



COVID-19 UPDATE

NOVEMBER 2020



About this Update

This Update is for SARS-CoV-2, a new virus that causes an illness called COVID-19.

It was identified at the beginning of 2020.

We are constantly learning about it and information about it changes often, so it's important to check trusted sources regularly.

In this Guidance

We look at what the world has learned about:

- The pandemic
- Transmission
- Prevention
- What COVID-19 does to people
- Care
- Treatment
- Vaccines

The Pandemic

As of Wednesday 18 November, 2020:

55,784,525 people have been infected

1,341,360 people have lost their lives

SOURCE: <https://coronavirus.jhu.edu/map.html>

Transmission

Transmission: It's about what you inhale

Coronavirus is airborne.

It spreads when a person who has it coughs, sneezes, sings, talks or exhales. They release virus-laden droplets and aerosols (much smaller particles that stay in the air much longer than heavier droplets).

People get infected when they inhale these droplets and aerosols, or if they land inside the nose, eyes or mouth.

Sun and wind are your friends—the sun can inactivate the virus and the wind can blow it away.

Transmission

It's possible, but not likely, that people could become infected if they touch a surface that has droplets/aerosols and then touch their eyes, nose or mouth, allowing them to enter the body.

It is still important to wash your hands for at least 20 seconds with soap and water or sanitizer with 70% alcohol—and not to touch your face (unless you have just washed your hands).

Prevention

Prevention

Wear a mask that covers your mouth and nose, especially indoors.

The outdoors is your friend. Avoid crowded, poorly ventilated indoor spaces.

‘Social distancing’—stay 2 meters (6 feet) away from other people.

Stay away from sick people.

Get tested, and isolate if you find out that you have been in contact with someone who has COVID-19 or if you feel ill.

Wash your hands thoroughly and often, and don’t touch your face unless you have just washed your hands.

What COVID-19 does to people

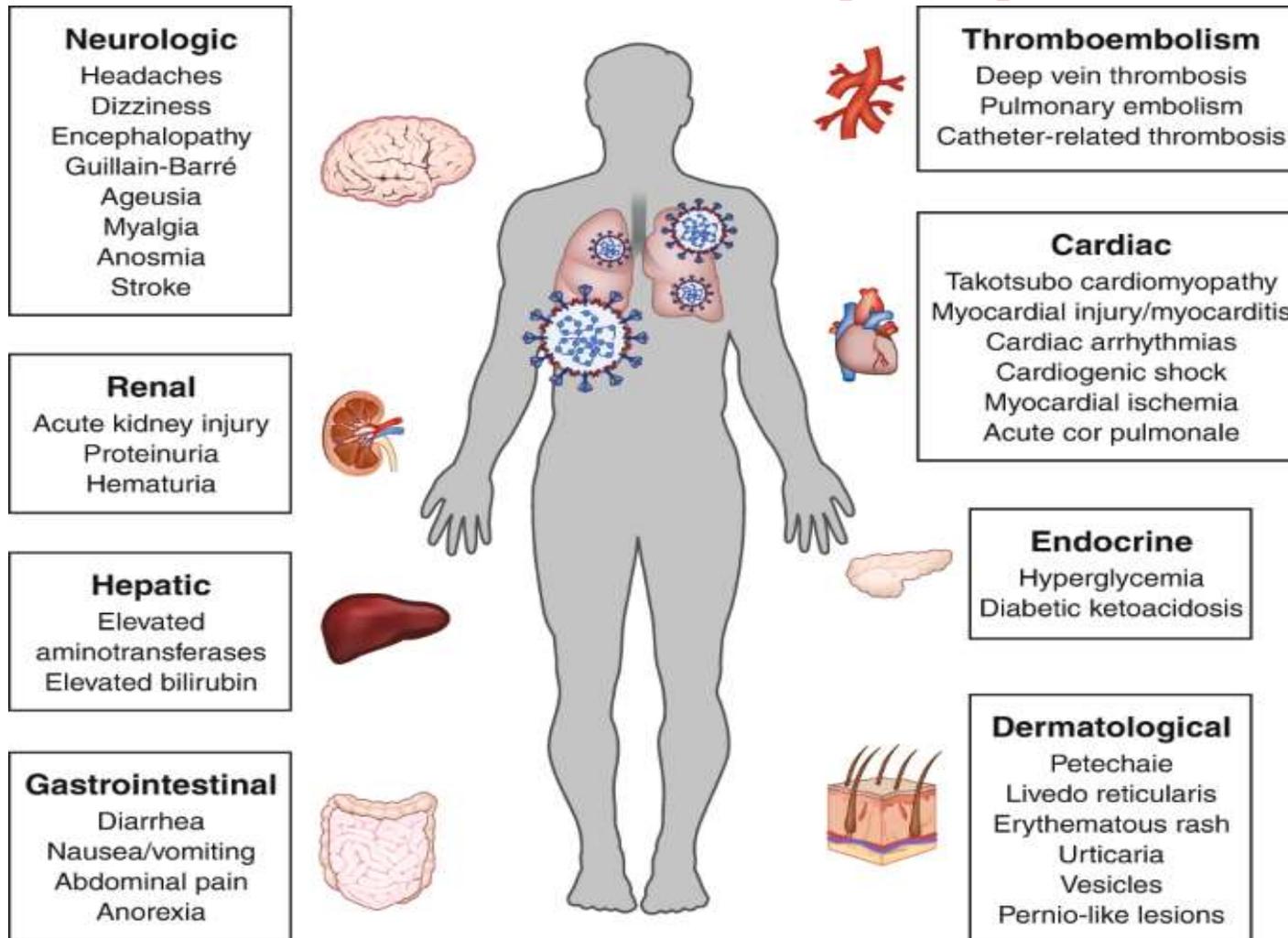
What COVID-19 does to people

Some people (~45%) get COVID-19, but never have any symptoms. This means we have to assume that anyone could have it.

Most people will fall ill within 4-5 days, but it can take up to 2 weeks for symptoms.

The most common symptoms are: fever, chills, dry cough, shortness of breath or difficulty breathing, appetite loss, nausea or vomiting, diarrhea, fatigue, muscle and body aches, headaches, loss of the sense of smell and taste, sore throat, stuffy or runny nose, conjunctivitis, skin rash and discolored fingers and toes.

What COVID-19 does to people



What COVID-19 does to people

“COVID toes”



What COVID-19 does to people

80% of people with COVID-19 do not become seriously ill.

15% become seriously ill, and 5% become critically ill.

The fatality rate differs, by age, pre-existing conditions- and by country. For example, in South Africa, people with diabetes and/or kidney disease were up to 13 times more likely to die from COVID-19.

It is not clear whether people living with HIV are more likely to become seriously ill and die from COVID - this varies by country.

People who have TB are more likely to become seriously ill and die from COVID-19.

What COVID-19 does to people

The virus itself can make people very ill.

COVID-19 can have an impact on gastrointestinal, cardiac, renal, neurological, and vascular systems. It can damage the heart, lungs, kidneys, liver and cause strokes.

The immune response to the virus can also make people very ill COVID-19 can trigger 'cytokine storm', when the immune system attacks tissues and cells (although we need to learn much more about this).

What COVID-19 does to people

Lingering COVID

Some people are ‘long-haulers’—they have a range of symptoms that persist for months, including shortness of breath, chest tightness, mild to severe fatigue, chills or sweats, body aches, dry cough, fever (98.8°-100°), mild headache, brain fog/concentration challenges and gastrointestinal symptoms. This is happening to people of all ages, including those who are fit, young and healthy.

A US study reported that 35% did not return to health for weeks.

What COVID-19 does to people

COVID Re-infection

Does the immune system protect people who have had COVID-19?

Can you get re-infected with SARS-CoV-2?

Care

Care

People with mild COVID-19 usually recover at home; rest, fluids and fever reducers are recommended.

People who are elderly and/or have a pre-existing condition should check with a healthcare provider, and be monitored by family, friends or healthcare workers.

Care

People with moderate to severe COVID-19, especially those with pre-existing conditions, may need to be hospitalized, where they may be given oxygen and other medicines to make them more comfortable.

Treatment

Treatment

Thousands of clinical trials are looking at treatments for COVID-19.

So far, one life-saving treatment has been identified: **dexamethasone**.

It is a steroid, available as an affordable generic.

Dexamethasone improves survival in people who are very ill—on a ventilator or oxygen—but it does not help people with milder COVID-19.

Treatment—what does not work

The WHO Solidarity Trial, done in nearly 12,000 people hospitalized with COVID-19 across 30 countries, compared 4 treatments (**remdesivir, hydroxychloroquine, lopinavir/ritonavir and interferon**) to the standard of care.

None of them made a significant difference in:

- how long people stayed in the hospital
- whether or not they went on a ventilator
- survival

Treatment—what might work

- Small studies showed a benefit to daclatasvir/sofosbuvir.
- Larger trials that will help to confirm or rule out effectiveness, are ongoing.
- Favipiravir may be promising.
- Many more candidates are in trials but they must be randomized and controlled, and large enough so that the results are clear.

Vaccines

Vaccines

Dozens of vaccines are in development, using different approaches to train the immune system to recognize and fight off SARS-CoV-2.

Most of them seem to produce immune responses against the virus—but we need to learn if these responses will protect people from becoming infected, or at least from falling ill with COVID-19, which takes some time.

Vaccine Update

On Monday 10 November, Pfizer released an interim analysis, reporting that their coronavirus vaccine candidate was over 90% effective. What does this mean?

It is proof-of-concept, which means other vaccines that target the spike protein may also be effective.

It's great news, but this information may change as we get results from more people in the trial.

Even in the best-case scenario, people will need to rely on masks, social distancing, avoiding crowds and handwashing for months to come.

Vaccine Update

It's a first look at results from over 43,000 people.

Half of them got the vaccine. The rest got placebo. Only the independent reviewers know who is getting what.

94 trial participants fell ill with COVID-19. **When 164 people fall ill, results will be analyzed, and the vaccine may be approved.**

Vaccine Questions

We still need to know:

1. Of the 9 or so people who got the vaccine and fell ill with COVID-19, how serious was their illness?
2. How well is this vaccine likely to work in older people and those with weaker immune systems?
3. Will the vaccine be safe for, and work in children?
4. How long will the vaccine protect people from COVID-19?
5. How safe is it in the long-term, and in different groups of people ?
6. Will it prevent asymptomatic infections?

Vaccine Hurdles

Rolling out this vaccine globally will be challenging for many reasons, including insufficient supply and inequitable distribution, pricing and if/how access will be enhanced through technology transfer or other means.

It needs two doses, spaced three weeks apart.

It needs an ultra cold-chain: the vaccine must be shipped and stored at -94° Fahrenheit/ -70° Celsius. (The temperature of an average refrigerator is 2° Celsius to 8° Celsius.)

More Vaccine News

On 16 November, Moderna released an interim analysis, reporting that their coronavirus vaccine candidate, which uses the same approach as the Pfizer vaccine, was 94% effective in their phase III trial.

Of the 30,000 trial volunteers (37% of whom were racial and ethnic minorities) 100 people became infected with coronavirus - 5 people in the vaccine group - none of whom became seriously ill - and 95 in the placebo group, 11 of whom became very ill.

More Vaccine News

The vaccine appeared to be equally effective, regardless of age, race, and ethnicity. Side effects included muscle aches, fatigue, and headache. Also, this vaccine does not require ultra-cool temperature storage. The company is collecting more information, and plans to file with US FDA and other global regulators in the coming weeks.

More Vaccine News

It is important to note that these results—and the ones from Pfizer—came from a press release issued by each company, not from a peer-reviewed scientific journal, which will tell us much more about how well the vaccine did in different groups as well as give a better picture of side effects.

AstraZeneca's Coronavirus Vaccine

Co-developed with Oxford University; being studied in Brazil, South Africa and the UK.

Can be stored and shipped at normal refrigeration temperatures (2 - 8 degrees Celsius or 36 -46 degrees Fahrenheit) for at least six months.

AstraZeneca's Vaccine Announcement

Pricing estimated at under \$4 per dose – and will remain at this price in low- and middle-income countries.

It is easier to aim to produce than the Pfizer and Moderna vaccine candidates – Astra Zeneca estimates that it could have around 3 billion doses in 2021 from both in-house and partner manufacturing.

AstraZeneca's Vaccine Announcement

On 23 November 2020, AstraZeneca issued a press release, announcing that its experimental coronavirus vaccine had an overall effectiveness of 70% in a pair of phase III trials.

- The vaccine was 62% effective in 8,895 people who got two full doses, one month apart.
- The vaccine was 90% effective in 2,741 people who got a half-dose, followed by a full dose one month later.
- There were 131 cases of COVID-19 during the trial.

AstraZeneca's Vaccine Announcement

BUT...

- The company did not disclose how many infections occurred in the vaccine group versus the placebo group.
- It has not mentioned the vaccine's effectiveness in important groups, such as older people, people with co-existing conditions and people of color.
- It combined data from two different trials.

AstraZeneca's Vaccine Announcement

BUT...

- The half-dose strategy arose from a manufacturing error although regulators approved it.
- The company does not know why the half-dose strategy was more effective.
- Experts are calling for more data, increased transparency and a larger sample size.



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