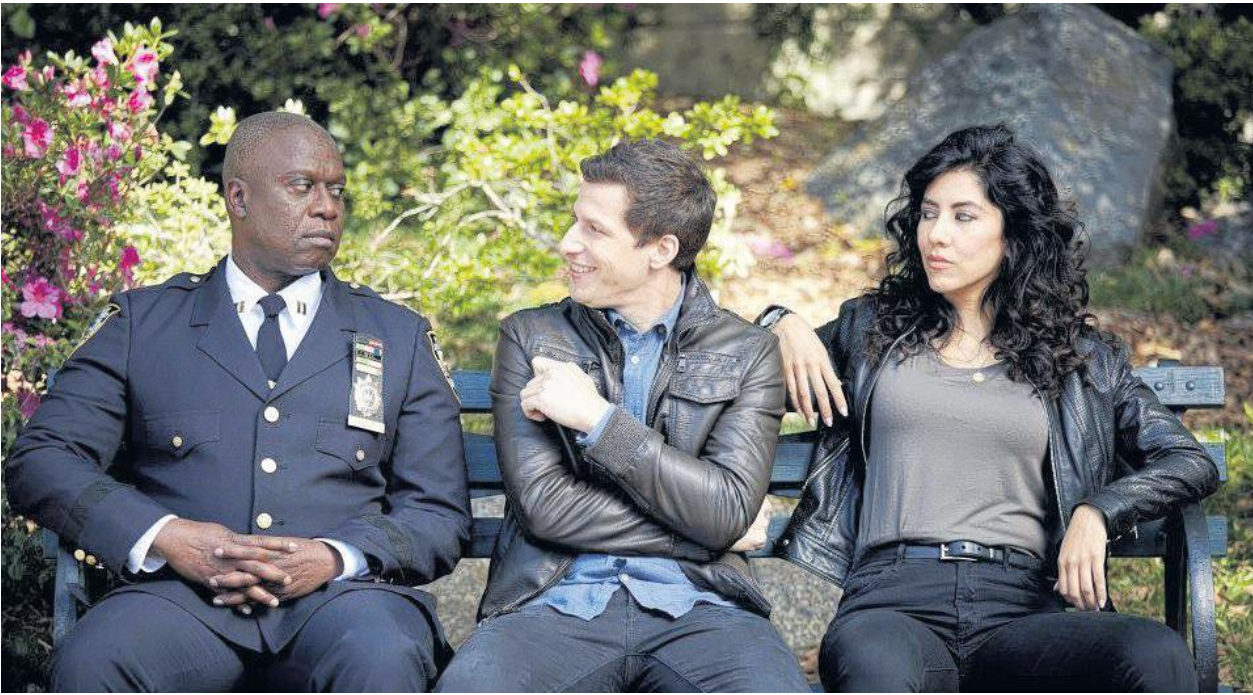
(PBS; AVAILABLE ON NETFLIX)

Well, there’s only so many times a person can rewatch “Downton Abbey” (and if you haven’t, for heaven’s sake, get on that; it’s on Amazon Prime and PBS Passport), so I was in need of a British period drama. A friend recommended this one, set in midcentury and centering on a group of midwife/nurses living in a convent in the working-class London district of Poplar, and I quickly got hooked. This show is based on the real-life memoirs of nurse Jennifer Worth, and it’s sort of the spiritual opposite of “Six Feet Under”: In every episode, a baby is born. In its many seasons (its ninth recently aired in Britain, and at least two more are planned), “Call the Midwife” has explored some unexpectedly gritty territory; this show is far more modern than it appears at first glance, and it has a female energy that’s both empowering and irresistible.

### “BROOKLYN NINE-NINE”

(NBC; AVAILABLE ON HULU)

You’ve probably already binged it twice by now, but it’s smart, it’s funny and, unlike many sitcoms that we’re finding haven’t aged well these days (since when is New York that white, “Friends”?), “Brooklyn Nine-Nine” has a wonderfully diverse cast and is standing proof that you can be funny without being offensive. You may think you caught all the brilliant jokes the first two times you binged it, but like with a good book, you’re guaranteed to find something new to



JOHN P. FLEENOR Fox

“Brooklyn Nine-Nine” on NBC and Hulu.



KEN WORONER BBC America

“Orphan Black” on BBC America and Amazon Prime Video.

laugh at with every re-watch. Besides, with all the anxiety and uncertainty swirling around the country right now, we could all use a little levity, right?

### “RUSSIAN DOLL”

(NETFLIX)

If you think you’re mired in rut and routine while you’re stuck at home for the foreseeable future, try being Natasha Lyonne in Netflix original “Russian Doll.” Lyonne is delightfully vulgar and sympathetic as Nadia, a woman who is destined (doomed?) to repeat the same party, at which she is the guest of honor, over and over and over again. It sounds like an old trick (a la “Groundhog Day”), but this is a smart take with some unique devices, like the fact that Nadia doesn’t just experience the same night over and over, but she actually dies (sometimes horribly, sometimes hilariously) at the end of each repeated night. Amy Poehler is one of the writers, and her skill at making the day-to-day of a “Parks and Recreation” office interesting for 125 episodes shines in this series about a day that won’t end. You’ll find yourself engrossed by the wit, tickled and touched by Lyonne’s at times hilarious and at times deeply wounded character, and relieved that the confines of your apartment aren’t nearly as maddening as the endless party (and deaths) Nadia has to endure.

### “WESTWORLD”

(HBO; AVAILABLE ON AMAZON PRIME VIDEO, HBO NOW, HULU)

The good news: There are only two seasons of this show (so far; Season 3 premieres March 15 on HBO), so it’s not a huge time commitment. The bad news: Once you start, you’ll probably want to watch it all at once – not good for either productivity or health. This series – in which rich people live

out their fantasies in a Wild West-set amusement park hosted by humanoid robots – becomes more twisted and multilayered as it goes along. Add to that the stellar cast (Evan Rachel Wood, Thandie Newton, Anthony Hopkins, Ed Harris, Jeffrey Wright, etc.), and this unsettling, violent, visually stunning sci-fi drama might have you, like me, hooked by the end of the first episode.

### “ORPHAN BLACK”

(BBC AMERICA; AVAILABLE ON AMAZON PRIME VIDEO)

Yeah, this series – which starts grippingly when a woman sees someone who looks exactly like herself step into the path of an oncoming train – becomes increasingly silly. But the show always remains compelling, thanks to its sense of humor and the warmhearted sisterhood that develops among a group of women who discover they are all clones. The main reason to watch it, though, is for star Tatiana Maslany, who earned a well-deserved Lead Actress Emmy for playing more than a dozen clones, from a street-smart single mother to a book-smart bohemian scientist to a suburban soccer mom, and more. Who – or what – is behind the cloning experiments? What are they trying to achieve? Who cares? All hail Maslany!

### “DARK”

(NETFLIX)

Nothing against the real town of Winden, Germany, but I have absolutely zero desire to visit after watching this creepy-as-all-hell two-season (for now) series. The first German-language show to debut on Netflix, “Dark” has been compared to “Stranger Things,” but other than the ‘80s and some supernatural forces, the two shows have nothing in common. There are no kids in Ghostbusters costumes here, only two nuclear cooling towers

dominating the rainy landscape plus an ominous forest complete with spooky caves. Wormholes, time travel, child abductions and more haunt four families over three generations connected in 33-year increments. It seems like everyone is hiding something, some secrets much more devastating than others. The default for the show is with English dubbing, but make sure you binge in German with subtitles for the full effect and one dark, twisty ride.

### “HIGH FIDELITY”

(HULU)

I remember loving the John Cusack movie version of this Nick Hornby novel when it was released in 2000, but this 10-episode version starring Zoe Kravitz has 100% won my heart. Kravitz plays Rob, the curmudgeonly owner of Championship Vinyl and the character originally played by Cusack. Replacing Jack Black and Todd Louiso as Rob’s employees and best friends are Da’Vine Joy Randolph as Cherise and David H. Holmes as Simon (who also happens to be one of Rob’s top five desert island heartbreaks). Things have been delightfully updated for the times ... while also scattering a few Easter eggs throughout the episodes for fans of the movie. You still watch Rob be a selfish jerk, but you root for her a little bit more than when Cusack was in the driver’s seat. Cherise and Simon help sand down her edges while also feeling like fully formed characters. Fans of “The OA” will recognize Rob’s ex, Mac, played by Kingsley Ben-Adir. Parker Posey makes a very memorable appearance. Natasha Lyonne directed an episode! What are you waiting for? Fingers crossed for another season.

### “THE CIRCLE”

(NETFLIX)

If you like reality television, or even if you don’t, you should check this show out. A group of strangers all vie to be the most influential, but they can only interact with each other through an online system called “The Circle.” With catfishing, romance, drama and a cast of unique characters, this show is the perfect recipe for a silly, but irresistible watch. Plus, considering the players have to be isolated in their own apartments, it might help you feel less alone while you’re doing the same.

### “SEX EDUCATION”

(NETFLIX)

Viewer discretion is absolutely advised with this one, but it’s worth a watch. Being a teenager is awkward enough, but for the show’s main character, Otis, it doesn’t help that his mom, played by Gillian Anderson, is a sex therapist. He eventually teams up with his classmate Maeve to start an underground sex therapy clinic using the knowledge he’s picked up from his mom. What could go wrong? Unsurprisingly, a lot, but it makes for an entertaining watch. The show is an honest, funny and open look at sexuality and growing up.

### “YOU’RE THE WORST”

(FX; AVAILABLE ON HULU)

My one-sentence summary of this show is: It’s like “It’s Always Sunny in Philadelphia,” if it were a romantic comedy set in Los Angeles. Frequently referred to as an “anti-romantic romantic comedy,” “You’re the Worst” contains one of the greatest love stories in modern television. The show follows two love-cynics, Gretchen and Jimmy, and their journey through love, relationships, happiness and other wacky antics over the course of several years. I think the true genius of the show is how it’s able to effectively tackle tough subjects, like depression, alcoholism and PTSD, with beautiful nuance, yet feature the trashiest band of characters imaginable.

### “AMERICAN VANDAL”

(NETFLIX)

Since the day I first watched the pilot, I have wanted to scream from the rooftop of any and all buildings, “WATCH ‘AMERICAN VANDAL’!!!” It is a searing, hilarious parody of the true-crime genre, (think “Serial” or “Making a Murderer”) with an incredibly well-written mystery arc, and a terrifyingly accurate depiction of high school antics in the 2010s.



# Coronavirus guide

## From ‘Outbreak’ to ‘Contagion’: What post-apocalyptic movies can teach about coping with the coronavirus pandemic

BY CRYSTAL PAUL  
*The Seattle Times*

SEATTLE

It starts with a cough ... The screen is black and all you hear is the sound of Gwyneth Paltrow gently coughing. That’s how director Steven Soderbergh’s 2011 film “Contagion” begins.

Before you know it, a deadly virus is spreading, people all over the world are dying or desperate, society as we know it breaks down, humanity turns selfish and cruel, and the heroes of the virus apocalypse spring into dramatic, adrenaline-inducing action.

That’s essentially the recipe for most pandemic-apocalypse films.

Of course, if it’s a less sophisticated film than “Contagion,” like the 1995 film “Outbreak,” then it starts with a series of very unlikely blunders, bad intentions, a touch of xenophobia and maybe even a government cover-up, before (spoiler alert!) the world is saved by Dustin Hoffman winning a game of chicken between a helicopter and a bomb-wielding plane.

But, you get the idea.

As stocks dive, businesses and schools close, major events are canceled and local governments urge residents to stay at home due to the spread of the new coronavirus, it can start to feel like we’re living in our own pandemic-wrought end of days.

While I 100% do not recommend watching “Contagion” at a time like this (it strikes way too close to home!), I did.

As the coronavirus pandemic spreads and everyday slices of life begin to resemble scenes from post-apocalyptic movies, I watched several popular apocalyptic pandemic films to see how the stories we put on screen compare to our real-life fears, hopes and reactions to these kinds of crises.

Eight movies and more than 16 hours later, here’s what I’ve learned from the experience. ... It’s a sunnier picture than you might imagine.

### OUR FEARS

What are we really afraid of?

From a cursory look at pandemic movies like “28 Days Later” or “World War Z,” you’d think the answer is simple – we just really don’t want to be eaten alive by ugly, gnarly fleshed, fast-running zombies.

I mean, yeah, that would suck. Of course, no one realistically believes the dead will rise with a rabid craving for human flesh.

With more realistic pandemic films like “Contagion,” which don’t rely on ugly monsters to scare us, we see how terrifying a virus can be all on its own. Throughout the film, the camera focuses in on all of the mundane, everyday behaviors we engage in that, in the hands of a viral infection, become deadly. These are otherwise harmless actions we all take hundreds or even



CLAUDETTE BARIUS/WARNER BROS. TNS

Gwyneth Paltrow played patient zero of a viral epidemic in ‘Contagion’.

thousands of times a day: touching our faces, greeting each other with a handshake, taking a credit card from a customer, holding onto the rail on the bus; basically, touching pretty much anything that another human touches without immediately washing our hands afterward.

These are the little things we are all hyperaware of and justly paranoid about right now.

But it’s particularly scary to think this could happen to you. Viruses, like zombies, don’t spare anyone. A single bite from a zombie can infect you. A simple handshake or an uncovered cough on the bus can sicken you.

It’s what makes viruses and epidemics big enough “monsters” that they’re worth making movies about.

Yet, aside from the “bad touch” that spreads the virus or the bite that spreads the zombification, what virus-focused movies like “Outbreak” and “Contagion” have in common with zombie movies are depictions of total societal breakdown.

In “Blindness,” a 2008 film based on Jose Saramago’s novel of the same name about an epidemic that causes the infected to go blind, a once-civil quarantine center becomes a hovel where women are raped in exchange for food.

In “Carriers” (a 2009 film in which Chris Pine leads a band of friends through an epidemic-torn country), countless video games or the comic-book and TV phenomenon “The Walking Dead” (in which the world is overrun by zombies), it’s every man or small group of bandits for himself.

Even in “Contagion,” the least dramatic of these films, people are reduced to stealing, looting and killing. The dead are bur-

ied in mass graves and civil society as we know it ends.

What apocalyptic films show us is that we’re not just afraid of gruesome death, we’re afraid societal breakdown will reveal that the ugly side of humanity is more grotesque than the necrotic, oozing faces of killer zombies, that if the worst happens – if a pandemic turns us all into potential carriers – the worst of humanity will surface. And then ... people will push over a young girl to steal her rations, they’ll kill their neighbors and loot and burn down the neighborhood grocery to save themselves. Another predictable trope: the government ignoring early warnings about the virus (a situation that, unfortunately hews a little too close to home) and ultimately deciding to blow up an entire American city to contain its spread.

This chaos and utter breakdown of normalcy is what we’re afraid of, but is it also, perhaps, what we secretly crave? The answer to the question of who we would become if civilized society came to a grinding halt? A total undoing of society as we know it would force humanity to survive without the comforts and social niceties we’ve cultivated, retreat to our most basic human instincts and create new beginnings or even whole new societies.

Inevitably, in the post-apocalypse film, those who rise to fill the voids of leadership and rebuild society are either the worst humanity has to offer, or the very best.

Because the other thing that post-apocalyptic films have in common is heroes.

### OUR HOPES

Films like “Outbreak” or “12 Monkeys” break out the big guns – Dustin

Hoffman and Bruce Willis, respectively – to swoop in and save the day with macho-style heroics featuring helicopter fights and time travel.

Yet, heroes in apocalypse movies don’t have to wear capes or possess superhuman abilities. Instead, apocalyptic heroism often comes in the form of a kind gesture, like sharing food with a hungry family, or an act of self-sacrifice – like in “Contagion,” when a doctor tests a possible vaccine on herself.

We’re starting to see this happen in real life, too. Such kindness has been reflected in Seattle amidst the coronavirus outbreak. Many readers responded to my story about those at highest risk of getting COVID-19 by asking how they could help these people in self-isolation. As more schools and businesses are asked to cease operations, the community has come together to provide supplies and aid to those in need.

These moments of human connection and empathy are playing out in real life as reliably as they play out in most post-apocalyptic movies. It’s proof that as long as we retain kindness and empathy for others, we can maintain our humanity even in the most horrific circumstances.

While our fears in times of pandemic may drive us to push our way through or avoid crowds and side-eye the woman with the mask coughing her way through the aisles, when it comes down to it, even if selfishness and criminality reign, basic human kindness still peeks through.

Hollywood depictions of post-apocalyptic cruelty and kindness may be more dramatic, but they’re not wrong in the notion that crisis brings out both in our society.

### OUR CHOICE

Ultimately, it comes down to one thing: We all have choices to make. And these movies seem to show that the measure of your humanity is how you react in a crisis when faced with tough decisions.

“Blindness” starts off with what appears to be an act of kindness – a stranger offers to help a man stranded due to a sudden onset of blindness, only to steal his car later. It’s not long before the epidemic of blindness spreads and people are quarantined and a fight breaks out between the car thief, now blind as well, and patient zero, whose car he stole.

“If you want to make this place a hell, you’re absolutely going about it the right way,” Mark Ruffalo’s character warns as he breaks up the fight.

His warning echoes throughout the film as quarantine numbers grow, rations deplete and desperation and cruelty spike. All it takes is a single man with a gun and bad intentions to thoroughly break down the flimsy social structure that once held the overcrowded quarantine together.

They’re not zombies, but from the way “Blindness” depicts people behaving in this quarantine, they might as well be mindless monsters. They made their own world into a hell, just as Ruffalo’s character forewarned.

In the world outside the quarantine, infected people shuffle around blind and attack each other over the slightest scraps of food, sex or anything that’s worth anything, very much like zombies.

But the original cast bonds as they guide each other through the post-apocalyptic world, telling stories to stay sane and taking pleasure in simple things like laughing in the

rain after so long in a disgusting quarantine.

When they find a safe haven and try to carve out a bit of normalcy together, sitting around a fire, dining and laughing together, their humanity is restored. They’ve become a family and found their own little refuge amid the terror. Cosmically, patient zero’s sight is restored around the same time, and it’s as if he wakes up from a bad nightmare, awaking to a new family and a new world.

Human nature is not inherently cruel and selfish or good and kind, they seem to say. It’s up to us.

Fact or fiction, zombie apocalypse or coronavirus pandemic, it’s up to us to either “make this place a hell” or remember we’re in this together and can wake up in a better reality if we take care of each other.

So far, even as we find ourselves in a radically new situation across the globe, with travel bans and schools and businesses shuttering, people in Seattle and elsewhere are stepping up to help the most vulnerable, and the most vulnerable are looking out for each other.

A pregnant friend who works with incarcerated people told me her clients worry about her getting sick. One even told the deputy on staff not to let her into the holding cell because they don’t have soap, windows or proper ventilation in there and he didn’t want her to get sick.

“Funny how people society treats with so little humanity (can) still show so much compassion,” she told me.

I think (I hope) we’re more likely to keep supporting each other than we are to start attacking each other in the streets over scraps of food (or, in our case, apparently toilet paper). But there’s still much more we can do.

We haven’t devolved into lawlessness here in King County, but we have seen xenophobia and racism arise as people avoid the Chinatown International District and treat Asian Americans with wariness. There’s apparently also been a surge in gun and ammunition purchases. However, we’ve also seen people rally around injured communities in various ways.

With schools closed, students and their parents need child care and internet access. We still don’t have solutions for our overworked health care workers, people who are incarcerated, struggling small-business owners or Seattleites without homes, whose situations put them at greater risk of contracting COVID-19.

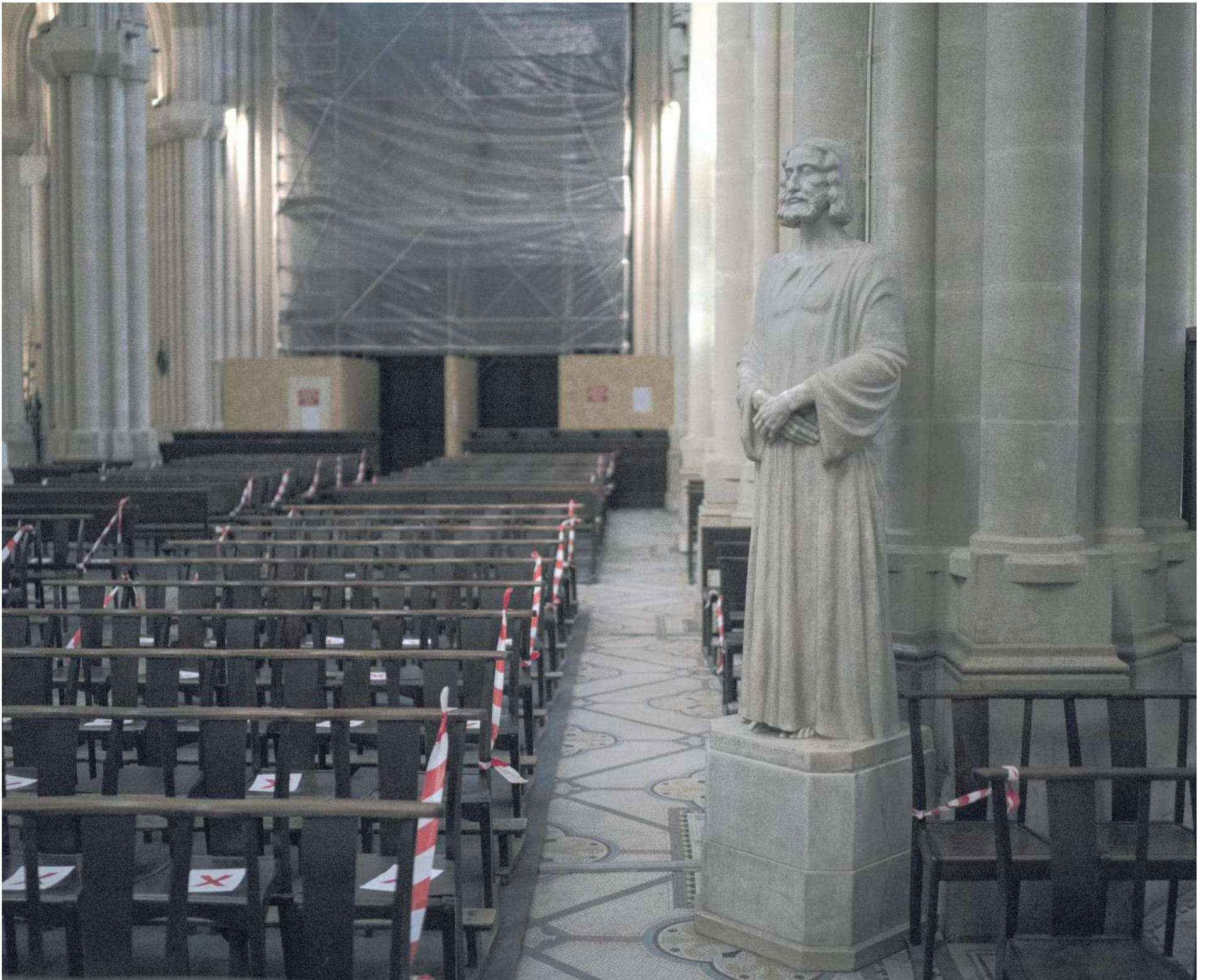
More needs and vulnerabilities will reveal themselves as we continue to deal with this virus.

You don’t have to survive a helicopter fight, be a time-traveling Bruce Willis, or run from sprinting zombies to be a hero in this time of fear and need. Small acts of kindness can go a long way in our communities.



# Coronavirus guide

## ONE GOOD THING



DANIEL COLE AP

Church seats are marked Sunday to indicate the appropriate social distancing measures at the St. Vincent de Paul church in Marseille, southern France.

# During virus lockdown, French priests master livestream at Gothic cathedral

BY DANIEL COLE  
Associated Press

### MARSEILLE, FRANCE

Recent restrictions on gatherings in France to prevent the spread of the new coronavirus have forced religious communities to adapt the way they express their faith.

On a typical Sunday morning, Father Philippe Rochas greets roughly 350 worshippers as they trickle into the neo-Gothic St.-Vincent-de-Paul church in the heart of Marseille.

This Sunday, however, he sat hunched over a webcam as he and his fellow priests prepared an empty meeting room to live-stream Sunday Mass directly to the screens of parishioners confined at home.

"I already realize that the people who see us on-line are very happy to have this service, as a kind of comfort," Rochas told The Associated Press.

As he delivered a sermon to just over 70 live viewers Sunday morning, one commented on the site: "glory be to god, amen," followed by a prayer emoji.

By the end of Sunday,

the video had accumulated more than 500 views on its Facebook page.

The French government imposed confinement rules in the past week. Those rules do not list churches as valid destinations on the permission forms required to leave confinement. But, Rochas decided to leave his church open for individuals to come and pray, up to a maximum of 20 people, who must respect the social

distancing measures and barriers put into place. Lines of warning tape and red X's cover the rows of polished seating at the church of St.-Vincent-de-Paul.

"We miss the real contact with our parishioners, but I strongly believe that in this new situation, we will reach new people," he said.

France is seeing a rapid rise in cases of the virus, with the third-largest number of deaths in Europe.

Most people quickly recover from the virus after experiencing only mild or moderate symptoms, such as fever and cough. For some, especially older adults and people with existing health problems, it can cause more severe illness, including pneumonia.

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DANIEL COLE AP

Priest Philippe Rochas, left, and Jean-Benoit de Beauchene pack up livestreaming equipment after holding a closed-door Sunday Mass.