Wolters Kluwer

Patient education: COVID-19 overview (The Basics)

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What is COVID-19?

COVID-19 stands for "coronavirus disease 2019." It is caused by a virus called SARS-CoV-2. The virus first appeared in late 2019 and quickly spread around the world.

What are the symptoms of COVID-19?

Symptoms usually start 4 or 5 days after a person is infected with the virus. But in some people, it can take up to 2 weeks for symptoms to appear. Some people never show symptoms at all.

When symptoms do happen, they can include:

- Fever
- Cough
- Trouble breathing
- Feeling tired
- Shaking chills
- Muscle aches
- Headache
- Sore throat
- Runny or stuffy nose
- Problems with sense of smell or taste

Many people only have mild cold symptoms. Some people have digestive problems, like nausea or diarrhea. There have also been some reports of rashes or other skin symptoms.

For most people, symptoms get better within a few days to weeks. But a small number of people get very sick and stop being able to breathe on their own. In severe cases, their organs stop working, which can lead to death.

Some people with COVID-19 continue to have some symptoms for weeks or months. This seems to be more likely in people who are sick enough to need to stay in the hospital. But this can also happen in people who did not get very sick. Doctors are still learning about the long-term effects of COVID-19.

While children can get COVID-19, they are less likely than adults to have severe symptoms. More information about COVID-19 and children is available separately. (See "Patient education: COVID-19 and children (The Basics)".)

Am I at risk for getting seriously ill?

It depends on your age, your health, and whether you have been vaccinated. In some people, COVID-19 leads to serious problems like pneumonia, which can cause a person to not get enough oxygen. It can also lead to heart problems, or even death. This risk gets higher as people get older. It is also higher in people who have other health problems like serious heart disease, chronic kidney disease, type 2 diabetes, chronic obstructive pulmonary disease ("COPD"), sickle cell disease, or obesity. People who have a weak immune system for other reasons (for example, HIV infection or certain medicines), asthma, cystic fibrosis, type 1 diabetes, or high blood pressure might also be at higher risk for serious problems.

Getting vaccinated makes people much less likely to get seriously ill with COVID-19.

How is COVID-19 spread?

The virus that causes COVID-19 mainly spreads from person to person. This usually happens when an infected person coughs, sneezes, or talks near other people. The virus is passed through tiny particles from the infected person's lungs and airway. These particles can easily travel through the air to other people who are nearby. In some cases, like in indoor spaces where the same air keeps being blown around, virus in the particles might be able to spread to other people who are farther away.

A person can be infected, and spread the virus to others, even without having any symptoms.

What are variants?

Viruses constantly change or "mutate." When this happens, a new strain or "variant" can form. Most of the time, new variants do not change the way a virus works. But when a variant has changes in important parts of the virus, it can act differently.

Experts have discovered several new variants of the virus that causes COVID-19. Some variants seem to spread more easily than the original virus. Certain variants might also make people sicker than others.

In the US, most cases of COVID-19 are from the "Omicron" variants.

Is there a test for the virus that causes COVID-19?

Yes. If you think that you might have COVID-19, get tested. This involves taking a swab from inside your nose or mouth. Some tests use a saliva sample. These tests can help you or your doctor figure out if you have COVID-19 or another illness.

There are 2 types of tests used to diagnose COVID-19:

- **Molecular tests** – These look for the genetic material from the virus. They are also called "nucleic acid tests" or "PCR tests." You can get a molecular test at a doctor's office, clinic, or pharmacy. Depending on the lab, it can take up to several days to get test results back.

  Molecular tests are the best way to know if a person has COVID-19. That's because they can detect even very low levels of virus in the body.

- **Antigen tests** – These look for proteins from the virus. They can give results faster than most molecular tests. You can buy antigen tests to use at home. You can also get an antigen test at a doctor's office, clinic, or pharmacy.

Antigen tests are not as accurate as molecular tests. They are more likely to give "false-negative" results. This is when the test comes back negative even though the person actually is infected. If a person has symptoms or knows they were exposed to the virus, experts recommend "repeat testing." This means getting tested again a few days later if an antigen test is negative.

There is also a blood test that can show if a person has had COVID-19 **in the past**. This is called an "antibody" test. Antibody tests are generally not used on their own to diagnose COVID-19 or

make decisions about care. But public health experts can use them to learn how many people in a certain area were infected without knowing it.

Can COVID-19 be prevented?

The best way to prevent COVID-19 is to **get vaccinated**. In the US, people age 6 months and older can get a vaccine.

More information about COVID-19 vaccines is available separately. (See "Patient education: COVID-19 vaccines (The Basics)".)

In addition to vaccination, there are other things you can do to help protect yourself and others. These include wearing a face mask in some situations (figure 1), washing your hands often (table 1), and staying home and getting tested when you are sick. You can also make sure that there is good ventilation (air flow) in your home, and in other places you visit.

What if I feel fine but think I was exposed?

If you were in close contact with someone with COVID-19, wear a mask for **10 days** when around others indoors. During this time:

- If you start having symptoms, you should get tested, whether or not you have been vaccinated.

- If you do not have symptoms, you should still get tested at least **5 days** after you were exposed.

If you test **negative** with an antigen test, experts recommend getting tested again with an antigen test 2 days later. If that test is also negative, get a third antigen test 2 days after that, for a total of 3 tests.

What should I do if I have symptoms or test positive?

If you have a fever, cough, cold symptoms, or other symptoms of COVID-19, get tested. You can use the flowchart to figure out when to test and what to do based on the results (algorithm 1).

If you **test positive**:

- "Self-isolate" for at least 5 days, even if you feel well. Self-isolation means staying apart from other people, even the people you live with. The 5 days should start the day **after** you first noticed symptoms or got a positive test result. If you have a weak immune system or if you still have a fever, you might need to self-isolate for longer than 5 days.

- After self-isolating for 5 days, wear a mask around all other people for at least 5 more days. Some people use antigen tests to decide how long to keep wearing the mask. If you do this, you can stop wearing a mask once you test negative on 2 antigen tests done at least 2 days apart.

- If your symptoms are severe, or if you are at risk for severe illness, **call** your doctor or nurse. They can tell you if you need to be seen. Depending on your situation, they might suggest treatment.

If you **have symptoms but test negative** with an antigen test:

- Get at least 1 more test to confirm that you do not have virus in your body. This can be another antigen test at least 2 days after the first test, or a molecular test.

- Wear a mask around other people until you get a second negative test.

If you think that you are having a medical emergency, **call for an ambulance** (in the US and Canada, **call 9-1-1**).

If I have COVID-19, do I need treatment?

It depends on your age, health, and symptoms. Most people with mild COVID-19 can rest at home until they get better. "Mild" means that you might have symptoms like fever, cough, or other cold symptoms, but you do not have trouble breathing. It often takes about 2 weeks for symptoms to improve, but it's not the same for everyone. While you are recovering, try to rest and drink plenty of fluids. You can also use over-the-counter medicines to help relieve symptoms like fever and cough.

Doctors **do** recommend treatment for people who are at risk for getting seriously ill, even if their symptoms are mild. This includes:

- Adults 65 years or older

- Adults who have certain health conditions – Examples include a weaker than normal immune system, diabetes, serious heart or lung disease, chronic kidney disease, and

obesity.

- Adults 50 years or older who have not been vaccinated

If you are not sure if you fit into any of these categories, ask your doctor or nurse about treatment. They can talk to you about the risks and benefits.

What is the best treatment for COVID-19?

For people who get treatment for mild COVID-19, the medicine most often used is an "antiviral" called nirmatrelvir-ritonavir (brand name: Paxlovid). This can lower your risk of getting sicker.

If your doctor suggests this treatment, it's important to know:

- Paxlovid comes as several pills that you take for 5 days.

- Treatment should be started within 5 days after symptoms begin. This is why it's important to test early so you know if you have COVID-19 as soon as possible.

- Before prescribing Paxlovid, your doctor should review any other medicines and supplements that you take. In some cases, they might want to change or stop your other medicines while you take Paxlovid.

For people who cannot take Paxlovid, it might be possible to get a different antiviral medicine instead. One option, remdesivir, is given by IV. There is also another antiviral pill, called molnupiravir, but this might not work as well as the other medicines. Some experts do not recommend molnupiravir.

Convalescent plasma might be another option, but it is not available everywhere. This treatment involves getting plasma that was donated from a person who has had COVID-19 in the past. Plasma is the liquid part of blood, and is given by IV. The donated plasma contains "antibodies" that can help fight the virus.

What is "viral rebound"?

This is when a person starts testing negative after having COVID-19, but then tests positive again. Sometimes, this can happen to people who are treated with Paxlovid. Symptoms might also come back, though they are almost always mild.

If you get Paxlovid, it is important to be aware that this could happen. If so, you might need to self-isolate again. But if you are at risk for serious illness, the benefits of treatment are still greater than the risk of viral rebound.

How is severe COVID-19 treated?

If you have more severe illness with trouble breathing and low oxygen levels, or if you have other health problems, you might need to stay in the hospital. Some people need to be in the intensive care unit (also called the "ICU"). While you are there, you will most likely be in a special isolation room. Only medical staff will be allowed in the room, and they will have to wear special gowns, gloves, masks, and eye protection.

The doctors and nurses can monitor and support your breathing and other body functions and make you as comfortable as possible. In the hospital, treatment might include:

- Extra oxygen
- A breathing tube and machine to help you breathe (ventilator)
- Antiviral medicines, steroids, or other medicines to treat the infection
- Medicines to help prevent blood clots
- Medicines to help with symptoms

What should I do if someone in my home has COVID-19?

If someone in your home has COVID-19, there are additional things you can do to protect yourself and others:

- Keep the sick person away from others – The sick person should stay in a separate room, and use a different bathroom if possible. They should also eat in their own room.

- Improve ventilation in the sick person's room – Open windows if possible to keep air flowing.

- Have them wear a mask – The sick person should wear a mask when they are in the same room as other people. If they can't wear a mask, you can help protect yourself by covering your face when you are in the room with them.

- Wash hands – Wash your hands with soap and water often.

- Clean often – Regularly clean things that are touched a lot. This includes counters, bedside tables, doorknobs, computers, phones, and bathroom surfaces.

What if I am pregnant?

More information about COVID-19 and pregnancy is available separately. (See "Patient education: COVID-19 and pregnancy (The Basics)".)

If you are pregnant and you have questions about COVID-19, talk to your doctor, nurse, or midwife. They can help.

How can I take care of my mental health?

The COVID-19 pandemic affected everyone in different ways. Many people have had to deal with being ill or caring for others who are sick. Others have lost family members or friends to COVID-19. And most people have had to deal with their lives changing in some way, sometimes permanently.

You can take care of yourself by trying to:

- Get regular exercise, and eat healthy foods.
- Get plenty of sleep.
- Find healthy ways to handle stress, like hobbies you enjoy.
- Connect with friends and family members.

If you are struggling to cope, **help is available**. Talk to your doctor or nurse if you feel very sad or anxious. They can recommend things that can help, or connect you with mental health resources.

Where can I go to learn more?

You can find more information about COVID-19 at the following websites:

- US Centers for Disease Control and Prevention ("CDC"):   www.cdc.gov/COVID19

- World Health Organization ("WHO"):   www.who.int/emergencies/diseases/novel-coronavirus-2019

More on this topic

Patient education: COVID-19 vaccines (The Basics)

Patient education: COVID-19 and children (The Basics)

Patient education: COVID-19 and pregnancy (The Basics)

Patient education: Long COVID (The Basics)

Patient education: Pneumonia in adults (The Basics)

Patient education: What are clinical trials? (The Basics)

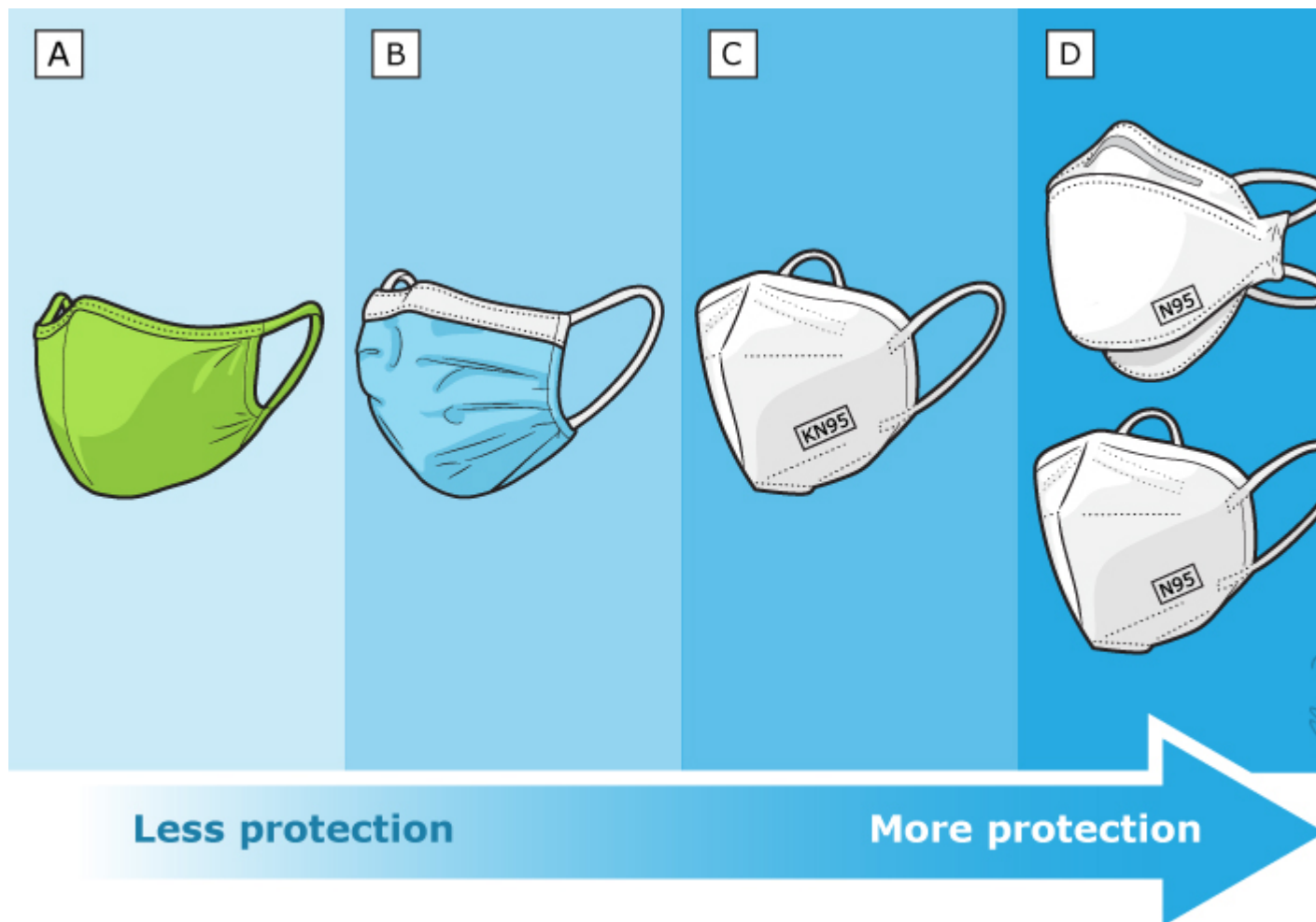All topics are updated as new evidence becomes available and our peer review process is complete.

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GRAPHICS

Choosing a face mask

There are different types of face masks. These include cloth masks with several layers (A), disposable surgical masks (B), and "respirators" such as KN95 and N95 masks (C, D). Experts recommend choosing the most protective mask that fits you well and that you will be able to wear consistently. Whatever mask you choose, make sure it covers both your mouth and nose. It should also fit well with no gaps between the mask and your skin.
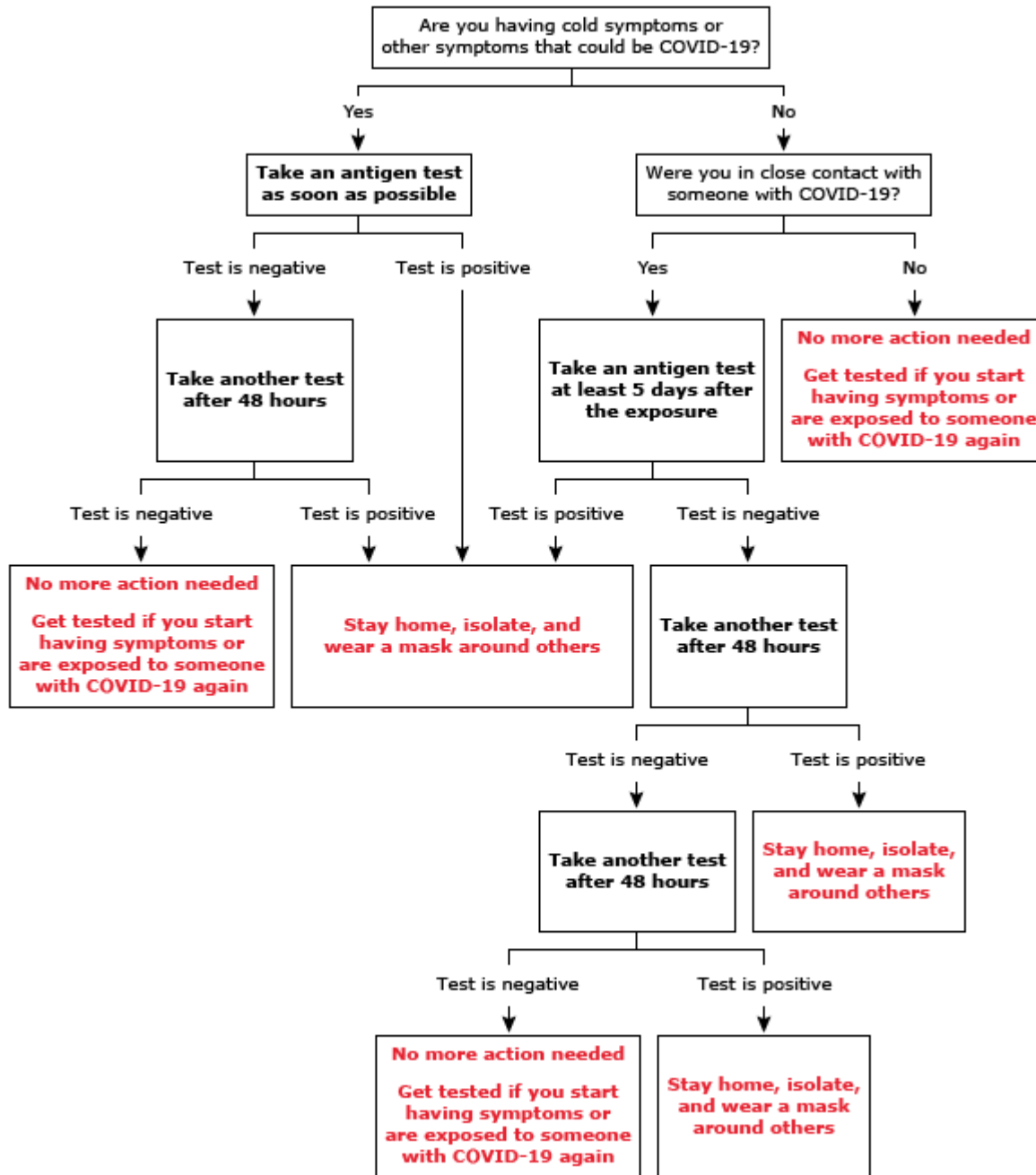
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Handwashing to prevent spreading illness

▪ Wet your hands and put soap on them.
▪ Rub your hands together for at least 20 seconds. Make sure to clean your wrists, fingernails, and in between your fingers.
▪ Rinse your hands.
▪ Dry your hands with a paper towel that you can throw away.

If you are not near a sink, you can use a hand sanitizer to clean your hands. The gels with at least 60% alcohol work the best. But it is better to wash with soap and water if you can.

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When to take a COVID-19 test

COVID-19: coronavirus disease 2019.

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