

COVID F.A.Q.S

(Compiled September 2021)

It is strongly encouraged to review Gnomon's website wherever applicable before reaching out to Gnomon staff with inquiries. Gnomon's reopening protocols and answers to many questions below can also be found on Gnomon's website [here](#):

The latest Gnomon COVID-19 News Updates can be found [here](#):

Prevention Information & Resources can be found on Gnomon's website [here](#):

Skip to General COVID-19 F.A.Qs below by clicking [here](#):

GNOMON-SPECIFIC QUESTIONS

Will Gnomon faculty, staff and students be required to wear a mask? Will I have to wear a mask while I'm teaching? Will masks be required in labs, while attending a class, in the Library, VR Room?

Yes to all of these questions.

Masks and compliant face-coverings are 100% mandated for Gnomon's Fall Term. Masks will be required at all times and are to be worn both indoors and outdoors. Any individuals who choose to not comply with wearing a mask will immediately be asked to leave campus.

Will Gnomon require students, faculty and staff to get the COVID 19 vaccination?

Yes.

All persons planning to be on Gnomon's campus this Fall Term must submit proof of Full Vaccination unless receiving an approved exemption for medical or religious/philosophical reasons. While our goal is a 100% vaccinated population, we legally must allow for exemptions. Any person who requires an exemption for these noted reasons, please contact Student Affairs for the Exemption Form. The Form, which contains requirements clarifying continuous COVID-19 testing, specific protocols and safety procedures for the unvaccinated, must be submitted and approved prior to entrance.

Can I wear just fitted plastic face guard and no face mask while on campus?

No.

You may wear a plastic face shield, but in addition to this, you must wear a mask under the face guard. Please see item #38 under the [General COVID Questions](#) below.

What about eating and drinking? Will Gnomon kitchens be open for students, faculty and staff? What about my mask and where am I allowed on-campus to eat?

There will be designated spaces around campus where masks can be removed and where eating and drinking will be allowed during that time. This guideline also applies to campus events, orientation, daily lunch breaks, snack breaks. Gnomon kitchens will be closed until further notice and communal supplies such as utensils, plates, water dispensers, etc. will not be available. Microwaves, sinks and refrigerators will be available and limited to proper use. Kitchens will be cleaned by a full time cleaning staff hourly. Current locations are as follows:

- Below Labs 4 & 5 (Building 12): There is an outdoor patio with tables and chairs and a small eating area which has vending machines and open air ventilation.
- Rooftop patio and tables.
- Common tenant areas outside Building 8 (Education Offices).

If I am required to submit weekly COVID-19 tests or need one, what do I do?

Completed COVID-19 tests can be uploaded here:

<https://www.gnomonreopening.com/employeeexemptions>

Password: Please email Gnomon's HR for the password (human.resources@gnomon.edu)

Please reach out to Human Resources for additional information on submitting via our digital portal at human.resources@gnomon.edu.

Additional resources and testing sites can be found here: <https://COVID19.lacounty.gov/testing/>

What COVID-19 home testing kits does Gnomon honor?

Gnomon will honor the following kits:

- BinaxNOW COVID-19 Antigen Self Test
- Ellume COVID-19 Home Test, Digital Results in 15 Minutes
- Pixel by Labcorp COVID-19 PCR Test Home Collection Kit
- QuickVue At-Home OTC COVID-19 2 Test Kit

These range in cost from \$23 p/kit to \$125 for more comprehensive kits.

These can be purchased at any CVS, Rite Aid or Walgreens, etc. They can also be purchased online. Please exercise caution when purchasing online.

How is Gnomon keeping its campus and facilities clean for safety and sanitization?

All campus spaces, specifically highly trafficked areas like classrooms, labs and student and staff areas, will be cleaned, disinfected and sanitized seven days a week in cycles and in between classes. A full time cleaning crew will be on site seven days a week addressing all cleaning needs with great attention. Fully stocked sanitizing stations, complete with masks, wipes, gloves and hand sanitizer have been strategically and visibly placed in all areas of campus. Additional supplies are available by request – inclusive of, but not limited to sprays, cleaning supplies, wipes, KN95 masks. Gnomon has also mounted signage around campus with reminders of mask wearing and hand hygiene.

I heard that air ventilation and air filtration are important? What is Gnomon doing about this?

Gnomon has upgraded its HVAC system to include MERV-13 industrial filtration and regular replacement thereof. Additionally, Gnomon has equipped certain spaces with power air purification units. As noted in Gnomon's COVID Prevention and Protection Plan (CPP), Gnomon has maximized, to the extent feasible, the quantity of outside air for our buildings with mechanical or natural ventilation systems by:

- Installing HEPA, Aerus ActivePure filter systems in select spaces.
- Mandating that HVAC / ventilation systems are professionally cleaned and checked on a regular schedule.
- Holding larger events outside or in highly ventilated areas where outside air flow is maximized.
- Heightened spacing and capacity oversight and management.
- Mandated mask usage.

I need a Gnomon Identification Badge to get the vaccine and return to campus. Where and how do I get one?

If a current, color photograph with a plain background has already been submitted to the Registrar (registrar@gnomon.edu) or has been provided during orientation and loaded into Empower, Gnomon's SIS (Student Information System), Gnomon ID badges may be printed in advance of Fall Term reopening. If so, they will be available during Welcome Week at the Front Desk or the Student Store. Please email frontdesk@gnomon.edu to request a badge and for more information. *Gnomon is currently only printing badges for Full Time Programs Students and Faculty and Staff.* If you are on campus, have current ID and require a badge, please stop by the Front Desk to get a picture taken and have a badge issued to you on campus.

I need a parking pass? How do I get one?

Email studentaccounts@gnomon.edu for information, pricing, and requests. Once approved and processed, parking passes can be picked up from Gnomon's Front Desk (frontdesk@gnomon.edu) or on during select times and days, the Student Store (store@gnomon.edu).

When will I need to be fully vaccinated to be eligible to enter campus in the Fall?

Students must be fully vaccinated at or before the start of the Fall Term, October 11th, 2021, and must upload proof of vaccination prior to arriving on campus. If seeking a medical or religious exemption, the Exemption Form must be completed and uploaded prior to arriving on campus. Please contact Student Affairs for further information on Exemption Form and requirements for unvaccinated individuals.

I do not plan on receiving the COVID-19 vaccine due to religious/philosophical or medical reasons. Will this prevent me from attending Gnomon?

While our goal is a 100% vaccinated population, we legally must allow for religious/philosophical or medical exemptions for an individual that is not vaccinated. Any student who requires an exemption for these noted reasons, please contact Student Affairs for the Exemption Form. The Form, which contains requirements clarifying continuous COVID-19 testing, specific protocols and safety procedures for the unvaccinated, must be submitted and approved prior to entrance.

Those with approved exemptions or accommodations may return to campus with the requirement that they remain masked in all public settings, comply with a COVID testing plan, and submit a negative test within 72 hours of visiting the campus, among other items, and requirements may change at any time. Students who are not vaccinated, and have no approved exemption, cannot study on campus. Gnomon has systems in place for promoting and enforcing compliance with health and safety policies. To request an exemption please contact Student Affairs.

Does Gnomon have a team in place to address issues related to COVID-19?

In addition to its own COVID-19 Prevention and Protection Plan (CPP), Gnomon has a designated COVID-19 Compliance Task Force that is responsible for establishing and enforcing all COVID-19 safety protocols and ensuring that staff, faculty and students receive education about COVID-19. Gnomon has assigned a COVID-19 Compliance Officer, Chris Strompolos, to oversee the task force and who also serves as a liaison in the event of an outbreak on campus. You may contact Gnomon's COVID-19 Compliance Officer for any related reason at chris.strompolos@gnomon.edu.

Will the Gnomon Student Store be open?

Yes. But with limited hours and supplies to start. The schedule is subject to change.

The tentative schedule is:

11am - 3pm. Tuesdays and Thursdays to commence.

Student Store will be open on Friday, 10/8/21 and throughout Week One of Fall Term – "Welcome Week"

Open as needed and necessitated.

As the Fall Term continues, announcements and notifications will follow:

Scaling out to 11 am to 5pm

Tuesdays, Wednesdays and Thursdays

For additional questions, information and ongoing schedules: store@gnomon.edu

How can I order supplies for my classes?

The best options to order supplies for your classes are as follows:

For all sculpture supplies and other items, please order from [AFA Supplies](#). They have a designated page dedicated exclusively for John Brown and all John Brown classes offered at Gnomon. AFA offers shipping services and direct pick up from their location.

For all other course supplies, please visit [Blue Rooster Art Supplies](#), [Blick Art Supplies](#) or [Amazon](#). The Student Store does currently offer a limited inventory of supplies. Please check store hours.

COVID-19 Vaccination & Exemption Submissions

All vaccination and exemption information is located on a private Gnomon website. Please email Human Resources at human.resources@gnomon.edu in order to gain access to the site. If you are an individual seeking an exemption for medical or religious/philosophical reasons, please download the Exemption Form located on this page and email it to Human Resources at human.resources@gnomon.edu. The Form, which contains requirements clarifying continuous COVID-19 testing, specific protocols and safety procedures for the unvaccinated, must be submitted and approved prior to entrance. Once you submit the Exemption Form, we will review and follow up with next steps.

To remain vigilant, you may wish to regularly visit the Department of Public Health at <http://publichealth.lacounty.gov/index.htm> to access the latest COVID-19 data in Los Angeles. You may also subscribe to news and updates on this site. Gnomon is required to fulfill its contact tracing obligation to the City of Los Angeles, and our shared community, thus please let us know as soon as possible if you experience any COVID-19 issues. We highly recommend you sign up for CA Notify at <https://canotify.ca.gov/> to protect yourself and those around you.

If I have been officially approved for an exemption (religious, medical, philosophical), what are the next steps?

You will be required to comply with regular COVID-19 testing, mask and/or face-shield wearing, and possibly other preventative requirements, aimed at keeping you and our entire community safe. You must take a COVID-19 test once a week, at minimum, and within 72 hours of arriving on campus, and negative results must be provided prior to your visit to Gnomon's campus.

You must upload your weekly COVID-19 results below:

<https://www.gnomonreopening.com/employeeexemptions>

Password: Please email Gnomon's HR for the password (human.resources@gnomon.edu)

For a list of free COVID-19 testing centers or to sign up for an exam please visit:

<https://coronavirus.lacity.org/COVID-19-testing>

If at any time, you feel unwell, or if any COVID-19 test shows positive results (virus is present), or uncertain results, you may not come to campus for any reason, and after you contact your health practitioner or other professional, please communicate with Human Resources at human.resources@gnomon.edu or the COVID-19 Compliance Officer, Chris Strompolos, to clarify how to proceed.

What ongoing communication will I receive from Gnomon if I have an approved exemption?

Chris Strompolos, Gnomon's Executive Director of Operations and designated COVID-19 compliance officer will remain in weekly contact with you during the Fall Term informing of any known risks on campus and/or any major updates or policy changes issued by County of Los Angeles Public Health Office. This communication is in partnership with Gnomon's COVID-19 Task Force, Student Affairs Department and Gnomon's Senior Management.

GENERAL COVID-19 FREQUENTLY ASKED QUESTIONS:

(Please click on each question to navigate to corresponding answer and additional information.)

1. [Does a vaccine need to be fully approved by the FDA for an employer or business to mandate vaccination?](#)
2. [If I've already had COVID-19, should I still get vaccinated? What if I got monoclonal antibody treatment?](#)
3. [Now that a COVID-19 vaccine has been fully approved, what does that really mean? And what's the difference between emergency use authorization and full approval?](#)
4. [Is it true kids can't get very sick from COVID-19? Or that children can't spread coronavirus to others? How many kids have actually been hospitalized with COVID-19?](#)
5. [When will the Pfizer vaccine be fully approved by the FDA for children ages 12 to 15?](#)
6. [When will the other COVID-19 vaccines get fully approved by the FDA?](#)
7. [Do we need COVID-19 vaccine booster shots? If so, when should we get another dose?](#)
8. [Do vaccines still work against the Delta variant?](#)
9. [With the Delta variant spreading, how much does vaccination reduce infection, hospitalization and death?](#)
10. [Why do some people get breakthrough infections after being fully vaccinated? Are they getting COVID-19 from the vaccine?](#)
11. [What is the Delta variant? Is it worse than other strains of coronavirus?](#)
12. [Do fully vaccinated people also need to wear masks because of the more contagious Delta strain?](#)
13. [Why should anyone care whether I'm vaccinated if they're already vaccinated?](#)
14. [Is it true the COVID-19 vaccines don't work as well in immunocompromised people? Can they get a third dose or a booster shot?](#)
15. [What should I do if I'm wearing a mask but have to sneeze?](#)
16. [I'm not feeling well, but I've already been vaccinated. Should I get tested for coronavirus?](#)
17. [Is it safe to go on vacation?](#)
18. [I'm vaccinated but just tested positive for coronavirus. What should I do?](#)
19. [When can younger kids get a COVID-19 vaccine?](#)
20. [My kids don't want to wear a mask. What should I do?](#)
21. [What's the difference between the Delta and Delta Plus variants?](#)
22. [What should I tell friends, family or coworkers who are hesitant to get vaccinated?](#)
23. [How long does immunity last if you recover from COVID-19?](#)
24. [Could I get coronavirus from the COVID-19 vaccine?](#)
25. [Will Americans be required to get a COVID-19 vaccine? What happens if I don't get vaccinated?](#)
26. [How much does a COVID-19 vaccine cost?](#)
27. [What are the side effects of the vaccines?](#)
28. [What are the long-term effects of coronavirus?](#)
29. [What is aerosolized spread? What's the difference between aerosols and droplets?](#)
30. [This pandemic is taking a toll on my mental health. How can I get help if I'm feeling isolated and depressed?](#)
31. [What "underlying conditions" put people at higher risk of bad outcomes with COVID-19?](#)
32. [What are the guidelines for riding in a car with someone from another household?](#)
33. [Are coronavirus and COVID-19 the same thing? How did they get their names?](#)
34. [Should we clean our cell phones daily?](#)
35. [Is it safe to go back to the gym?](#)
36. [I tested positive for coronavirus weeks ago. How long are people contagious with COVID-19? Do I need to keep isolating or getting retested?](#)
37. [I heard you can get COVID-19 through your eyes. Should we wear goggles, too?](#)
38. [Should people wear face shields instead of \(or in addition to\) face masks?](#)

39. [Doesn't the flu kill more people than coronavirus?](#)
40. [Could I have the flu and coronavirus at the same time? If so, what does that do to your body?](#)
41. [How can I tell if I have coronavirus or the flu \(or both\)?](#)
42. [How do I prevent my glasses or sunglasses from fogging up when I wear a mask?](#)
43. [Can central air conditioning spread COVID-19 in public places?](#)
44. [What does asymptomatic mean?](#)
45. [How effective are different types of face masks? Which cloth masks work the best?](#)
46. [What's so different about coronavirus that made us shut down the economy? Why did we have to practice social distancing when we didn't during the SARS and swine flu epidemics?](#)
47. [When are people with coronavirus most contagious?](#)
48. [Can you get COVID-19 through sex?](#)
49. [Is it true young people with coronavirus are also having blood clots and strokes?](#)
50. [Why has the guidance on wearing face masks changed so much?](#)
51. [How can I stay safe in an elevator?](#)
52. [How safe are public restrooms?](#)
53. [Is hand sanitizer as effective as soap and water in killing coronavirus?](#)
54. [Are some blood types able to fight coronavirus better than other blood types?](#)
55. [What's the risk of having a maid service come to clean your house if you're not home?](#)
56. [Can I disinfect my mask by putting it in the microwave?](#)
57. [Is it safe to perform CPR on a stranger?](#)
58. [Can I get coronavirus from swimming in open water, like in a lake or seawater? What about in a public pool or hot tub?](#)
59. [I saw other countries spraying down sidewalks and other public places with disinfectant. Why haven't we done that in the US?](#)
60. [Can protests increase the spread of COVID-19?](#)
61. [Do vitamin D levels affect your risk for coronavirus? Is there a correlation between vitamin D and those who test positive for COVID-19?](#)
62. [Can you get coronavirus from touching money? What about from other objects, like plants?](#)
63. [Can UV light kill coronavirus?](#)
64. [Do I need to wash fruits and vegetables with soap and water?](#)
65. [Can coronavirus stay in my hair or in a beard? Should I wash my hair every day?](#)
66. [Could I infect my pets with coronavirus, or vice versa? Can someone get infected by touching an animal's fur? Should I get my pet tested for coronavirus?](#)
67. [What is contact tracing?](#)
68. [Should I wash my hands and laundry in very warm or hot water?](#)
69. [How does soap kill coronavirus? If I don't have disinfecting wipes, can I use soap and water on surfaces?](#)
70. [Can coronavirus be transferred by people's shoes? How do I protect kids who crawl or play on the floor?](#)
71. [Can I get coronavirus through food? Is it safe to eat takeout from restaurants?](#)
72. [Can mosquitoes or houseflies transmit coronavirus?](#)
73. [Can you safely reuse a non-cloth mask that you can't wash, like a disposable mask?](#)
74. [Will ingesting or injecting disinfectants, like the ones that kill viruses on surfaces, protect me against coronavirus or kill coronavirus if I already have it?](#)
75. [Can coronavirus stick to clothes? Do I need to wash my clothes right after encountering other people, like at the grocery store or while jogging?](#)
76. [Will an antibody test show whether I'm immune and can go back to work or school?](#)
77. [Can I use vodka as hand sanitizer?](#)
78. [How do I make my own hand-sanitizer?](#)
79. [Are smokers or vapers at higher risk? What if I only smoke weed?](#)
80. [Does this pandemic have anything to do with the 5G network?](#)
81. [My ex and I have joint custody of our kids. Is it safe for them to go between two homes?](#)

82. [How long does coronavirus stay “alive” on surfaces?](#)
83. [Will a pneumonia or flu vaccine help protect against coronavirus?](#)
84. [Why is it so difficult to make a drug to cure coronavirus?](#)
85. [Why have medical workers gotten sick with or died from coronavirus if they’re wearing protective gear? Does the viral load matter?](#)
86. [How many people with coronavirus don't have symptoms? Are they still contagious?](#)
87. [If there’s no cure, why go to the hospital unless you have a breathing problem?](#)
88. [How do I safely take care of someone who’s sick?](#)
89. [What are the symptoms?](#)
90. [What can I do if my loved one thinks he or she has coronavirus?](#)
91. [Can I make my own disinfectant sprays and hand sanitizer?](#)
92. [Can I be fired if I stay home sick?](#)
93. [What happens when workers don't get paid sick leave?](#)
94. [Can managers send a sick worker home?](#)
95. [If traveling on a plane, how do I stay safe?](#)
96. [What do I do if I think I’m sick?](#)
97. [Should I spray myself or my kids with disinfectant?](#)
98. [I’ve heard that home remedies can cure or prevent the virus. Is that true?](#)
99. [Why was the US been so far behind other countries with testing?](#)
100. [If a coronavirus patient gets pneumonia, what antibiotics have proven to be effective?](#)
101. [Did Dean Koontz predict this outbreak in the book “The Eyes of Darkness” almost 40 years ago?](#)
102. [Can the heat from a hand dryer kill coronavirus?](#)
103. [Can I get coronavirus from a package sent from China?](#)

Does a vaccine need to be fully approved by the FDA for an employer or business to mandate vaccination?

No. Businesses have been able to issue COVID-19 vaccine mandates for months, back when all three vaccines used in the US had emergency use authorization from the US Food and Drug Administration, [according to the US Equal Employment Opportunity Commission](#).

Work/Life Schools/Education Vaccine Myths & Misinformation

If I've already had COVID-19, should I still get vaccinated? What if I got monoclonal antibody treatment?

"Yes, you should be vaccinated regardless of whether you already had COVID-19," [the CDC said in August 2021](#).

"Evidence is emerging that people get better protection by being fully vaccinated compared with having had COVID-19. [One study](#) showed that unvaccinated people who already had COVID-19 are more than 2 times as likely than fully vaccinated people to get COVID-19 again," the CDC's website said.

"If you were treated for COVID-19 with monoclonal antibodies or convalescent plasma, you should wait 90 days before getting a COVID-19 vaccine. Talk to your doctor if you are unsure what treatments you received or if you have more questions about getting a COVID-19 vaccine."

Many doctors believe the [immunity gained through vaccination](#) is likely stronger and lasts longer than the immunity achieved from previous infection.

"Many of the vaccines that we've made in history are actually stronger than the virus is itself at creating immunity," epidemiologist Dr. Larry Brilliant said.

Vaccine Treatment & Prevention Work/Life Family Schools/Education Transmission

Now that a COVID-19 vaccine has been fully approved, what does that really mean? And what's the difference between emergency use authorization and full approval?

On August 23, the US Food and Drug Administration [granted full approval for Pfizer/BioNTech's COVID-19 vaccine](#) for people ages 16 and up.

Previously, all three COVID-19 vaccines used in the US – from Pfizer/BioNTech, Moderna and Johnson & Johnson – were given emergency use authorization (EUA). The FDA had reviewed at least three months of safety and efficacy data and said the benefits of administering the vaccines outweighed the risks – especially given the public health emergency caused by COVID-19.

But an EUA status does not mean a vaccine is less safe or effective than a vaccine that has been fully approved.

"Frankly, the only real difference was in length of follow-up," said Dr. Paul Offit, a member of the FDA's Vaccines and Related Biological Products Advisory Committee.

There are two key differences between emergency authorization and full approval, Offit said. The first involves time, and the second involves a very detailed protocol for future production.

"Full approval, for all practical purposes, just means three more months of efficacy data," Offit said.

When the FDA gave emergency use authorization for the Pfizer/BioNTech and Moderna vaccines, "we could say they're 95% effective for three months, because that's how much data we had," Offit said. "The FDA, for it to move to full approval – licensure – wants three more months," or at least six months of data, he said.

In the history of vaccines, the most severe side effects have all been caught within two months of a person getting vaccinated.

After that, “your body has made the antibodies. It has done what it’s supposed to do,” said Dr. Julia Garcia-Diaz, director of clinical infectious diseases research at Ochsner Health in New Orleans. Any problems outside that window are most likely “not related to the vaccine.”

Another reason why it takes a while to get full approval – or licensure – is because of a detailed validation process to help ensure future production stays precise and consistent.

When the FDA fully approves a vaccine, “they don’t just license the product ... they also license the process,” Offit said.

“Because they want to make sure that every lot is consistently produced, they validate every aspect of the production. And they validate the building. So everything – the computers, the cleaning out of the vats, everything that’s done has to be validated.”

As part of the review for full approval, FDA experts have been poring through a massive amount of documents, running their own analyses, getting any clarification needed from vaccine companies and thoroughly inspecting the manufacturing process.

With full approval of the Pfizer/BioNTech vaccine for ages 16 and up, more workplaces will likely issue vaccine mandates to help prevent the Delta variant from setting the country back further, US Surgeon General Dr. Vivek Murthy said.

More people might want to get vaccinated on their own, too. A recent study showed some vaccine-hesitant Americans would be more likely to get a COVID-19 vaccine if it were fully approved.

And with full approval, Pfizer/BioNTech are now allowed to market and advertise their vaccine, which has the brand name Comirnaty.

Vaccine Travel Schools/Education Work/Life Transmission Treatment & Prevention

Is it true kids can’t get very sick from COVID-19? Or that children can’t spread coronavirus to others? How many kids have actually been hospitalized with COVID-19?

More than 50,000 children have been hospitalized with COVID-19 since August 2020, according to the US Centers for Disease Control and Prevention.

And it’s not just children with preexisting conditions getting hospitalized.

Almost half – 46.4% – of children hospitalized with COVID-19 between March 2020 and June 2021 had no known underlying condition, according to CDC data from almost 100 US counties.

During this Delta variant surge, an average of 309 children with COVID-19 were getting hospitalized every day during the week ending August 23, according to CDC data.

“Kids can transmit the virus. They are susceptible to it,” said Anne Rimoin, an epidemiology professor at UCLA.

More than 125 campers and adults who attended a Texas church’s summer camp for 6th through 12th graders tested positive for coronavirus.

“And hundreds of others were likely exposed when infected people returned home from camp,” the lead pastor of the church said.

At the University of Mississippi Medical Center, “We are seeing an increase in the number of hospitalizations of children,” Associate Vice Chancellor for Clinical Affairs Dr. Alan Jones said.

“We’ve had infants as small as 6 to 8 months old up to the teenage years,” Jones said July 14.

“We do know in Mississippi that the predominant strain that’s circulating – probably 88% to 90% of it – is the Delta variant,” Jones said.

“That, associated with the fact that we are seeing a lot less mask usage now, is another variable that plays into the equation of why we’re seeing more” children in the hospital, he said.

“Finally, it appears as though this particular variant, the Delta variant, while being more infectious is also causing more children to be symptomatic,” Jones said.

“Whether that just is that it causes a little more severe illness than other variants or that it is just more prevalent – and so we’re seeing more symptomatic cases – we’re not sure. But it’s probably multifactorial and related to all of those things.”

Some youngsters have suffered long-term effects from COVID-19 or multisystem inflammatory syndrome in children (MIS-C) – a rare but potentially serious condition that can happen in children weeks after a coronavirus infection.

Myths & Misinformation Schools/Education Family Variants Transmission Vaccine

When will the Pfizer vaccine be fully approved by the FDA for children ages 12 to 15?

For months, children ages 12 to 15 have been able to get the Pfizer/BioNTech vaccine due to emergency use authorization by the FDA.

In light of the FDA’s recent full approval of the vaccine for those ages 16 and up, “I don’t think it’ll be long before they extend it to 12 to 15 – maybe within a few weeks to a month or so,” said Dr. Bob Frenck, director of the Vaccine Research Center at Cincinnati Children’s Hospital.

The Pfizer/BioNTech vaccine was granted emergency use authorization for people 16 and up in December. In May, the FDA expanded that EUA to include children ages 12 to 15.

Family Schools/Education Work/Life Vaccine

When will the other COVID-19 vaccines get fully approved by the FDA?

The Pfizer/BioNTech vaccine is the only one that has been granted full FDA approval – specifically, for people ages 16 and up. The Moderna and Johnson & Johnson vaccines both have emergency use authorization (EUA) for use in adults ages 18 and up.

Pfizer/BioNTech started applying for full approval in May. In June, Moderna announced it started applying for full approval of its coronavirus vaccine. As of August 23, Johnson & Johnson had not yet filed for full FDA approval of its vaccine.

The FDA is assessing Moderna’s application for full approval, US Surgeon General Dr. Vivek Murthy said August 24. He said he anticipates Johnson & Johnson will submit its application in the near future.

But regardless of which vaccine people receive, “getting vaccinated now with any of the three vaccines is still your fastest path to protection ... particularly against hospitalization and death from the virus,” the surgeon general said.

Vaccine Work/Life Treatment & Prevention

Do we need COVID-19 vaccine booster shots? If so, when should we get another dose?

Americans vaccinated with the two-dose Moderna or Pfizer/BioNTech vaccines may be eligible for a third dose starting September 20, pending independent review of the safety and efficacy of a third dose, [several US health officials said in a joint statement](#) August 18.

“We are prepared to offer booster shots for all Americans beginning the week of September 20 and [starting 8 months after an individual’s second dose](#),” said the health officials, who include CDC Director Dr. Rochelle Walensky.

The FDA has already [authorized third doses for some immunocompromised people](#).

For Americans who got the single-dose Johnson & Johnson vaccine, “We also anticipate booster shots will likely be needed for people who received the Johnson & Johnson (J&J) vaccine. Administration of the J&J vaccine did not begin in the U.S. until March 2021, and we expect more data on J&J in the next few weeks. With those data in hand, we will keep the public informed with a timely plan for J&J booster shots as well.”

The health officials said the COVID-19 vaccines used in the US “continue to be remarkably effective in reducing risk of severe disease, hospitalization, and death, even against the widely circulating Delta variant.”

But immunity can wane over time, and additional vaccine doses could be needed to provide long lasting protection, the health officials said.

With “the dominance of the Delta variant, we are starting to see evidence of reduced protection against mild and moderate disease,” the statement read.

“Based on our latest assessment, the current protection against severe disease, hospitalization, and death could diminish in the months ahead, especially among those who are at higher risk or were vaccinated during the earlier phases of the vaccination rollout. For that reason, we conclude that a booster shot will be needed to maximize vaccine-induced protection and prolong its durability.”

The CDC and others say vaccination is still the best weapon in the fight against COVID-19.

“Nearly all the cases of severe disease, hospitalization, and death [continue to occur among those not yet vaccinated at all](#),” the joint statement said.

Vaccine Schools/Education Work/Life Transmission Treatment & Prevention Variants

Do vaccines still work against the Delta variant?

Full vaccination significantly reduces the chances of severe illness, hospitalization and death from the Delta variant, though breakthrough infections are possible.

“Vaccines continue to reduce a person’s risk of contracting the virus that cause COVID-19, including this variant,” the [CDC said in a August 2021 update](#).

“Vaccines are highly effective against severe illness, but the [Delta variant causes more infections and spreads faster](#) than earlier forms of the virus that causes COVID-19.”

Vaccine effectiveness against coronavirus infection dropped from 91% to 66% once the Delta variant accounted for the majority of circulating virus, according to a study published August 24 by the US Centers for Disease Control and Prevention.

The study is in line with others from the US and around the world showing Delta's increased tendency to cause largely minor infections among fully vaccinated people.

Still, the effectiveness of vaccines against severe disease — including hospitalization and death — has remained high against all known variants.

Health experts say it's important to take both doses of any two-dose vaccine.

Two doses of the Pfizer/BioNTech vaccine offered 88% protection against symptomatic COVID-19 caused by the Delta variant, according to a study published in May by [Public Health England](#).

But those who got only one dose of the Pfizer/BioNTech vaccine had just 33% protection against the Delta variant three weeks later, [according to the study](#).

"The key is: Get vaccinated. Get both doses," US Surgeon General Dr. Vivek Murthy said.

Variants Transmission Family Schools/Education Work/Life Travel Vaccine

With the Delta variant spreading, how much does vaccination reduce infection, hospitalization and death?

Compared to unvaccinated people, "If you're (fully) vaccinated now, your chances of getting infected go down by 3 1/2-fold," National Institutes of Health Director Dr. Francis Collins said August 1.

"Your chances of having symptoms go down by 8-fold. Your chance of ending up with illness significant enough to be in the hospital goes down 25-fold."

Such decreases in infections, illnesses and hospitalizations are "fantastically good for any vaccine," Collins said. "We didn't really have a right to dare they would be this good in the real world, and they are — even against Delta."

The Delta variant is [more than twice as contagious](#) than the original strain of novel coronavirus and [appears to cause more severe disease](#), according to [an internal presentation](#) from the CDC.

Still, more than 99.99% of people who were fully vaccinated against COVID-19 [have not had a breakthrough case resulting in hospitalization or death](#), a CNN analysis of August 2 CDC data suggests.

Vaccine Variants Transmission Treatment & Prevention Schools/Education Work/Life Family

Why do some people get breakthrough infections after being fully vaccinated? Are they getting COVID-19 from the vaccine?

It's impossible to get COVID-19 from a vaccine because [there is no coronavirus in any of the vaccines](#) used in the US.

The vaccines can't prevent people from breathing in the virus. What they can do is ensure that the body mounts a fast response to clear the virus if someone does get exposed. During that time, some people might actually become infected.

But more than 99.99% of people who are fully vaccinated against COVID-19 [have not had a breakthrough case](#) resulting in hospitalization or death, a CNN analysis of CDC data suggests.

As of August 2, more than 164 million people in the US were fully vaccinated, according to CDC data.

Among them, 7,101 people — or less than 0.005% — were hospitalized with COVID-19, and 1,507 people — or less than 0.001% — died, according to the CDC data.

Those who get breakthrough infections generally have milder symptoms than unvaccinated people or no symptoms at all, CDC research shows.

Because few people get tested after they've been fully vaccinated, there's limited data on how many vaccinated people get mild or asymptomatic infections.

But about half of states have reported data on COVID-19 breakthrough cases – and in each of those states, less than 1% of fully vaccinated people had a breakthrough infection, according to a Kaiser Family Foundation analysis published July 30.

More than 90% of people who end up in the hospital or who die from COVID-19 have *not* been fully vaccinated, according to the CDC.

It's important to remember you're not fully vaccinated until 2 weeks after your final dose of COVID-19 vaccine, so you're still vulnerable in the first few weeks of vaccination.

"Keep taking all precautions until you are fully vaccinated," the CDC says.

Work/Life Family Transmission Vaccine Schools/Education Myths & Misinformation

What is the Delta variant? Is it worse than other strains of coronavirus?

The Delta variant is the highly contagious B.1.617.2 strain of coronavirus first identified in India. It's fueling rapid increases in infections, hospitalizations and deaths in the US, according to the CDC.

"COVID-19 cases have increased over 300% nationally from June 19 to July 23, 2021, along with parallel increases in hospitalizations and deaths driven by the highly transmissible B.1.617.2 (Delta) variant," the CDC said.

In two months, Delta jumped from 3% to more than 93% of sequenced coronavirus samples in the US, according to CDC data.

The Delta variant has a cluster of mutations, including one known as L452R, that helps it infect human cells more easily.

"This variant is even more transmissible than the UK (Alpha) variant, which was more transmissible than the version of the virus we were dealing with last year," US Surgeon General Dr. Vivek Murthy said.

In addition to increased transmissibility, "it may be associated with an increased disease severity, such as hospitalization risk," said Dr. Anthony Fauci, director of the National Institute of Allergy and Infectious Diseases.

An analysis of 38,805 sequenced cases in England showed the Delta variant carried 2.61 times the risk of hospitalization within 14 days compared with the Alpha variant when variables such as age, sex, ethnicity and vaccination status were taken into consideration.

Variants Transmission Family Schools/Education Work/Life Travel Vaccine

Do fully vaccinated people also need to wear masks because of the more contagious Delta strain?

The US Centers for Disease Control and Prevention updated its guidance on July 27:

- If you are fully vaccinated, you can participate in many of the activities that you did before the pandemic.
- To maximize protection from the Delta variant and prevent possibly spreading it to others, wear a mask indoors in public if you are in an area of substantial or high transmission.

- Wearing a mask is most important if you have a weakened immune system or if, because of your age or an underlying medical condition, you are at increased risk for severe disease, or if someone in your household has a weakened immune system, is at increased risk for severe disease, or is unvaccinated. If this applies to you or your household, you might choose to wear a mask regardless of the level of transmission in your area.

The guidance is stronger than in May, when the CDC said fully vaccinated people could unmask in most situations. But back then, the highly contagious Delta variant represented only about 1% of reported infections. By late July, at least 83% of sequenced samples were from the Delta variant.

“The Delta variant behaves uniquely differently from past strains of the virus that cause COVID-19,” CDC Director Dr. Rochelle Walensky said July 27.

“This new science is worrisome and unfortunately warrants an update to our recommendations,” she said. “This is not a decision that we or CDC has made lightly.”

Fully vaccinated people are less likely to get infected and also less likely to get severely sick if they do get a breakthrough infection. But new research suggests those with breakthrough cases might have as much viral load as unvaccinated people who are infected – meaning they might also be able to transmit the virus, Walensky said.

States with below-average vaccination rates had, on average, almost triple the rate of new COVID-19 cases compared to states with above-average vaccination rates, according to data from Johns Hopkins University. For those not fully vaccinated, the CDC says it’s crucial to mask up:

“Unvaccinated people should get vaccinated and continue masking until they are fully vaccinated. With the Delta variant, this is more urgent than ever,” the CDC says.

“Getting vaccinated prevents severe illness, hospitalizations, and death.”

Transmission Variants Family Work/Life Vaccine Schools/Education Vaccine Travel

Why should anyone care whether I’m vaccinated if they’re already vaccinated?

Avoiding vaccination can harm loved ones and the country as a whole, doctors say.

Full vaccination reduces the chances of getting and spreading the highly contagious Delta variant. Children too young to be vaccinated and those who are immunocompromised also rely on the vaccination of others to help protect them, said Dr. William Schaffner, a professor in the Division of Infectious Diseases at Vanderbilt University Medical Center.

But vaccination is also important to help prevent more contagious or more dangerous variants from forming – such as one that might evade vaccines and harm those who are fully vaccinated.

“If we are going to continue to allow this virus to spread, we’re going to continue to allow ... variants to be created,” said Dr. Paul Offit, director of the Vaccine Education Center at the Children’s Hospital in Philadelphia.

Viruses frequently mutate as they replicate among infected people. If the mutations are significant, they can lead to a more contagious variant like the Delta variant, which is now the dominant strain in the US.

“Think of a virus as a necklace full of different-colored beads,” board-certified internist Dr. Jorge Rodriguez said.

“In position No. 1, you need a red bead. Position No. 2 is a green bead. That’s the genetic code – that sequence of bead colors,” he said.

“When a virus replicates, it is supposed to make an exact replica of those bead colors. But every once in a while, maybe a green bead gets into where a red bead is supposed to be.”

When mutations give the virus an advantage – such as the ability to replicate faster or to hide from the immune system – that version will outcompete others.

The only way to get rid of variants is to lower the number of infections, said [Penny Moore](#), an expert in viruses at South Africa’s National Institute for Communicable Diseases.

That’s a big reason why doctors say people should get vaccinated as soon as they can. Those who don’t get vaccinated aren’t just risking their own health – they’re also jeopardizing the health of others.

“Unvaccinated people are potential variant factories,” Schaffner said. “The more unvaccinated people there are, the more opportunities for the virus to multiply.”

Variants Schools/Education Work/Life Transmission Vaccine Myths & Misinformation Travel

Is it true the COVID-19 vaccines don’t work as well in immunocompromised people? Can they get a third dose or a booster shot?

The vaccines require an immune system response to work, so millions of Americans who are immunocompromised or take drugs that suppress the immune system might not get as much help from a standard vaccine course as others do.

On August 12, the FDA authorized a third dose of the Pfizer/BioNTech and Moderna vaccines for certain people with compromised immune systems. That group includes “solid organ transplant recipients or those who are diagnosed with conditions that are considered to have an equivalent level of immunocompromise,” the FDA said.

Immunocompromised people who took the single-dose Johnson & Johnson vaccine will also likely need an additional dose, “but we are waiting on some data from the company about a second dose,” US Surgeon General Dr. Vivek Murthy said August 22.

The CDC estimates 9 million Americans are immunocompromised. They’re in a tough spot because they’re at higher risk of severe illness from COVID-19, but they also might not generate enough of an immune response to get the full benefits from a standard course of vaccine.

That’s why many Americans are counting on fellow Americans to get vaccinated to help protect them, said Dr. Francis Collins, director of the National Institutes of Health.

Vaccine Treatment & Prevention Family Myths & Misinformation

What should I do if I’m wearing a mask but have to sneeze?

If there are tissues nearby, you can take your mask off and sneeze into the tissue before putting your mask back on, CNN Chief Medical Correspondent Dr. Sanjay Gupta said.

For kids in school – or anyone else who might have to wear a mask all day – keep a backup mask in a baggie in case the first mask gets dirty. You can put the dirty mask in the baggie.

It’s also a good idea to keep backup masks in your car in case of any mask accidents.

Transmission Schools/Education Work/Life Treatment & Prevention

I'm not feeling well, but I've already been vaccinated. Should I get tested for coronavirus?

If you think you might have COVID-19 symptoms, “please get tested regardless of your vaccination status,” US Surgeon General Dr. Vivek Murthy said.

“We know the symptoms of COVID-19 mimic the symptoms of the flu or cold initially. It can be a runny nose or fatigue or other such symptoms. In those cases, it is important for people to get tested.”

It's impossible to get COVID-19 from a vaccine because there is no coronavirus in any of the vaccines used in the US.

But COVID-19 vaccines don't take full effect until 2 weeks after your final dose — “so a person could get sick if the vaccine has not had enough time to provide protection,” the US Centers for Disease Control and Prevention says.

Those who are fully vaccinated are much less likely to get infected than unvaccinated people, the CDC says. In addition, “COVID-19 vaccines reduce the risk of people spreading COVID-19.”

But while COVID-19 vaccines are highly effective, they're not perfect. The vaccines require an immune system response to work, so millions of Americans who are immunocompromised or take drugs that suppress the immune system might not get as much protection from a vaccine as others do.

The good news: When rare breakthrough infections do happen in vaccinated people, they're usually less severe, CDC research shows.

But it's especially important for unvaccinated people who have COVID-19 symptoms to get tested. Unvaccinated people can spread coronavirus more easily than vaccinated people, the CDC says.

“We have seen that many people are not getting tested around the country even though they have symptoms,” Murthy said July 13.

“Many people are thinking, ‘COVID is over — why do I need to get tested?’ And this is particularly happening in areas, unfortunately, where the vaccination rates are low — which is where we want to be testing more.”

Work/Life Vaccine Family Transmission Treatment & Prevention

Is it safe to go on vacation?

“Delay travel until you are fully vaccinated,” the CDC says. Fully vaccinated means at least 2 weeks have passed since your last dose of COVID-19 vaccine.

For those traveling within the US, you “do NOT need to get tested or self-quarantine if you are fully vaccinated or have recovered from COVID-19 in the past 3 months. You should still follow all other travel recommendations,” the CDC says.

For example, face masks are still required to board public transportation.

Americans traveling internationally should learn about the COVID-19 restrictions in place at their destination. Those flying back home to the US must provide proof that they have recently tested negative for coronavirus or recently recovered from COVID-19. They should also get a viral test 3 to 5 days after coming home, the CDC says.

For those who aren't fully vaccinated but must travel, the guidelines are much tougher. The CDC says it's important to wear a mask; get tested within three days before traveling; maintain physical distance from

anyone not traveling with you; and quarantine for 10 days after you return home. (That [quarantine period can be reduced to 7 days if you get tested 3 to 5 days](#) after coming home.)

Travel Family Transmission Treatment & Prevention Work/Life

I'm vaccinated but just tested positive for coronavirus. What should I do?

"Fully vaccinated people should not visit private or public settings if they have tested positive for COVID-19 in the prior 10 days or are experiencing COVID-19 symptoms," [the CDC says](#).

"It's possible a person [could be infected just before or just after vaccination](#) and still get sick."

Vaccine Family Transmission Work/Life Treatment & Prevention

When can younger kids get a COVID-19 vaccine?

One vaccine is already available for children ages 12 and up, and [clinical trials are underway for younger children](#).

Pfizer/BioNTech's vaccine is the only one currently authorized for people [ages 12 and up](#). The vaccine is now [being tested in children between 6 months and 11 years](#) old. If all goes well, Pfizer said, it plans to ask the US Food and Drug Administration in September to authorize the vaccine for children ages 2 to 11 years.

[Learn more about why parents volunteered their babies and young children for vaccine trials and why doctors say it's important to vaccinate kids against COVID-19](#)

Moderna's vaccine is currently [authorized for adults 18 and older](#). In May, the company said early trial data showed [the vaccine is safe and appears to be effective in 12- to 17-year-olds](#). In June, Moderna said it has asked the FDA to authorize its vaccine for the 12-to-17 age group.

Moderna is also [testing various doses of its vaccine in younger children](#) between ages 6 months through 11 years. If all goes well, Moderna said, children under age 12 could be eligible for the vaccine this winter or in early 2022.

Johnson & Johnson said it plans to start testing its COVID-19 vaccine in adolescents starting this fall. Its single-dose vaccine is currently authorized for adults ages 18 and up.

J&J said it's planning four late-stage vaccine trials for children. This first trial will focus on 12- to 17-year-olds, and the others will expand to include younger children. In total, J&J plans to enroll a minimum of 4,500 pediatric participants up to age 17.

"To keep children safe, and ultimately to achieve herd immunity, it is imperative that COVID-19 vaccine clinical trials continue to move forward in this population," J&J said in a July 1 email to CNN.

Vaccine Transmission Treatment & Prevention Family Schools/Education

My kids don't want to wear a mask. What should I do?

Children can be more reluctant because they're more sensitive to new things than adults are, said Christopher Willard, a psychiatry lecturer at Harvard Medical School.

"There's also the weird psychological aspect of not being able to see their own face or other people's faces and facial expressions," which can hinder their feelings of comfort or safety, he said.

To ease your child's mask hesitancy, try buying or making masks with fun designs on them. Or have your child customize his or her own masks by drawing on them with markers.

You can also order children's face masks with superheroes on them or show your kids photos of their favorite celebrities wearing masks. It's also a good idea to set an example by wearing a mask yourself.

Schools/Education Family Treatment & Prevention Work/Life Transmission

What's the difference between the Delta and Delta Plus variants?

The Delta Plus variant (B.1.617.2.1) is a new and slightly changed offshoot of the highly contagious Delta variant (B.1.617.2).

All variants carry clusters of mutations. Delta Plus is different from Delta because it has an extra mutation called K417N. That mutation affects the spike protein – the part of the virus that attaches to human cells it infects.

The Indian government's COVID-19 genome sequencing body said the Delta Plus variant exhibits several worrying traits such as increased transmissibility, stronger binding to receptors of lung cells, and a potential reduction in antibody response.

It's not yet clear what effect the mutation may have on vaccine efficacy. But it could give the variant "significant vaccine escape properties," warned Julian Tang, professor of respiratory sciences at the University of Leicester.

Most of the coronavirus vaccines are designed to train the body to recognize the spike protein, or parts of it – which is where Delta Plus' extra mutation is.

But there isn't enough evidence to determine anything conclusively yet. The World Health Organization is tracking Delta Plus to determine its transmissibility and severity, said Maria Van Kerkhove, WHO's technical lead on COVID-19.

The US is among at least 11 countries that have reported cases of the emerging Delta Plus variant. But Delta Plus has not made up a significant share of sequenced COVID-19 cases in the US, according to June data from the CDC.

In late June, the genetic sequencing company Helix said it has seen some intermittent cases of the Delta Plus variant in the US.

Transmission Work/Life Schools/Education Vaccine Travel Variants

What should I tell friends, family or coworkers who are hesitant to get vaccinated?

"It is a normal human reaction to be afraid," pediatrician Dr. Edith Bracho-Sanchez said. "They're having a normal reaction, and perhaps they haven't been able to sit down with their physician."

She suggests finding a time to have a calm, rational conversation – when neither person is angry or likely to start a fight.

"The first thing I would say is 'I get it. I totally get where you're coming from and I understand that you're concerned about this,'" Bracho-Sanchez said.

It's also important to cite scientific data – like the truth about side effects, the safety of COVID-19 vaccines and why it's important for young, healthy people to get vaccinated.

Work/Life Family Transmission Treatment & Prevention Vaccine

How long does immunity last if you recover from COVID-19?

Research is still evolving, but a recent study examining antibodies suggests you could be immune for months after infection.

“Although this cannot provide conclusive evidence that these antibody responses protect from reinfection, we believe it is very likely that they will decrease the odds ratio of reinfection,” researchers from Mount Sinai wrote.

“It is still unclear if infection with SARS-CoV-2 [the scientific name for the novel coronavirus] in humans protects from reinfection and for how long.”

There have been some reports of people getting infected twice within several months. Doctors said a 25-year-old Nevada man appeared to be the first documented case of COVID-19 reinfection in the US. He was first diagnosed in April 2020, then recovered and tested negative twice. About a month later, he tested positive again.

A separate team of researchers said a 33-year-old man living in Hong Kong had COVID-19 twice, in March and August of 2020.

Last year, an 89-year-old Dutch woman – who also had a rare white blood cell cancer – died after catching COVID-19 twice, experts said. She became the first known person to die after getting reinfected.

Work/Life Treatment & Prevention Schools/Education Myths & Misinformation Transmission

Could I get coronavirus from the COVID-19 vaccine?

No.

It’s literally impossible to get COVID-19 from any of the vaccines used in the US because none of them contains even a piece of actual coronavirus.

This article explains how each vaccine was made.

Vaccine Treatment & Prevention Family Transmission Work/Life

Will Americans be required to get a COVID-19 vaccine? What happens if I don’t get vaccinated?

Dr. Anthony Fauci said he does not foresee a nationwide COVID-19 vaccine mandate.

But if only half of all Americans are willing to get vaccinated, COVID-19 could stick around for years, said Dr. Francis Collins, director of the National Institutes of Health.

Health experts say if you don’t get a vaccine, the consequences will extend far beyond yourself – even if you’re young and healthy now. Not only would you be more vulnerable to getting severely sick with COVID-19 or “long COVID” – it will also be harder to achieve herd immunity through vaccination.

In other words: Getting a vaccine is critical for slowing or possibly ending this pandemic. And that will help everyone get back to normal, faster.

Treatment & Prevention Family Schools/Education Transmission Travel Work/Life Vaccine

How much does a COVID-19 vaccine cost?

“It’s all free. The government is paying for this,” said Dr. Paul Offit, director of the Vaccine Education Center at the Children’s Hospital in Philadelphia.

Vaccine Family Work/Life

What are the side effects of the vaccines?

Some people have reported feeling temporary, flu-like symptoms. Don't freak out if this happens to you, health experts say.

"These are immune responses, so if you feel something after vaccination, you should expect to feel that," said Patricia Stinchfield of Children's Hospitals and Clinics of Minnesota.

"And when you do, it's normal that you have some arm soreness or some fatigue or some body aches or even some fever," Stinchfield said.

Read more about what to do if you do get side effects and why side effects are often a good sign.

The Pfizer/BioNTech vaccine has shown no serious safety concerns, Pfizer said. Pfizer has said side effects "such as fever, fatigue and chills" have been "generally mild to moderate" and lasted one to two days.

Moderna said its vaccine did not have any serious side effects. It said a small percentage of trial participants had symptoms such as body aches and headaches.

With the Johnson & Johnson vaccine, the most common side effects were pain at the injection site, headache, fatigue and muscle pain. While the CDC recommends the Johnson & Johnson vaccine, "women younger than 50 years old especially should be aware of the rare but increased risk of thrombosis with thrombocytopenia syndrome (TTS)," the agency says. "TTS is a serious condition that involves blood clots with low platelets. There are other COVID-19 vaccine options available for which this risk has not been seen."

Work/Life Family Treatment & Prevention Schools/Education Vaccine

What are the long-term effects of coronavirus?

Some COVID-19 survivors have reported problems weeks or months after testing positive.

Even young adults have suffered long-lasting symptoms such as shortness of breath, chronic fatigue, brain fog, long-term fever, coughing, memory loss, and the inability to taste or smell.

One CDC study found 35% of survivors surveyed still had symptoms two to three weeks after their coronavirus tests:

- In the 18-to-34 age group, 26% said they still had symptoms weeks later.
- In the 35-to-49 age range, 32% were still grappling with the effects weeks later.
- For those 50 and older, 47% said they still had symptoms weeks later.

And the risk of death from coronavirus-related heart damage seems to be far greater than previously thought, the American Heart Association said.

Inflammation of the vascular system and injury to the heart occur in 20% to 30% of hospitalized COVID-19 patients and contribute to 40% of deaths, the AHA said. AHA President Dr. Mitchell Elkind said cardiac complications of COVID-19 could linger after recovering from coronavirus.

Work/Life Family Transmission

What is aerosolized spread? What's the difference between aerosols and droplets?

Aerosolized spread is the potential for coronavirus to spread not just by respiratory droplets, but by even smaller particles called aerosols that can float in the air longer than droplets and can spread farther than 6 feet.

Respiratory aerosols and droplets are released when someone talks, breaths, sings, sneezes or coughs. But the main difference is size.

Respiratory droplets are bigger – between 5 and 10 microns in diameter. (For perspective, a human hair is typically 60 to 120 microns wide.)

“If you have droplets that come out of a person, they generally go down within 6 feet,” said Dr. Anthony Fauci, director of the National Institute of Allergy and Infectious Diseases.

But aerosols (aka droplet nuclei) are smaller – less than 5 microns in diameter, according to the World Health Organization.

“Aerosol means the droplets don’t drop immediately,” Fauci said. “They hang around for a period of time.”

This becomes “very relevant” when you are indoors and there is poor ventilation, he said.

Multiple case studies suggest coronavirus can spread well beyond 6 feet through airborne transmission, such as during choir practices, said Dr. Amy Compton-Phillips, chief clinical officer of Providence Health System.

In Washington state, for example, 53 members of a choir fell sick and two people died after one member attended rehearsals and later tested positive for COVID-19.

Last July, 239 scientists backed a letter urging public health agencies to recognize the potential for aerosolized spread.

“There is significant potential for inhalation exposure to viruses in microscopic respiratory droplets (microdroplets) at short to medium distances (up to several meters, or room scale), and we are advocating for the use of preventive measures to mitigate this route of airborne transmission,” the letter said.

Transmission Treatment & Prevention Family Schools/Education Work/Life Travel

This pandemic is taking a toll on my mental health. How can I get help if I'm feeling isolated and depressed?

The Crisis Text Line is available texting to 741741. Trained volunteers and crisis counselors are staffed 24/7, and the service is free.

The Substance Abuse and Mental Health Services Administration Disaster Distress Helpline provides 24/7, 365-day-a-year crisis counseling and support to people experiencing emotional distress related to disasters. Call 1-800-985-5990 or text TalkWithUs to 66746 to connect with a trained crisis counselor.

For health care professionals and essential workers, For the Frontlines offers free 24/7 crisis counseling and support for workers dealing with stress, anxiety, fear or isolation related to coronavirus.

For more resources, check out CNN's guide to giving and getting help during the pandemic.

Family Work/Life Treatment & Prevention Schools/Education

What “underlying conditions” put people at higher risk of bad outcomes with COVID-19?

More than 40% of US adults have at least one underlying condition that can put them at higher risk of severe complications, according to the CDC.

Those conditions include obesity, chronic obstructive pulmonary disease, heart disease, diabetes, and chronic kidney disease, according to the CDC.

People who have cancer, an organ transplant, sickle cell anemia, poorly controlled HIV or any autoimmune disorder are also at higher risk.

COVID-19 patients with pre-existing conditions – regardless of their age – are 6 times more likely to hospitalized and 12 times more likely to die from the disease than those who had no pre-existing conditions, CNN Chief Medical Correspondent Dr. Sanjay Gupta said.

While young, healthy people are less likely to die from COVID-19, many are suffering long-term effects from the disease.

Treatment & Prevention Transmission Family Work/Life

What are the guidelines for riding in a car with someone from another household?

Unvaccinated people from different households in a car should wear face masks, said Dr. Aaron Hamilton of the Cleveland Clinic.

“You should also wear one if you’re rolling down your window to interact with someone at a drive-thru or curbside pickup location,” Hamilton said.

It’s also smart to keep the windows open to help ventilate the car and add another layer of safety, said Dr. Anthony Fauci, director of the National Institute of Allergy and Infectious Diseases.

Travel Transmission Treatment & Prevention Work/Life Family Schools/Education

Are coronavirus and COVID-19 the same thing? How did they get their names?

Coronavirus and COVID-19 are not the same thing, but sometimes the terms can be used interchangeably.

This “novel coronavirus” is novel because it just emerged in humans in late 2019. There have been six other coronaviruses known to infect humans, such as SARS (circa 2003) and MERS (circa 2012).

“Coronaviruses are named for the crown-like spikes on their surface,” or coronas, the CDC says. The scientific name for this novel coronavirus is SARS-CoV-2, which stands for “severe acute respiratory syndrome coronavirus 2.”

COVID-19, however, is the disease *caused* by the novel coronavirus. The letters and numbers in “COVID-19” come from “Coronavirus disease 2019.”

Myths & Misinformation Schools/Education

Family Transmission Treatment & Prevention

Should we clean our cell phones daily?

Yes, that's a good idea because cell phones are basically "petri dishes in our pockets" when you think about how many surfaces you touch before touching your phone.

You should regularly disinfect your mobile phone anyway, with or without a coronavirus pandemic.

"There's probably quite a lot of microorganisms on there, because you're holding them against your skin, you are handling them all the time, and also you're speaking into them," said Mark Fielder, a professor of medical microbiology at Kingston University.

"And speaking does release droplets of water just in normal speech. So it's likely that a range of microbes – including COVID-19, should you happen to be infected with that virus – might end up on your phone."

Watch the best ways to disinfect your cell phone [here](#).

Transmission Work/Life Treatment & Prevention Family

Is it safe to go back to the gym?

There are certainly risks if you're not vaccinated.

Coronavirus often spreads more easily indoors rather than outdoors – especially if you're indoors for an extended period of time.

Researchers have also found that heavy breathing and singing can propel aerosolized viral particles farther and increase the risk of transmission.

During one fitness instructor workshop, about 30 participants with no symptoms trained intensely for four hours, according to research published by the CDC. Eight participants later tested positive, and more than 100 new cases of coronavirus were traced back to that fitness workshop.

To help mitigate the risk, many gyms are limiting capacity or requiring masks.

And while health experts have recommended staying 6 feet away from others, it's smart to keep even more distance than that at the gym.

"With all the heavy breathing, you may even want to double the usual 6 feet to 12 feet, just to be safe," CNN Chief Medical Correspondent Dr. Sanjay Gupta said.

Transmission Work/Life Treatment & Prevention

I tested positive for coronavirus weeks ago. How long are people contagious with COVID-19? Do I need to keep isolating or getting retested?

For symptomatic carriers: If it's been at least 10 days since your symptoms started *and* at least 24 hours since you've had a fever (without the help of fever-reducing medication) *and* your other symptoms have improved, you can go ahead and stop isolating, the CDC says.

Patients with severe illness may have to keep isolating for up to 20 days after symptoms started.

(But it's important to note symptoms typically don't show up until several days after infection — and you can be more contagious during this pre-symptomatic time. Also, symptoms can last for weeks or months — including in young people.)

For asymptomatic carriers: People who tested positive but don't have any symptoms can stop isolating 10 days after the first positive test – as long as they have not subsequently developed symptoms, the CDC says.

But 10 days is just a general guideline: “Because symptoms cannot be used to gauge where these individuals are in the course of their illness, it is possible that the duration of viral shedding could be longer or shorter than 10 days after their first positive test,” the CDC warned. With viral shedding, a person can infect others with the virus, even if they have no symptoms.

Asymptomatic carriers who have tested positive can also stop isolating if they get two negative test results from tests taken more than 24 hours apart. At that point, it's very unlikely they are still contagious.

Work/Life Treatment & Prevention Family Schools/Education Transmission

I heard you can get COVID-19 through your eyes. Should we wear goggles, too?

Doctors say wearing eye protection (in addition to face masks) could help some people, but it's not necessary for everyone.

Teachers who have younger students in the classroom are “likely to be in environments where children might pull down their masks, or not be very compliant with them,” epidemiologist Saskia Popescu said. “There is concern that you could get respiratory droplets in the eyes.”

If you're a health care worker or taking care of someone at home who has coronavirus, it's smart to wear eye protection, said Dr. Thomas Steinemann, clinical spokesperson for the American Academy of Ophthalmology.

(Note: Regular glasses or sunglasses aren't enough, because they leave too many gaps around the eyes.)

But if you're vaccinated or not in a high-risk situation, wearing goggles isn't necessary.

While it's still possible to get COVID-19 through the eyes, that scenario is less likely than getting it through your nose or mouth, Steinemann said.

He said if a significant number of people were getting coronavirus through their eyes, doctors would probably see more COVID-19 patients with conjunctivitis, also known as pink eye (though having pink eye doesn't necessarily mean you have coronavirus).

Transmission Work/Life Treatment & Prevention Schools/Education Myths & Misinformation

Should people wear face shields instead of (or in addition to) face masks?

The CDC does not recommend using plastic face shields for everyday activities or as a substitute for face masks. There are a few exceptions, such as for those who are hearing-impaired and rely on lip-reading or those who have physical or mental health conditions that would be exacerbated by wearing a cloth face mask.

“Cloth face coverings are a critical preventive measure and are most essential in times when social distancing is difficult,” the CDC says.

Clinical and laboratory studies show cloth face coverings reduce the spray of droplets when worn over the nose and mouth – what the CDC refers to as “source control.” And many people are contagious even when they don’t have any symptoms and don’t know they’re infected.

Face shields worn *in addition to masks* can provide an added layer of protection and can also help people stop touching their faces. Workers who are around people for long periods of time, such as grocery store workers or hospital personnel, may want to wear face shields in addition to masks, to increase their protection.

If someone must use a face shield without a mask, the CDC says the shield “should wrap around the sides of the wearer’s face and extend to below the chin. Disposable face shields should only be worn for a single use. Reusable face shields should be cleaned and disinfected after each use.”

Transmission Treatment & Prevention Work/Life Schools/Education

Doesn't the flu kill more people than coronavirus?

No. In fact, COVID-19 has killed more people in one year than the flu did during the last five flu seasons combined.

During the 2019-2020 flu season, an estimated 22,000 people in the US died from the flu, according to the CDC.

With COVID-19, the first known US death was in February 2020. By January 27, more than 427,000 people had died, according to data from Johns Hopkins University. COVID-19 has now taken more than half a million US lives.

There are other reasons why coronavirus can be more dangerous than the flu:

- Coronavirus is twice as contagious as the flu. Research indicates a person with the flu infects an average of 1.28 other people, CNN Chief Medical Correspondent Dr. Sanjay Gupta said. With coronavirus, “it’s likely between 2 and 3” other people. But mitigation efforts can drastically reduce that number.
- Coronavirus can be spread unknowingly for more days than the flu. People with coronavirus might not get symptoms for 14 days, and some get no symptoms at all. But they can still infect others unknowingly. The incubation period for the flu is shorter, and most people get symptoms within two days of infection.

Transmission Family Work/Life Myths & Misinformation

Could I have the flu and coronavirus at the same time? If so, what does that do to your body?

“You can certainly get both the flu and COVID-19 at the same time, which could be catastrophic to your immune system,” said Dr. Adrian Burrowes, a family medicine physician in Florida.

In fact, getting infected with one can make you more vulnerable to getting sick with the other, epidemiologist Dr. Seema Yasmin said.

“Once you get infected with the flu and some other respiratory viruses, it weakens your body,” she said. “Your defenses go down, and it makes you vulnerable to getting a second infection on top of that.”

On their own, both COVID-19 and the flu can attack the lungs, potentially causing pneumonia, fluid in the lungs or respiratory failure, the Centers for Disease Control and Prevention said.

“The two (illnesses) together definitely could be more injurious to the lungs and cause more respiratory failure,” said Dr. Michael Matthay, a professor of medicine at the University of California, San Francisco.

And just like with COVID-19, even young, healthy people can die from the flu.

Doctors say the easiest way to help avoid a flu/COVID-19 double whammy is to get vaccinated.

Transmission Family Work/Life Schools/Education Myths & Misinformation

How can I tell if I have coronavirus or the flu (or both)?

Both the flu and COVID-19 can give you a fever, cough, shortness of breath, fatigue, sore throat, body aches and a runny or stuffy nose, the CDC said.

“Some people may have vomiting and diarrhea, though this is more common in children than adults,” the CDC said.

But unlike the flu, COVID-19 can cause a loss of taste or smell.

And about half of coronavirus transmissions happen before any symptoms show up. (Many of those people spreading the virus silently are pre-symptomatic and are more contagious before they start showing symptoms.)

So the best way to know if you have the novel coronavirus or the flu (or both) is to get tested. The CDC has created a test that will check for both viruses, to be used at CDC-supported public health labs.

Work/Life Family Treatment & Prevention Schools/Education Myths & Misinformation

How do I prevent my glasses or sunglasses from fogging up when I wear a mask?

First, make sure the top of your mask fits snugly against your skin. Then put your glasses over the snug-fitting top portion of your mask.

If that doesn't do the trick, soap and water can create a barrier that prevents glasses from fogging up. Here's how.

Work/Life Family Schools/Education Treatment & Prevention

Family Work/Life Transmission Treatment & Prevention

Can central air conditioning spread COVID-19 in public places?

Technically, it can, but HVAC (heating/ventilation/air conditioning) systems are not thought to be a significant factor in the spread of coronavirus.

Many modern air conditioning systems will either filter out or dilute the virus. Ventilation systems with highly effective filters are a key way to eliminate droplets from the air, said Harvard environmental health researcher Joseph Gardner Allen.

Filters are rated by a MERV system – their “minimum efficiency reporting value” that specifies their ability to trap tiny particles. The MERV ratings go from 1 to 20. The higher the number, the better the filtration.

HEPA filters have the highest MERV ratings, between 17 and 20. HEPA filters are used by hospitals to create sterile rooms for surgeries and to control infectious diseases. They're able to remove 99.97% of dust, pollen, mold, bacteria and other airborne particles as small as 0.3 microns.

For context, this coronavirus is thought to be between 0.06 to 1.4 microns in size.

But “HEPA filtration is not always going to be feasible or practical,” Allen said. “But there are other filters that can do the job. What is recommended now by the standard setting body for HVAC is a MERV 13 filter.”

High-efficiency filters in the 13-to-16 MERV range are often used in hospitals, nursing homes, research labs and other places where filtration is important.

“If you’re an owner of a home, building or mall, you want to have someone to assess your system and install the largest MERV number filter the system can reliably handle without dropping the volume of air that runs through it,” advised Erin Bromage, an associate professor of biology at the University of Massachusetts Dartmouth.

“In addition, virtually all modern air conditioning systems in commercial buildings have a process called makeup air where they bring in air from outside and condition it and bring it inside,” Bromage said. “It’s worse in regards to energy, but the more outside air we bring in, the more dilution of the virus we have and then the safer you are.”

Transmission Family Work/Life Schools/Education

What does asymptomatic mean?

Asymptomatic describes a person who is infected but does not have symptoms. With COVID-19, asymptomatic carriers can still easily infect others without knowing it. So if you’re infected but don’t feel sick, you could still get others very sick.

Some medical professionals differentiate between truly asymptomatic carriers – those who don’t currently have and will never have symptoms – from “pre-symptomatic” carriers – those who don’t have symptoms now, but will get them later. But the general public often uses the term “asymptomatic” to describe both categories of infected people.

Regardless of which term you use, researchers have found that about half of coronavirus transmissions happen between people who don’t have any symptoms. And in some cases, people are more contagious before they start showing symptoms.

Work/Life Transmission Schools/Education

How effective are different types of face masks? Which cloth masks work the best?

An N95 respirator provides the best protection. But throughout the pandemic, N95s have been in high demand and short supply.

As for other masks, different types have different levels of effectiveness, according to researchers at Florida Atlantic University.

They compared four types of face masks commonly used by the public: a stitched mask with two layers of fabric, a commercial cone mask, a folded handkerchief, and a bandana. Researchers tested each to see which would likely offer the most protection if someone coughed or sneezed.

- The stitched mask with two layers of fabric performed the best, with droplets traveling only 2.5 inches.
- With a cone-style mask, the droplets traveled about 8 inches.
- A folded handkerchief performed worse, with droplets traveling 1 foot, 3 inches.
- The bandana gave the least amount of protection of the cloth masks tested, with droplets traveling 3 feet.

- Still, any kind of cloth mask is better than none, the researchers found. Without any covering, droplets were able to travel 8 feet.

“People need to know that wearing masks can reduce transmission of the virus by as much as 50%, and those who refuse are putting their lives, their families, their friends, and their communities at risk,” said Dr. Christopher Murray, director of the University of Washington’s Institute for Health Metrics and Evaluation.

Treatment & Prevention Transmission

What’s so different about coronavirus that made us shut down the economy? Why did we have to practice social distancing when we didn’t during the SARS and swine flu epidemics?

Unlike SARS and swine flu, the novel coronavirus is both highly contagious and especially deadly, CNN Chief Medical Correspondent Dr. Sanjay Gupta said.

“SARS was also a coronavirus, and it was a new virus at the time,” Gupta said. “In the end, we know that SARS ended up infecting 8,000 people around the world and causing around 800 deaths. So very high fatality rate, but it didn’t turn out to be very contagious.”

The swine flu, or H1N1, “was very contagious and infected some 60 million people in the United States alone within a year,” Gupta said. “But it was far less lethal than the flu even – like 1/3 as lethal as the flu.”

What makes the novel coronavirus different is that “this is both very contagious ... and it appears to be far more lethal than the flu as well.”

Work/Life Transmission Treatment & Prevention

When are people with coronavirus most contagious?

“People can be contagious without symptoms. And in fact – a little bit strangely in this case – people tend to be the most contagious *before* they develop symptoms, if they’re going to develop symptoms,” CNN Chief Medical Correspondent Dr. Sanjay Gupta said.

“They call that the pre-symptomatic period. So people tend to have more virus at that point seemingly in their nose, in their mouth. This is even before they get sick. And they can be shedding that virus into the environment.”

Some people infected with coronavirus never get symptoms. But it’s easy for these asymptomatic carriers to infect others, said Anne Rimoin, an epidemiology professor at UCLA’s School of Public Health.

“When you speak, sometimes you’ll spit a little bit,” she said. “You’ll rub your nose. You’ll touch your mouth. You’ll rub your eyes. And then you’ll touch other surfaces, and then you will be spreading virus if you are infected and shedding asymptotically.”

That’s why health officials suggests people wear face masks while in public and when it’s difficult to stay 6 feet away from others.

Transmission Treatment & Prevention Myths & Misinformation

Can you get COVID-19 through sex?

The odds of transmitting coronavirus through sex hasn’t been thoroughly studied, though it has been found to exist in men’s semen.

But we do know COVID-19 is a highly contagious respiratory illness that can spread via saliva, coughs, sneezes, talking or breathing – with or without symptoms of illness.

So three Harvard physicians examined the likelihood of getting or giving COVID-19 during sex and made several recommendations.

For partners who haven't been isolating together, they should wear masks and avoid kissing, the authors write.

In addition to wearing masks, people who have sex with partners outside of their home should also shower before and after; avoid sex acts that involve the oral transmission of bodily fluids; clean up the area afterward with soap or alcohol wipes to reduce their likelihood of infection.

Transmission Treatment & Prevention Family Myths & Misinformation

Is it true young people with coronavirus are also having blood clots and strokes?

Yes, some young adults have suffered strokes after getting coronavirus.

"The virus seems to be causing increased clotting in the large arteries, leading to severe stroke," said Dr. Thomas Oxley, a neurosurgeon at Mount Sinai Health System in New York.

"Most of these patients have no past medical history and were at home with either mild symptoms (or in two cases, no symptoms) of COVID."

Family Work/Life Schools/Education

Why has the guidance on wearing face masks changed so much?

Earlier in this pandemic, scientists didn't know how easily this new virus spreads between people without symptoms, nor did they know how long infectious particles could linger in the air. There was also a shortage of N95 respirators and face masks among health care workers who were quickly overwhelmed with COVID-19 patients.

But since then, the CDC, the former US Surgeon General and other doctors have changed their recommendations and are now urging the widespread use of face masks.

The CDC now says the public needs to "cover your mouth and nose with a cloth face cover when around others."

"Everyone should wear a cloth face cover when they have to go out in public, for example to the grocery store or to pick up other necessities," the CDC said.

Scientists have made many recent discoveries about the new coronavirus, including:

- It's easy to spread this virus by just talking or breathing.
- This coronavirus is highly contagious. Without mitigation efforts like stay-at-home orders, each person with coronavirus infects, on average, another two to three other people. That makes it twice as contagious as the flu.
- This virus has a long incubation period – up to 14 days – giving a wide window of opportunity for people to infect others before they even know they're infected.
- Carriers may be most contagious in the 48 hours before they get symptoms, making transmission even more blind.

In other words, it's not just people who are sneezing and coughing who can spread coronavirus. It's often people who look completely normal and don't have a fever. And that could include you.

Work/Life Myths & Misinformation Transmission Treatment & Prevention

How can I stay safe in an elevator?

Doctors say getting vaccinated is the best way to prevent coronavirus infection.

If you're not vaccinated, it's best to take the stairs if you can. But if you can't, emergency room physician Dr. Leana Wen offers several tips:

- Wear a mask. Not only does wearing a mask reduce your risk of inhaling the virus – which can linger in the air for 8 minutes – it also helps reduce your chances of infecting others if you are an asymptomatic carrier.
- Use a tissue to push the elevator buttons. If you don't have a tissue, use your elbow, then wash or disinfect that area when you can.
- Try to keep your distance from anyone else inside the elevator as much as possible.

Transmission Work/Life Treatment & Prevention

How safe are public restrooms?

For those not fully vaccinated, try to avoid public restrooms if you can, said microbiologist Ali Nouri, president of the Federation of American Scientists. But he acknowledged that's not always possible: "Sometimes when you gotta go, you gotta go."

Close contact with others is the most significant risk in a public restroom, Nouri said. So if there's a single-person bathroom available that doesn't have multiple stalls, using that might be best.

If you do use a multi-stall public restroom, Nouri offers the following tips:

- Don't use your freshly washed hands to turn off the water with the germ-laden faucet handle. Instead, use a paper towel to turn off the water and open the bathroom door. Throw away the paper towel immediately afterward.
- Wear a face mask. "Masks are one of the most effective ways to stop human-to-human transmission," Nouri said. "If people in a public bathroom are not wearing masks, think twice before going in."
- If the restroom looks crowded, wait until it clears out, if you can. "You're reducing the risk of inhaling aerosolized particles from other people," Nouri said.

Transmission Treatment & Prevention Work/Life

Is hand sanitizer as effective as soap and water in killing coronavirus?

Yes – as long as you use the right kind of sanitizer and use it correctly.

Hand sanitizers "need to have at least 60% alcohol in them," said Dr. William Schaffner, professor of preventative medicine and infectious disease at Vanderbilt University School of Medicine.

And don't just put a little dollop in your hand and smear it around quickly.

"You've got to use enough and get it all over the surfaces," Schaffner said. "Rub it all over your hands, between your fingers and on the back of your hands."

But it's always better to thoroughly wash your hands, if you're able to.

"Alcohol is pretty effective at killing germs, but it doesn't wash away stuff," said Dr. John Williams, a virologist at the University of Pittsburgh Medical Center Children's Hospital of Pittsburgh.

"If somebody's just sneezed into their hand, and their hand is covered with mucus, they would have to use a lot more alcohol to inactivate that bacteria or virus."

Schools/Education Treatment & Prevention Work/Life Transmission Family

Are some blood types able to fight coronavirus better than other blood types?

A study published in [The New England Journal of Medicine](#) found that people with Type A blood have a higher risk of getting infected with coronavirus and developing severe symptoms, while people with Type O blood have a lower risk – but the study has caveats.

The researchers cannot say if blood type is a direct cause of the differences in susceptibility. It could be that genetic changes that affect someone's risk also just happen to be linked with blood type, they said.

The study's findings, while plausible, may mean very little for the average person, said Dr. Roy Silverstein, a hematologist and chairman of the department of medicine at the Medical College of Wisconsin.

"The absolute difference in risk is very small," he said. "The risk reduction may be statistically significant, but it is a small change in actual risk. You never would tell somebody who was Type O that they were at smaller risk of infection."

The bottom line: "All of us are susceptible to this virus," said Dr. Maria Van Kerkhove, technical lead for the World Health Organization's COVID-19 response.

Treatment & Prevention Myths & Misinformation

What's the risk of having a maid service come to clean your house if you're not home?

"It's probably safe if you're not at home," emergency physician Dr. Leana Wen said. She suggested leaving the windows open to improve ventilation and asking the cleaners to use your own cleaning supplies so they don't bring items that have been in other people's houses.

Transmission Work/Life Treatment & Prevention Family

Can I disinfect my mask by putting it in the microwave?

That's "not a great idea," said [Dr. Joseph Vinetz](#), a professor of infectious diseases at Yale School of Medicine. "We have no evidence about that."

"If there's a metal piece in an N95 or surgical mask and even staples, you can't microwave them," he said. "It'll blow up."

Vinetz said cloth masks can be washed and reused, and even disposable masks can be reused if you let them sit for several days.

To disinfect masks that you can't wash, Vinetz recommends leaving them in a clean, safe place in your home for a few days. After that, it should no longer be infectious, as this coronavirus is known to survive on hard surfaces for only up to three days.

Treatment & Prevention Work/Life Myths & Misinformation

Is it safe to perform CPR on a stranger?

Doctors strongly recommend performing CPR when someone needs it.

You could be hundreds of times more likely to save that dying person's life than you are to die from COVID-19 if you contract it after performing CPR, according to a report published by a group of Seattle emergency room physicians in the journal *Circulation*.

But it's important to act quickly for CPR to be effective.

"The chance of survival goes down by 10% for every minute without CPR," said Dr. Comilla Sasson, vice president for science and innovation in emergency cardiovascular care at the American Heart Association. "It's a 10-minute window to death in many cases."

If you're not certified in CPR, performing chest compressions could also buy more time until help arrives. Bystanders should "provide high-quality chest compressions by pushing hard and fast in the middle of the victim's chest, with minimal interruptions," the American Heart Association said.

If you're not sure how "fast" to do to those chest compressions, singing any of these popular songs will help you get the right rhythm.

Transmission Work/Life Family Myths & Misinformation

Can I get coronavirus from swimming in open water, like in a lake or seawater? What about in a public pool or hot tub?

It's not the water you need to worry about. It's how close you might get to other people.

"Properly maintained pool water will not be a source of spread of the virus. The chlorine that's in it will inactivate the virus fairly quickly," immunologist Erin Bromage said.

"The level of dilution that would happen in a pool or an ocean or a large freshwater body would not lead to enough virus to establish an infection. But when you do this, you need to just make sure that we're maintaining an appropriate physical distance while swimming or sitting in a hot tub."

That's because it's easy for infected people with no symptoms to spread the virus if they're within 6 feet from each other. If you have an indoor pool or hot tub, even 6 feet might not be enough distance.

Transmission Family Travel Treatment & Prevention Work/Life

I saw other countries spraying down sidewalks and other public places with disinfectant. Why haven't we done that in the US?

Randomly spraying open places is largely a waste of time, health experts say. It can actually do more harm than good. "Spraying disinfectants can result in risks to the eyes, respiratory or skin irritation," the World Health Organization said.

"Spraying or fumigation of outdoor spaces, such as streets or marketplaces, is also not recommended to kill the COVID-19 virus or other pathogens because disinfectant is inactivated by dirt and debris, and it is not feasible to manually clean and remove all organic matter from such spaces," the WHO said.

"Moreover, spraying porous surfaces, such as sidewalks and unpaved walkways, would be even less effective." Besides, the ground isn't typically a source of infection, the WHO said.

And once the disinfectant wears off, an infected person could easily contaminate the surface again.

Treatment & Prevention Myths & Misinformation Travel Transmission

Can protests increase the spread of COVID-19?

Any large gathering can increase the spread because this coronavirus is transmissible by talking or even just breathing. Carriers of the virus can be contagious even if they don't have symptoms.

And when people are "shouting and cheering loudly, that does produce a lot of droplets and aerosolization that can spread the virus to people," said Dr. James Phillips, a physician and assistant professor at George Washington University Hospital.

So doctors and officials say its important to get vaccinated or wear a face mask and try to keep your distance from others as much as possible.

Transmission Treatment & Prevention Work/Life

Do vitamin D levels affect your risk for coronavirus? Is there a correlation between vitamin D and those who test positive for COVID-19?

"To date, there is no evidence that very high vitamin D levels are protective against COVID-19 and consequently medical guidance is that people should not be supplementing their vitamin D levels beyond those which are currently recommended by published medical advice," wrote Robin May, director of the Institute of Microbiology and Infection at the University of Birmingham in the UK.

Vitamin D is important for healthy muscles, strong bones and a powerful immune system. The recommended daily dose of vitamin D for anyone over age 1 is 15 mcg/600 IU per day in the US. For anyone over 70 years of age in the US, the recommended daily intake goes up to 20 mcg/800 IU per day.

But too much vitamin D can lead to a toxic buildup of calcium in your blood that can cause confusion, disorientation, heart rhythm problems, bone pain, kidney damage and painful kidney stones.

Treatment & Prevention Myths & Misinformation

Can you get coronavirus from touching money? What about from other objects, like plants?

"Viruses can live on surfaces and objects – including on money – although your chance of actually getting COVID-19 from cash is probably very low," emergency medicine physician Dr. Leana Wen said.

The new coronavirus can live for up to 72 hours on stainless steel and plastic, up to 24 hours after landing on cardboard, and up to four hours after landing on copper, according to a study funded by the US National Institutes of Health.

So how do you protect yourself? To avoid touching cash or coins, use contactless methods of payment whenever possible, Wen said.

If you can't use a contactless form of payment, credit cards and debit cards are much easier to clean and disinfect than cash. But remember that anyone who touches your credit card can also leave germs on it.

If you must use cash, "wash your hands well with soap and water" afterward, Wen said.

The same applies for anything else you touch that might have coronavirus on it. If you can't wash your hands immediately, use hand sanitizer or disinfectant.

And since COVID-19 is a respiratory disease, make sure you avoid touching your face.

Transmission Work/Life Treatment & Prevention

Myths & Misinformation Transmission Family

Can UV light kill coronavirus?

While some UV light devices are used for hospital disinfection, UV light only kills germs under very specific conditions – including certain irradiation dosages and exposure times, the World Health Organization said.

But UV light can also damage the body.

Two factors are required for UV light to destroy a virus: intensity and time. If the light is intense enough to break apart a virus in a short time, it's going to be dangerous to people, said Donald Milton, a professor at the University of Maryland.

UVA and UVB light both damage the skin. UVC light is safer for skin, but it will damage tender tissue such as the eyes.

Myths & Misinformation Treatment & Prevention

Do I need to wash fruits and vegetables with soap and water?

No. The US Food and Drug Administration says you don't need to wash fresh produce with soap and water, but you should rinse it with plain water.

But it's still important to wash your hands with soap and water frequently because we often touch our faces without realizing it. And that's a way coronavirus can spread.

You don't have to worry about getting coronavirus by "eating" it, though. Even if coronavirus does get into your food, your stomach acid would kill it, said Dr. Angela Rasmussen, a virologist at Columbia University.

Treatment & Prevention Work/Life Transmission

Can coronavirus stay in my hair or in a beard? Should I wash my hair every day?

Coronavirus can stick to hair, said Dr. David Aronoff, director of the Division of Infectious Diseases at Vanderbilt University Medical Center.

Touching contaminated hair and then touching your mouth, eyes or nose could increase your risk of infection. "Like on the skin, this coronavirus is a transient hitchhiker that can be removed by washing," Aronoff said.

But that doesn't mean you have to wash the hair on your head multiple times a day, said dermatologist Dr. Hadley King.

That's because "living hair attached to our scalps may be better protected by our natural oils that have some antimicrobial properties and may limit how well microbes can attach to the hair," she said.

"If you are going out into areas that could possibly be contaminated with viral particles, then it would be reasonable to wash the hair daily during the pandemic. But it's not the same as hand washing – the virus infects us through our mucosal surfaces. If your hair is not falling into your face or you're not running your fingers through it, then there is less of a risk."

If your hair does fall into your face, you may want to pull it back to minimize your risk, King said.

As for facial hair, “washing at least daily if not more frequently is wise, depending on how often they touch their face,” Aronoff said.

Transmission Treatment & Prevention Work/Life

Could I infect my pets with coronavirus, or vice versa? Can someone get infected by touching an animal’s fur? Should I get my pet tested for coronavirus?

There have been some reports of animals infected with coronavirus – including [two pets in New York](#) and [eight big cats at the Bronx Zoo](#).

Most of those infections came from contact with humans who had coronavirus, like a zoo employee who was an asymptomatic carrier.

But [according to the CDC](#), there is no evidence animals play a significant role in spreading the virus to humans. Therefore, at this time, routine testing of animals for COVID-19 is not recommended.

As always, it’s best to wash your hands after touching an animal’s fur and before touching your face. And if your pet appears to be sick, call your veterinarian.

Family Work/Life Treatment & Prevention Transmission

What is contact tracing?

This [“Contact tracing 101” article](#) explains how contact tracing works, how it quashed previous outbreaks, who can get hired, and why tracing is critical to helping reopen economies.

But the US hasn’t been doing nearly enough contact tracing, experts say. [Here’s why](#).

Work/Life Transmission Treatment & Prevention Travel

Should I wash my hands and laundry in very warm or hot water?

Hot water is best for killing bacteria and viruses in your laundry. But you don’t want to use that kind of scalding hot water on your skin.

Warm water is perfectly fine for washing your hands – as long as you wash them thoroughly ([like this](#)) and for at least 20 seconds. (To time yourself, you can hum the “Happy Birthday” song twice or sing a couple of verses from [any of these hit songs from the past several decades](#).)

Cold water will also work, “but you have to make sure you work really vigorously to get a lather and get everything soapy and bubbly,” said chemist Bill Wuest, an associate professor at Emory University. To do that, you might need to sing “Happy Birthday” three times instead of twice.

“Warm water with soap gets a much better lather – more bubbles,” Wuest said. “It’s an indication that the soap is ... trying to encapsulate the dirt and the bacteria and the viruses in them.”

Treatment & Prevention Work/Life Transmission Myths & Misinformation

How does soap kill coronavirus? If I don't have disinfecting wipes, can I use soap and water on surfaces?

Yes, you can use soap and water on surfaces just like you would on your hands to kill coronavirus. But don't use water alone – that won't really help.

The outer layer of the virus is made up of lipids, aka fat. Your goal is to break through that fatty barrier, forcing the virus' guts to spill out and rendering it dead.

In other words, imagine coronavirus is a butter dish that you're trying to clean.

"You try to wash your butter dish with water alone, but that butter is not coming off the dish," said Dr. John Williams, chief of pediatric infectious diseases at UPMC Children's Hospital of Pittsburgh.

"You need some soap to dissolve grease. So soap or alcohol are very, very effective against dissolving that greasy liquid coating of the virus."

By cutting through the greasy barrier, Williams said, "it physically inactivates the virus so it can't bind to and enter human cells anymore."

Work/Life Transmission Treatment & Prevention Schools/Education

Can coronavirus be transferred by people's shoes? How do I protect kids who crawl or play on the floor?

Yes, coronavirus can live on the soles of shoes, but the risk of getting COVID-19 from shoes appears to be low.

A report published by the CDC highlighted a study from a hospital in Wuhan, China, where this coronavirus outbreak began.

The soles of medical workers' shoes were swabbed and analyzed, and the study found that the virus was "widely distributed" on floors, computer mice, trash cans and door knobs. But it's important to note the study was done in a hospital, where the virus was concentrated.

It's still possible to pick up coronavirus on the bottoms of your shoes by running errands, but it's unlikely you'll get sick from it because people don't often touch the soles of their shoes and then their faces. Because COVID-19 is a respiratory disease, the CDC advises wearing a mask while in public and washing your hands frequently– the correct way.

If you have small children who crawl or regularly touch the floor, it's a good idea to take your shoes off as soon you get home to prevent coronavirus or bacteria from spreading on the floors.

Transmission Family Treatment & Prevention Schools/Education

Can I get coronavirus through food? Is it safe to eat takeout from restaurants?

There's no evidence that coronavirus can be transmitted through food, the CDC says.

Even if coronavirus does get into your food, your stomach acid would kill it, said Dr. Angela Rasmussen, a virologist at Columbia University.

"When you eat any kind of food, whether it be hot or cold, that food is going to go straight down into your stomach, where there's a high acidity, low-pH environment that will inactivate the virus," she said.

But it's a good idea to disinfect the takeout containers, CNN Chief Medical Correspondent Dr. Sanjay Gupta said. Coronavirus is a respiratory virus, and it's easy to touch your face without realizing it.

If you don't have disinfecting wipes, use your own plates or bowls to serve the food. Just make sure to wash your hands after transferring food from the containers.

Transmission Family Work/Life

Can coronavirus spread through water, like in a swimming pool or hot tub?

"There is no evidence that COVID-19 can be spread to humans through the use of pools and hot tubs," the CDC says.

"Proper operation, maintenance, and disinfection (e.g., with chlorine and bromine) of pools and hot tubs should remove or inactivate the virus that causes COVID-19."

But health officials still advise staying at least 6 feet away from others because COVID-19 is a respiratory disease. In other words, you probably won't get coronavirus from the water, but you could get coronavirus from someone close to you in the water.

As for drinking water, doctors say you don't need to worry about coronavirus in the tap water because most municipal drinking water systems should remove or inactivate the virus.

Transmission Work/Life

Can mosquitoes or houseflies transmit coronavirus?

"To date there has been no information nor evidence to suggest that the new coronavirus could be transmitted by mosquitoes," the World Health Organization says. There's also no evidence so far suggesting flies can spread coronavirus.

Transmission Myths & Misinformation

Can you safely reuse a non-cloth mask that you can't wash, like a disposable mask?

Yes you can, said Dr. Joseph Vinetz, an infectious diseases professor at Yale School of Medicine.

To disinfect masks that you can't wash, Vinetz recommends leaving them in a clean, safe place in your home for a few days. After that, it should no longer be infectious, as this coronavirus is known to survive on hard surfaces for only up to three days.

You can reuse cloth masks, too. Just launder them between each use on a high-heat setting.

Learn more about which masks you shouldn't buy and how you can make your own (without having to sew) here.

Work/Life Treatment & Prevention

Will ingesting or injecting disinfectants, like the ones that kill viruses on surfaces, protect me against coronavirus or kill coronavirus if I already have it?

"That's a bad idea," said Dr. Colleen Kraft, an infectious diseases professor at Emory University School of Medicine. "It could definitely kill you."

Former President Donald Trump wondered aloud during a press conference whether there's "a way we can do something like that, by injection inside or almost a cleaning."

But the Reckitt Benckiser Group, which produces Lysol cleaning products, said "under no circumstance" should disinfectants be put into the human body.

Myths & Misinformation Treatment & Prevention Work/Life

Can coronavirus stick to clothes? Do I need to wash my clothes right after encountering other people, like at the grocery store or while jogging?

"I don't think you need to," CNN Chief Medical Correspondent Dr. Sanjay Gupta said.

Coronavirus can stay alive for up to three days on stainless steel and plastic. But clothing "is probably more like cardboard – it's more absorbent, so the virus is unlikely to stay and last that long," Gupta said.

While coronavirus can stay alive on cardboard for up to 24 hours, viruses generally don't stick well on surfaces that are in motion.

"If you look at how viruses move through air, they kind of want to move around objects," Gupta said. "They don't want to necessarily land on objects. So if you're moving as human body through the air ... (it's) unlikely to stick to your clothes."

Transmission Work/Life Family Treatment & Prevention

Will an antibody test show whether I'm immune and can go back to work or school?

Not necessarily. Antibodies are a body's response to bacteria or viruses. But it's not clear whether having antibodies means you have long-term protection from getting reinfected.

"The thing we don't know yet is what is the relationship between the level of antibody and the degree of your protection," Dr. Anthony Fauci, director of the National Institute of Allergy and Infectious Diseases, told Snapchat's "Good Luck America" show.

"So you may be positive for an antibody, but not enough to protect you."

There's also a risk that some antibody tests might confuse the novel coronavirus with other coronaviruses, like the ones that cause the common cold.

Work/Life Treatment & Prevention Transmission Schools/Education

Can I use vodka as hand sanitizer?

Please don't. The CDC advises using hand sanitizer that contains at least 60% alcohol.

Vodka typically contains between 35% and 46% percent alcohol.

If the stores are out of hand sanitizer and you want to make your own, the Nebraska Medical Center offers this recipe:

What you'll need:

- 2/3 cup 91% isopropyl alcohol (rubbing alcohol)
- 1/3 cup aloe vera gel
- Mixing bowl

- Spoon or something for whisking
- Small container, such as a 3-oz. travel bottle
- Optional: essential oil to give your hand sanitizer a fragrance

Directions:

In a mixing bowl, stir isopropyl alcohol and aloe vera gel together until well blended.

Add 8-10 drops of scented essential oil (optional, but nice). Stir.

Pour the homemade hand sanitizer into an empty container and seal. Write "hand sanitizer" on a piece of masking tape and attach to the bottle.

Myths & Misinformation Treatment & Prevention

Are smokers or vapers at higher risk? What if I only smoke weed?

This is not a good time to be vaping or smoking anything, including weed.

"Vaping affects your lungs at every level. It affects the immune function in your nasal cavity by affecting cilia, which push foreign things out," said Prof. [Stanton Glantz](#), director of the Center for Tobacco Research Control and Education at University of California San Francisco.

When you vape, "the ability of your upper airways to clear viruses is compromised," Glantz said.

Tobacco smokers are at especially high risk. In a study from China, where the first COVID-19 outbreak occurred, [smokers were 14 times more likely to develop severe complications](#) than non-smokers.

Even occasionally smoking marijuana can put you at greater risk.

"What happens to your airways when you smoke cannabis is that it causes some degree of inflammation, very similar to bronchitis, very similar to the type of inflammation that cigarette smoking can cause," said [pulmonologist Dr. Albert Rizzo](#), chief medical officer for the [American Lung Association](#).

"Now you have some airway inflammation, and you get an infection on top of it. So yes, your chance of getting more complications is there."

Work/Life Family Treatment & Prevention

Family Transmission Treatment & Prevention Myths & Misinformation Schools/Education

Does this pandemic have anything to do with the 5G network?

No. [That's just a hoax](#) going around the internet.

"The theory that 5G might compromise the immune system and thus enable people to get sick from corona is based on nothing," said Eric van Rongen, chairman of the International Commission on Non-Ionizing Radiation Protection (ICNIRP).

Learn more about [how 5G really works and why this hoax makes no sense](#).

Myths & Misinformation

My ex and I have joint custody of our kids. Is it safe for them to go between two homes?

Ideally, you should limit your children's potential exposures to coronavirus and work out the safest plan possible with your ex.

The problem: Some state and county family courts might be closed, or open only for emergencies involving abuse or endangerment. So it might be difficult to formally modify pre-existing custody agreements.

But some states may be offering some flexibility during the pandemic. And there may be creative solutions, such as spending more time with one parent now in exchange for extra time with the other parent after the pandemic ends.

Family Work/Life Travel

How long does coronavirus stay "alive" on surfaces?

Up to three days, depending on the surface. According to a study funded by the US National Institutes of Health:

- The novel coronavirus is viable up to 72 hours after being placed on stainless steel and plastic.
- It was viable up to four hours after being placed on copper, and up to 24 hours after being put on cardboard.
- In aerosols, it was viable for three hours.

Transmission

Will a pneumonia or flu vaccine help protect against coronavirus?

Some cases of coronavirus do lead to pneumonia. But the pneumonia vaccine won't help.

"Vaccines against pneumonia, such as pneumococcal vaccine and Haemophilus influenza type B (Hib) vaccine, only help protect people from these specific bacterial infections," according to Harvard Medical School.

"They do not protect against any coronavirus pneumonia."

Transmission Myths & Misinformation Treatment & Prevention Vaccine

Why is it so difficult to make a drug to cure coronavirus?

An antiviral drug must be able to target the specific part of a virus' life cycle that is necessary for it to reproduce, according to Harvard Medical School.

"In addition, an antiviral drug must be able to kill a virus without killing the human cell it occupies. And viruses are highly adaptive."

Treatment & Prevention

Why have medical workers gotten sick with or died from coronavirus if they're wearing protective gear? Does the viral load matter?

Many health care workers haven't had enough protective gear to handle the growing influx of coronavirus patients.

Some have resorted to using plastic report covers as masks. The CDC said medical providers might have to use expired masks or reuse them between multiple patients.

But it's not just subpar protective gear that puts medical workers at risk. It's also the amount of virus they're exposed to.

"The viral load – the amount of virus – does determine the severity of your illness," emergency medicine physician Dr. Leana Wen said. "So that could happen in the case of health care workers who are exposed to a lot more COVID-19 as a result of their work – that they get more severely ill."

Transmission

How many people with coronavirus don't have symptoms? Are they still contagious?

In one study, about 4 in 5 people with confirmed coronavirus in China were likely infected by people who didn't know they had it, according to research published in the journal "Science" last year.

"These findings explain the rapid geographic spread of (coronavirus) and indicate containment of this virus will be particularly challenging," researchers wrote.

In March 2020, the CDC said almost half of the 712 people with coronavirus who were on the Diamond Princess cruise ship didn't have any symptoms when they tested positive.

Other studies suggest 25% to 50% of coronavirus carriers don't have symptoms.

In the US, "I think it could be as many as 1 in 3 walking around asymptomatic," said New Jersey primary care physician Dr. Alex Salerno.

"We have tested some patients that have known exposure to COVID (coronavirus disease). They did not have temperature. Their pulse/(oxygen) was OK."

Salerno said more testing of people without symptoms is essential.

When asymptomatic carriers test positive, "we isolate them, and we separate them from the people who are not positive," Salerno said. If more asymptomatic people got tested, "we could get people back to work safely."

Transmission Myths & Misinformation Work/Life

If there's no cure, why go to the hospital unless you have a breathing problem?

Most coronavirus patients don't need to be hospitalized. "The vast majority of people – about 80% – will do well without any specific intervention," said Dr. Anthony Fauci, director of the National Institute of Allergy and Infectious Diseases.

Those patients should get plenty of rest, hydrate frequently and take fever-reducing medication.

“The current guidance – and this may change – is that if you have symptoms that are similar to the cold and the flu and these are mild symptoms to moderate symptoms, stay at home and try to manage them,” said [Dr. Patrice Harris, president of the American Medical Association](#).

But about 20% of coronavirus patients get advanced disease. “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 [CDC](#) says.

The CDC also says you should [get immediate help if you have](#):

- Trouble breathing
- Persistent pain or pressure in the chest
- Sudden confusion
- Bluish lips or face

“This list is not all inclusive,” the CDC says. “Please consult your medical provider for any other symptoms that are severe or concerning.”

Treatment & Prevention Family

How do I safely take care of someone who’s sick?

It may be difficult to know whether your loved one has coronavirus or another illness. So it’s critical to play it safe and not infect yourself and, in turn, others. The CDC suggests:

- Giving the sick person their own room to stay in, if possible. Keep the door closed.
- Having only one person serve as the caretaker.
- Asking the sick person to wear a face mask, if it doesn’t cause breathing problems. It’s a good idea for the caretaker to also wear a secure face mask.

Transmission Family

What are the symptoms?

Fatigue, fever, dry cough, difficulty breathing and the loss of taste or smell are some of the symptoms of COVID-19.

Symptoms can appear anywhere from 2 days to 2 weeks after exposure, [the CDC says](#). But some people get no symptoms at all and can infect others without knowing it.

The illness varies in its severity. And while many people can recover at home just fine, some people – including young, previously healthy adults – [are suffering long-term symptoms](#).

Transmission

What can I do if my loved one thinks he or she has coronavirus?

Don’t visit family members with suspected illness – connect with them virtually. If that person lives with you, limit contact with them and avoid using the same bathroom or bedroom if possible, [the CDC advises](#).

If the person been diagnosed, he or she might be able to recover at home in isolation. Separate yourself as much as possible from your infected family member and keep animals away, too. Continue to use separate restrooms and regularly disinfect them.

Stock up on groceries and household supplies for them while they can't travel outside and minimize trips to stores. Wash your hands frequently and avoid sharing personal items with the infected person.

If you think you're developing symptoms, stay home and call your physician.

Family

The stores are all out of disinfectant sprays and hand sanitizer. Can I make my own?

Yes, you can make both at home.

"Unexpired household bleach will be effective against coronaviruses when properly diluted" if you're trying to kill coronavirus on a non-porous surface, the US Centers for Disease Control and Prevention said.

The CDC's recipe calls for diluting 5 tablespoons (or 1/3 cup) of bleach per gallon of water, or 4 teaspoons of bleach per quart of water.

You can also make your own hand sanitizer. The Nebraska Medical Center – famous for its biocontainment unit and treatment of Ebola patients – offers this recipe:

What you'll need:

- 2/3 cup 91% isopropyl alcohol (rubbing alcohol)
- 1/3 cup aloe vera gel
- Mixing bowl
- Spoon or something for whisking
- Small container, such as a 3 oz. travel bottle
- Optional: essential oil to give your hand sanitizer a fragrance

Directions:

In a mixing bowl, stir isopropyl alcohol and aloe vera gel together until well blended.

Add 8-10 drops of scented essential oil (optional, but nice). Stir.

Pour the homemade hand sanitizer into an empty container and seal.

Write "hand sanitizer" on a piece of masking tape and attach to the bottle.

Work/Life Treatment & Prevention

Can I be fired if I stay home sick?

An employee can be fired if they don't show up to work and don't have sick leave that would cover the absence, says Krista Slosburg, an employment attorney at Stokes Lawrence in Seattle.

But there are exceptions. Employers who make workers with COVID-19 come in may be violating Occupational Safety and Health Administration [OSHA] regulations, said Donna Ballman, who heads an employee advocacy law firm in Florida.

Work/Life

What happens when workers don't get paid sick leave?

If you work in a city or state that requires sick leave and you use it, you can't be terminated or disciplined.

But there is no federal mandate that requires companies to offer paid sick leave, and almost a quarter of all US workers don't get it, according to 2019 government data. Some state and local governments have passed laws that require companies to offer paid sick leave.

The Family and Medical Leave Act (FMLA) can sometimes protect a worker's job in the event they get sick, but it won't guarantee they get paid while they're out.

Employee advocates urge businesses to consider the special circumstances of the COVID-19, and some already have

Work/Life

Can managers send a sick worker home?

Yes, managers can.

The Society for Human Resource Management recommends companies "actively encourage sick employees to stay home, send symptomatic employees home until they are able to return to work safely, and require employees returning from high-risk areas to telework during the incubation period (of 14 days)."

If a manager feels an employee's illness poses a direct threat to colleagues' safety, the manager may be able to insist the employee be evaluated by a doctor, said Alka Ramchandani-Raj, an attorney specializing in workplace safety.

Work/Life

If traveling on a plane, how do I stay safe?

Since COVID-19 is a respiratory disease, many airlines require passengers to wear face masks during the flight, except for while eating or drinking.

Health experts suggest eating, drinking and using the restroom *before* getting on the plane, to eliminate the need to take off your mask or go into a cramped lavatory on board.

And always be mindful of where your hands have been, travel medicine specialist Dr. Richard Dawood said.

Airport handrails, door handles and airplane lavatory levers are notoriously dirty.

"It is OK to touch these things as long as you then wash or sanitize your hands before contaminating your face, touching or handling food," Dawood said.

"Hand sanitizers are great. So are antiseptic hand wipes, which you can also use to wipe down armrests, remote controls at your seat and your tray table."

Travel Family Work/Life

What do I do if I think I'm sick?

Stay home. Call your doctor to talk about your symptoms and let them know you're coming for an appointment so they can prepare for your visit, [the CDC says](#).

Only a COVID-19 test can diagnose you with coronavirus, but if you suspect you have it, isolate yourself at home.

Many patients with coronavirus are able to recover at home. If you've been diagnosed and your illness is worsening, seek medical attention promptly. You may need to be monitored in a hospital.

Treatment & Prevention

Should I spray myself or my kids with disinfectant?

No. Those products work on surfaces but can be dangerous to your body.

There are some [chemical disinfectants](#), including bleach, 75% ethanol, peracetic acid and chloroform, that may kill the virus on surfaces.

But if the virus is already in your body, putting those substances on your skin or under your nose won't kill it, [the World Health Organization says](#). And those chemicals can harm you.

Treatment & Prevention Myths & Misinformation

I've heard that home remedies can cure or prevent the virus. Is that true?

There's [no evidence](#) from the outbreak that eating garlic, sipping water every 15 minutes or taking vitamin C will protect people from the new coronavirus. Same goes for using essential oils or colloidal silver.

Treatment & Prevention Myths & Misinformation

Why was the US been so far behind other countries with testing?

Experts said cuts in federal funding for public health and problems with early testing forced the US to play catch-up.

Problems with public health infrastructure: Two years ago, the [CDC stopped funding epidemic prevention activities](#) in 39 countries, including China. This happened because the Trump administration refused to allocate money to a program that started during the 2014 Ebola outbreak.

Former CDC director Dr. Tom Frieden warned that move "would [significantly increase the chance an epidemic will spread](#) without our knowledge and endanger lives in our country and around the world."

Problems with the testing: Malfunctions, shortages and delays in availability have all contributed to the slowdown.

In the first few weeks of the outbreak in the US, the CDC was the only facility in the country that could confirm test results — even though a World Health Organization test became available around the same time.

Some test kits that were sent around the country were flawed — a move that put the US behind about "four to five weeks," says Dr. Rob Davidson, executive director of the Committee to Protect Medicare.

Treatment & Prevention

If a coronavirus patient gets pneumonia, what antibiotics have proven to be effective?

No antibiotics are effective against COVID-19 because the disease is caused by a viral infection, not a bacterial infection.

“However, if you are hospitalized for the [coronavirus], you may receive antibiotics because bacterial co-infection is possible,” the [World Health Organization](#) says.

There is no known cure for the novel coronavirus.

Treatment & Prevention

Did Dean Koontz predict this outbreak in the book “The Eyes of Darkness” almost 40 years ago?

No. There are some interesting coincidences in the 1981 fiction novel, which says “a severe pneumonia-like illness will spread around the globe” around the year 2020. Modern editions of the book call the biological strain “Wuhan-400,” and the current coronavirus outbreak started in Wuhan, China.

But there are important differences between the book and reality. The original version of the book called the strain the “Gorki-400,” in reference to a Russian locality, before it was later changed to the “Wuhan-400.” In the book, the virus was man-made, while scientists believe the novel coronavirus started in animals and jumped to humans. And in the book, the virus had a 100% mortality rate. Early estimates of the mortality rate for this coronavirus outbreak range from 2-4%.

Myths & Misinformation

Can the heat from a hand dryer kill coronavirus?

Hand dryers can’t kill the virus, according to WHO. The organization also says that UV lamps shouldn’t be used to sterilize hands or other areas of the body because the radiation can irritate skin.

Drinking hot water or taking hot baths won’t kill it, either.

Myths & Misinformation

Can I get coronavirus from a package sent from China?

No. “The new coronavirus cannot be transmitted through goods manufactured in China or any country reporting COVID-19 cases,” the [World Health Organization](#) says.

“Even though the new coronavirus can stay on surfaces for a few hours or up to several days (depending on the type of surface), it is very unlikely that the virus will persist on a surface after being moved, travelled, and exposed to different conditions and temperatures,” WHO said.

Source: CNN