

COVID-19 Essentials for Oral health professionals 2023

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Presenter & Acknowledgements

- Mark Schweizer, DDS, MPH
- No financial relationships with commercial entities to disclose
- This slide set has been peer-reviewed to ensure that there are no conflicts of interest represented in the presentation



Polling Question 1

- Will you get the COVID-19 booster?
- YES
- NO

Polling Question 2

You are attending a small gathering which last for two hours. All attending wear a mask except then they are eating or drinking. All are maintaining social distancing.

Two days after the event you get a call that one of the attendees was diagnosed with COVID-19.

Is this a direct exposure?

Yes

No

If this is a direct exposure what is the correct quarantine period if your are fully vaccinated?

Current State of the COVID Pandemic

United States

At a Glance

Cases Total 101,094,670

Case Trends



Deaths Total 1,091,184

Death Trends



Current Hosp. 36,700

Admission Trends



15.4% of People 5+ with Updated Booster Dose



World-wide

All-time cases & deaths

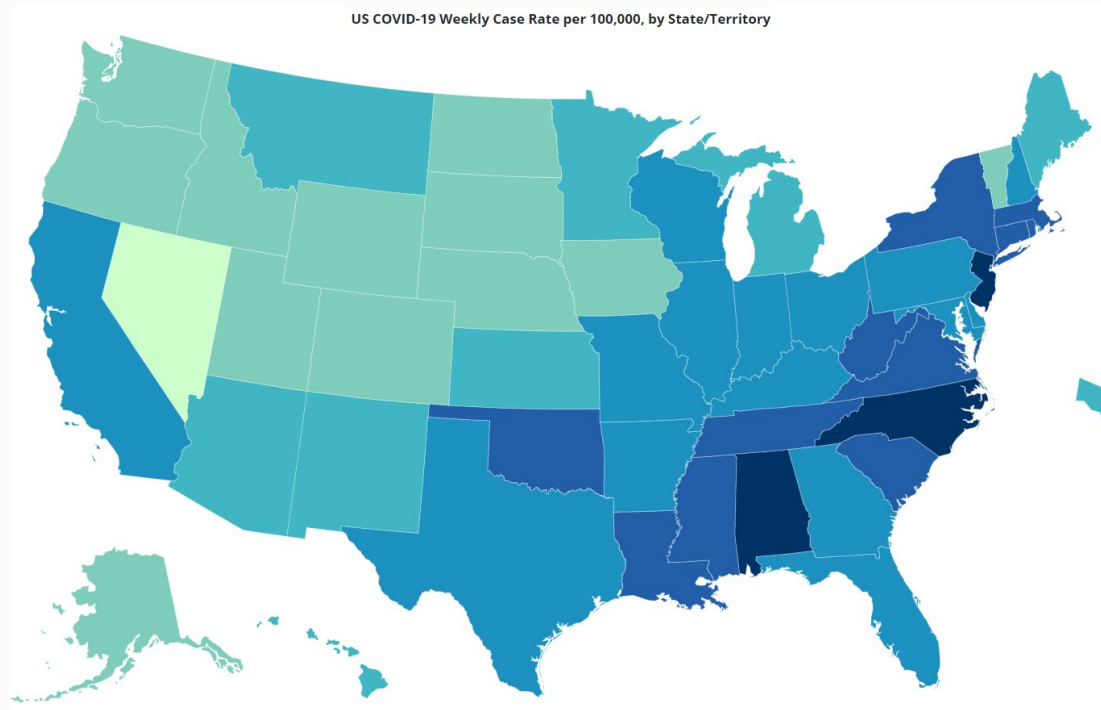
Total cases

665M

Total deaths

6.71M

Current State of the COVID Pandemic



Florida

Past Week:

Weekly Case Rate per 100K:

Total Cases per 100K:

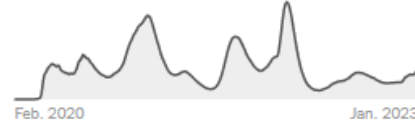
Death Rate

Current State of the COVID Pandemic

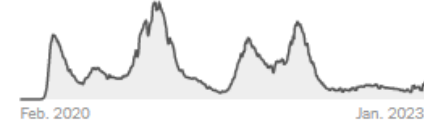
Test positivity rate



Hospitalized



Deaths



DAILY AVG. ON JAN. 10

PER 100,000

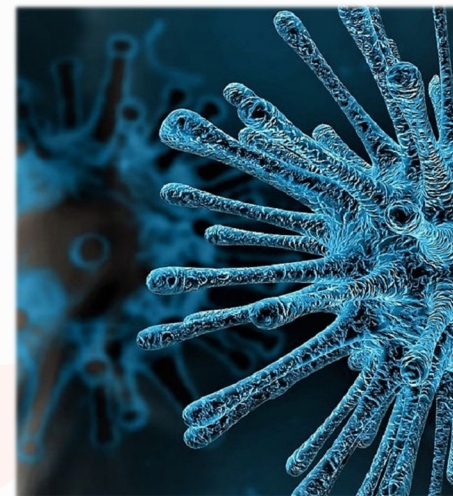
14-DAY CHANGE

Cases	63,982	19	-4%
Test positivity	15%	—	+10%
Hospitalized	46,677	14	+15%
In I.C.U.s	5,580	2	+13%
Deaths	580	<1	+50%

[About this data](#)

What is COVID-19?

- COVID-19, 'CO' stands for 'corona,' 'VI' for 'virus,' and 'D' for disease.
- A cluster of pneumonia of unknown origin was identified in Wuhan, China, in December 2019. On January 12, 2020, Chinese authorities shared the sequence of a novel coronavirus termed severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) isolated from some clustered cases.
- The first laboratory-confirmed case of COVID-19 in the United States was confirmed on January 20, 2020.
- Jan. 27, 2020: The National Microbiology Lab in Winnipeg confirms that a man in quarantine in Sunnybrook Hospital is Canada's first documented case of the new coronavirus.



Symptoms of Covid

COVID-19 affects different people in different ways. Infected people have had a wide range of symptoms reported – from mild symptoms to severe illness.

Symptoms may appear 2-14 days after exposure to the virus.

▪ COMMON

- **ASYMPTOMATIC**
- Fever or chills
- Cough
- Shortness of breath or difficulty breathing
- Fatigue
- Muscle or body aches
- Headache
- New loss of taste or smell
- Sore throat
- Congestion or runny nose

▪ LESS COMMON

- Nausea or vomiting
- Diarrhea

Recovery/death rates

- Most people (about 80%) recover from the disease without needing special treatment, and for the majority – especially for children and young adults – illness due to COVID-19 is generally minor. However, for some people it can cause serious illness.

Around 1 in every 5 people who are infected with COVID-19 develop difficulty in breathing and require hospital care. People who are aged over 60 years, and people who have underlying medical conditions such as diabetes, heart disease, respiratory disease or hypertension are among those who are at greater risk.

- Two new peer-reviewed studies are showing a sharp drop in mortality among hospitalized COVID-19 patients. The drop is seen in all groups, including older patients and those with underlying conditions, suggesting that physicians are getting better at helping patients survive their illness.
- The study, finds that mortality has dropped among hospitalized patients by 18 percentage points since the pandemic began. Patients in the study had a 25.6% chance of dying at the start of the pandemic; they now have a 7.6% chance.

Modes of transmission

Direct Contact Transmission

- Direct contact transmission may occur through direct contact with virus-contaminated objects or surfaces and infecting people through the mouth, nose, or eyes. Healthcare providers attending COVID-19 patients are especially at risk of being infected via this mode of disease transmission one reason there are numerous nosocomial infections.

Aerosol Transmission

- The aerosols from expired air coughs, and sneezes that contaminate the immediate environment are among media for virus spread. Aerosol transmission is not just from people with symptoms of the disease, even asymptomatic COVID-19-positive people can be the source of infection. In close environments, the virus-containing aerosol may persist in the air for long periods and at high concentrations, further increasing the rate of transmission. The virus remains viable for at least 3 h in aerosols and 48–72 h on stainless steel and plastic surfaces.

Modes of transmission

Droplet Transmission

- Respiratory air normally contains an abundance of droplets of sizes less than 5 μm in diameter. Coughing and sneezing cause increased expulsion of droplets from the oral cavity and respiratory tract. In COVID-19 patients these droplets contain a virus that if inhaled or ingested or landing on the mucous membranes will cause disease in people.

Fecal-oral transmission

- The role of feces in the transmission of COVID-19 is unclear. There have been suggestions that the gastrointestinal system is a critical route for the spread of this virus. It seems, that using immunofluorescent staining, the ACE2-positive cells are rarely detected in esophageal mucosa. This is probably of the predominance of esophageal squamous epithelial cells that express less ACE2 than glandular epithelial cells.

Modes of transmission

Transmission through organ transplantation and surgical operations

- The COVID-19 virus resides principally in the respiratory tract and its secretions. These pose risks to healthcare providers if these patients require surgery. This is particularly true in organ transplantation procedures. Recipients of organs, especially, because being placed in the immunocompromised state, which is necessary for the procedure, are at high risk of being infected with COVID-19

Vertical Transmission

- The COVID-19 pandemic puts pregnant women and fetuses at risk of being infected by the virus.

Viral load and shedding

The pathophysiological characteristics of COVID-19 have not been determined and there is much uncertainty regarding the mechanism of shedding and spread of the virus. Recent estimates suggested that COVID-19 has a median incubation period of 3 days (range: 0–24 days) with potential asymptomatic transmission. Epidemiological evidence showed the virus can be transmitted during the incubation period , especially during the late stages.

What are the best measures to prevent COVID transmission in the dental setting



COVID Testing

Diagnostic tests

- A **diagnostic test** can show if you have an active coronavirus infection and should take steps to quarantine or isolate yourself from others. Currently there are two types of diagnostic tests—**molecular** tests, such as RT-PCR tests, that detect the virus's genetic material, and **antigen** tests that detect specific proteins from the virus.

Antibody test

- An **antibody test** looks for antibodies that are made by your immune system in response to a threat, such as a specific virus. Antibodies can help fight infections. Antibodies can take several days or weeks to develop after you have an infection and may stay in your blood for several weeks or more after recovery. Because of this, antibody tests should not be used to diagnose COVID-19. At this time researchers do not know if the presence of antibodies means that you are immune to COVID-19 in the future.

COVID Testing

Diagnostic tests/Molecular Test

- Nasopharyngeal (the part of the throat behind the nose), nasal or throat swab (most tests)
- Saliva (a few tests)
- Same day (some locations) or up to a week (longer in some locations with many tests)
- This test is typically highly accurate and usually does not need to be repeated.
- Diagnoses active coronavirus infection

Diagnostic tests/Antigen/Rapid Test

- Nasal or nasopharyngeal swab (most tests)
- Some may be very fast (15 - 30 minutes), depending on the test
- Positive results are usually highly accurate, but false positives can happen, especially in areas where very few people have the virus. Negative results may need to be confirmed with a molecular test.
- Antigen tests are more likely to miss an active COVID-19 infection compared to molecular tests. Your health care provider may order a molecular test if your antigen test shows a negative result, but you have symptoms of COVID-19.

COVID Testing

Antibody Test

- Serological test, serology, blood test, serology test.
- Finger stick or blood draw.
- Same day (many locations) or 1-3 days
- Sometimes a second antibody test is needed for accurate results.
- Shows if you've been infected by coronavirus in the past.
- **Does not diagnose COVID-19 at the time of the test or show that you do not have COVID-19**

We do not know how long antibodies stay in the body following infection with the virus that causes COVID-19. We do not know if antibodies give you protective immunity against the virus, so results from a serology test should not be used to find out if you have immunity from the virus.

The FDA cautions patients against using the results from any serology test as an indication that they can stop taking steps to protect themselves and others, such as stopping social distancing or discontinuing wearing masks.

COVID Testing

No test is 100% accurate all of the time. Some things that may affect the test's accuracy include:

- You may have the virus, but the swab might not collect it from your nose or throat.
- The swab or mucus sample may be accidentally contaminated by the virus during collection or analysis.
- The nasal or throat swab may not be kept at the correct temperature before it can be analyzed.
- The chemicals used to extract the virus genetic material and make copies of the virus DNA may not work correctly

How to prevent the spread of COVID in the community

- Wash your hands often
- [Wash your hands](#) often with soap and water for at least 20 seconds especially after you have been in a public place, or after blowing your nose, coughing, or sneezing.
- It's especially important to wash:
 - Before eating or preparing food
 - Before touching your face
 - After using the restroom
 - After leaving a public place
 - After blowing your nose, coughing, or sneezing
 - After handling your mask
 - After changing a diaper
 - After caring for someone sick
 - After touching animals or pets
- If soap and water are not readily available, use a hand sanitizer that contains at least 60% alcohol. Cover all surfaces of your hands and rub them together until they feel dry.
- Avoid touching your eyes, nose, and mouth with unwashed hands.
- WEAR A MASK

How to prevent the spread of COVID in the community

- Monitor Your Health Daily
- **Be alert for symptoms.** Watch for fever, cough, shortness of breath, or [other symptoms](#) of **COVID-19**.
 - Especially important if you are [running essential errands](#), going into the office or workplace, and in settings where it may be difficult to keep a [physical distance of 6 feet](#).
- **Take your temperature** if symptoms develop.
 - Don't take your temperature within 30 minutes of exercising or after taking medications that could lower your temperature, like acetaminophen.
- Follow [CDC guidance](#) if symptoms develop.



How to prevent the spread of COVID in the community



- [Protect Your Health This Flu Season](#)
- It's likely that flu viruses and the virus that causes COVID-19 will **both** spread this fall and winter. Healthcare systems could be overwhelmed treating both patients with flu and patients with COVID-19. This means getting a flu vaccine during 2020-2021 is more important than ever.
- While getting a flu vaccine will not protect against COVID-19 there are many important benefits, such as:
 1. Flu vaccines have been shown to reduce the risk of flu illness, hospitalization, and death.
 2. Getting a flu vaccine can also save healthcare resources for the care of patients with COVID-19.

Patient Protocols

- Patients who are COVID positive should delay dental care except for emergencies
- If the patient was diagnosed with COVID-19 less than one month ago, it is recommended that patient have two negative COVID-19 tests greater than 24 hours apart, the second test be a PCR and symptom free for greater than 24 hours
- If greater than four weeks since diagnosis, no testing results are recommended.

Vaccines

COVID-19 vaccines help protect against severe illness, hospitalization and death. COVID-19 vaccines also help protect against infection. People who are vaccinated may still get COVID-19. When people who have been vaccinated get COVID-19, they are much less likely to experience severe [symptoms](#) than people who are unvaccinated.

When someone who is vaccinated with either a primary series or a primary series plus a booster dose gets infected with the virus that causes COVID-19, it is referred to as a “vaccine breakthrough infection.”

People who get vaccine breakthrough infections can [spread COVID-19 to other people](#). When a community reports more COVID-19 infections, that means more virus is circulating. When more virus is circulating, more breakthrough infections will occur even when vaccination rates are high. Even if you are vaccinated, if you live in a [county with a high COVID-19 Community Level](#), you and others in your community, whether vaccinated or not, should take more steps to protect yourself and others, like wearing a mask in indoor public places.

- There are four COVID-19 vaccines, which include primary series and boosters, recommended in the United States.
- Vaccine recommendations are based on age, the first vaccine received, and time since last dose.
- People who are [moderately or severely immunocompromised](#) have specific recommendations for COVID-19 vaccines, including boosters.
- Side effects after a COVID-19 vaccine are common, however [severe allergic reactions](#) after getting a COVID-19 vaccine are **rare**.
-

Vaccines

Pfizer-BioNTech and Moderna COVID-19 vaccines are [mRNA vaccines](#).

- [mRNA vaccines](#) use mRNA created in a laboratory to teach our cells how to make a protein—or even just a piece of a protein—that triggers an immune response inside our bodies. The mRNA from the vaccines is broken down within a few days after vaccination and discarded from the body.
- Two shots 3-4 weeks apart
- Two weeks after second shot to reach maximum effectiveness
- [Side effects](#) that happen within 7 days of getting vaccinated are common but are mostly mild. Sometimes they may affect a person's ability to do daily activities.
- Side effects throughout the body (such as fever, chills, tiredness, and headache) are more common after the second dose of a Pfizer-BioNTech, Moderna, or Novavax COVID-19 vaccine.
- [Severe allergic reactions](#) to vaccines are rare but can happen.
- There is a rare risk of [myocarditis and pericarditis](#) associated with mRNA COVID-19 vaccination, mostly among males ages 12–39 years. The rare risk may be further reduced with a longer interval between the first and second dose.

Vaccines

- **Johnson & Johnson's Janssen (J&J/Janssen) viral vector COVID-19 vaccine**
- [Viral vector vaccines](#) use a harmless, modified version of a different virus (a vector virus), and not the virus that causes COVID-19. The vector virus delivers important instructions to our cells on how to recognize and fight the virus that causes COVID-19.

One shot

Waning efficacy is an issue

Booster recommended

There is a potential cause-and-effect relationship between J&J/Janssen COVID-19 vaccine and a rare and serious adverse event. It is blood clots with low platelets ([thrombosis with thrombocytopenia syndrome, or TTS](#)). TTS occurs at a rate of about 4 cases per million Janssen's Johnson and Johnson doses and has resulted in deaths. Because of this risk, vaccination with COVID-19 vaccines other than J&J/Janssen vaccine is preferred.

Vaccines

Novavax protein subunit COVID-19 vaccine

[Protein subunit vaccines](#) contain pieces (proteins) of the virus that causes COVID-19. The virus pieces are the spike protein. The Novavax COVID-19 vaccine contains another ingredient called an adjuvant. It helps the immune system respond to that spike protein. After learning how to respond to the spike protein, the immune system will be able to respond quickly to the actual virus spike protein and protect you against COVID-19.

When to Consider Getting a Monovalent Novavax Booster

You may get a monovalent Novavax booster **if** you are unable or unwilling to receive a Pfizer or Moderna updated (bivalent) COVID-19 booster **and** you meet the following requirements:

- You are 18 years of age or older
- You completed a COVID-19 vaccine primary series at least 6 months ago
- You have **not** gotten any other booster dose
- **Cases of myocarditis and pericarditis have also been reported in people who received Novavax COVID-19 vaccine.**

Vaccines

- **None of the COVID-19 vaccines affect or interact with our DNA** and the following are **not** included in the vaccines:
 - **No preservatives** such as thimerosal or mercury or any other preservatives.
 - **No antibiotics** such as sulfonamide or any other antibiotics.
 - **No medicines or therapeutics** such as ivermectin or any other medications.
 - **No tissues** such as aborted fetal cells, gelatin, or any materials from any animal.
 - **No food proteins** such as eggs or egg products, gluten, peanuts, tree nuts, nut products, or any nut byproducts. (COVID-19 vaccines are not manufactured in facilities that produce food products).
 - **No metals** such as iron, nickel, cobalt, titanium, or rare earth alloys. They also do not have any manufactured products like microelectronics, electrodes, carbon nanotubes or other nanostructures, or nanowire semiconductors.
 - **No latex.** The vial stoppers used to hold the vaccine also do not contain latex.
- After the body produces an immune response, it discards all of the vaccine ingredients, just as it would discard any substance that cells no longer need. This process is a part of normal body functioning.
- **YOU CANNOT GET COVID FROM A COVID VACCINE**

Vaccines

Can I stop taking safety precautions after getting a COVID-19 vaccine?

Experts want to learn more about the protection that a COVID-19 vaccine provides and how long immunity lasts before changing safety recommendations. Factors such as how many people get vaccinated and how the virus is spreading in communities will also affect these recommendations.

In the meantime, the Centers for Disease Control and Prevention recommends following current precautions for avoiding infection with the COVID-19 virus.

Vaccines given outside of the United States:

Vaccines that are not part of the CDC vaccinations in the United States should either have a new series or receive an approved booster

Boosters

An additional primary shot of a COVID-19 vaccine is recommended for people who are vaccinated and might not have had a strong enough immune response. In contrast, a booster dose is recommended for people who are vaccinated and whose immune response weakened over time. Immune response fades naturally over time. It can also happen when the virus that causes COVID-19 changes so the immune system doesn't recognize it as well. Research suggests that getting a booster dose can decrease your risk of infection and severe illness with COVID-19.

The CDC recommends additional primary shots and booster doses of COVID-19 vaccines in specific instances:

- Additional primary shot.** For people age 5 and older, the CDC recommends a third dose of an mRNA COVID-19 vaccine for some people with weakened immune systems, such as those who have had an organ transplant. People with weakened immune systems might not develop enough immunity after vaccination with two doses of an mRNA COVID-19 vaccine or one dose of the Janssen/Johnson & Johnson COVID-19 vaccine. An additional shot using an mRNA COVID-19 vaccine might improve their protection against COVID-19.

The CDC now recommends that children ages 5 through 11 who have moderately or severely weakened immune systems should get an additional primary shot of the Pfizer-BioNTech COVID-19 vaccine. The additional primary shot should be given at least four weeks after a second dose of an mRNA COVID-19 vaccine or one dose of the Janssen/Johnson & Johnson COVID-19 vaccine. The additional shot should be the same brand as the other two mRNA COVID-19 vaccine doses that were given. If the brand given isn't known, either brand of mRNA COVID-19 vaccine can be given as a third dose.

Boosters

•**Booster dose.** These recommendations differ by age, what vaccines you have been given and the state of your immune system. But in general, people can get the booster shot at least two months after their last shot. People who recently had a positive COVID-19 test may think about waiting three months after their symptoms started to get the booster.

Kids ages 6 months through 5 years who got the Moderna COVID-19 vaccine can get an updated, called bivalent, Moderna COVID-19 vaccine booster. The booster is based on the original virus strain and two omicron strains.

Kids age 5 who got the Pfizer-BioNTech COVID-19 vaccine can only get the updated Pfizer-BioNTech COVID-19 bivalent vaccine booster. Kids age 6 and older can choose between the Pfizer-BioNTech and the Moderna COVID-19 bivalent vaccine boosters.

If you are age 18 or older, and got the Janssen COVID-19 vaccine, you can get either of the mRNA vaccine bivalent boosters at least two months after your shot. People 18 and older may also get a Novavax booster based on the original virus strain as a first booster at least six months after their last shot.

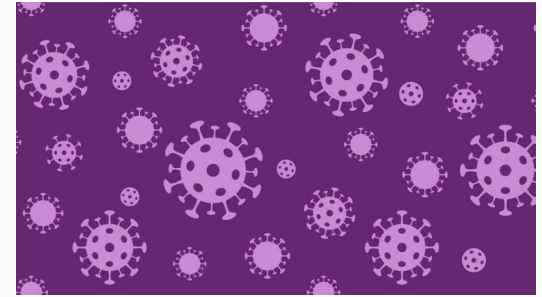
Pregnant people can also get a COVID-19 booster dose.

People age 5 and older who have a weakened immune system and have had all recommended doses of the Moderna, Pfizer-BioNTech or Novavax COVID-19 vaccines can get a booster dose of the updated Pfizer-BioNTech or Moderna COVID-19 bivalent vaccines.

Variants

- Viruses constantly change through mutation, and new variants of a virus are expected to occur over time. Sometimes new variants emerge and disappear. Other times, new variants emerge and persist. Multiple variants of the virus that causes COVID-19 have been documented in the United States and globally during this pandemic.
- The virus that causes COVID-19 is a type of coronavirus, a large family of viruses. Coronaviruses are named for the crown-like spikes on their surfaces. Scientists monitor changes in the virus, including changes to the spikes on the surface of the virus. These studies, including genetic analyses of the virus, are helping scientists understand how changes to the virus might affect how it spreads and what happens to people who are infected with it.
- Multiple variants of the virus that causes COVID-19 are circulating globally and within the United States. In collaboration with a SARS-CoV-2 Interagency Group (SIG), [CDC established 3 classifications](#) for the SARS-CoV-2 variants being monitored: Variant of Interest (VOI), Variant of Concern (VOC), and Variant of High Consequence (VOHC).

Variants



- **Omicron: Alpha, Beta, Delta**
- Omicron and its subvariants have ranked as the predominant SARS CoV-2 strains in the U.S for over a year now. The original Omicron strain (BA.1) was first identified in Botswana and South Africa in late November 2021, and cases quickly began to surface and multiply in other countries. By December of that year, Omicron was causing daily case numbers in the U.S. to skyrocket to over a million, and it began to spawn subvariants. One of those was BA.5, which became the predominant virus strain in the U.S., only to be replaced in November 2022 by two new subvariants known as BQ.1 and BQ.1.1. At the beginning of 2023, a new subvariant called XBB.1.5 was on the rise.
- Omicron's subvariants are considered to be especially efficient spreaders of the disease, and while scientists are still learning about XBB.1.5, they say it is the most transmissible strain of the virus so far. The original strain of Omicron was more transmissible than Delta was. One explanation was that more than 30 of Omicron's mutations are on the virus's spike protein, the part that attaches to human cells, and several of those are believed to increase the probability of infection.

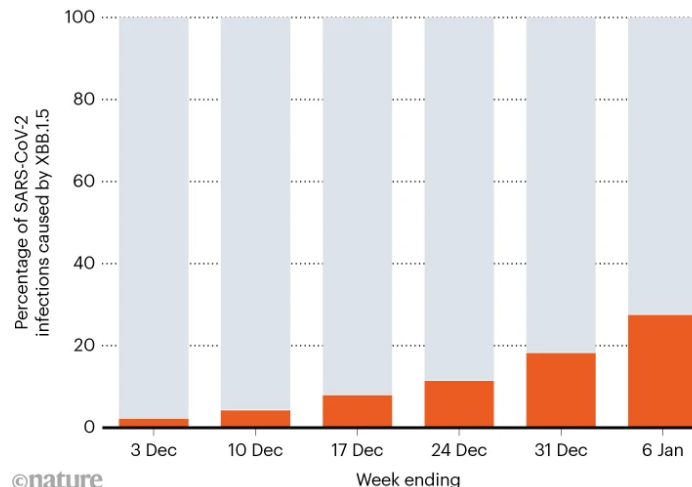
Variants

The XBB.1.5 subvariant now makes up around 28% of US COVID-19 cases, according to projections from the US Centers for Disease Control and Prevention (CDC) in Atlanta, Georgia, and its prevalence is on the rise globally. In the Northeastern United States, it seems to have rapidly out-competed the menagerie of other immunity-dodging variants that were expected to circulate alongside one another this winter

As its name suggests, XBB.1.5 is an offshoot of a SARS-CoV-2 variant called XBB. That lineage is a recombinant of two descendants of the BA.2 lineage that began spiking in early 2022; BA.2 itself is an offshoot of [Omicron](#). XBB's spike protein has a suite of mutations that boost the variant's ability to evade antibodies. This has helped XBB to become common over the past few months, particularly in Asia, where it caused a surge in cases in Singapore.

NEW YEAR, NEW VARIANT

An offshoot of Omicron called XBB.1.5 began to take hold in the United States towards the end of 2022. Modelling suggests that the share of SARS-CoV-2 infections caused by XBB.1.5 rose from 2% in early December to 28% by early January.



©nature

Variants

- **Severity:** Scientists are still working to learn more about whether the current Omicron strains cause more severe disease than their predecessors. Data has suggested that the original Omicron strain was less severe, in general, than previous variants, according to the CDC. But it has also noted that surges in cases may lead to significant increases in hospitalizations and deaths, as they did during the variant's spread in the beginning of 2022, when the estimated death rates went as high or higher than they were at the time of the Delta variant surge in the previous autumn.
- **Can vaccination prevent it?** The CDC says that while breakthrough infections in vaccinated people are expected, getting vaccinated and staying up to date with your vaccine and the latest booster shot is the best protection against Omicron. In 2022, the FDA authorized Pfizer-BioNTech and Moderna bivalent booster shots for everyone 6 months of age and older. These boosters are designed to protect against disease caused by the original strain of the SARS-CoV-2 virus, as well as the Omicron subvariants BA.4 and BA.5 (although experts are still learning about their effectiveness against the latest Omicron subvariants).

Variants

NEW SYMPTOMS

- A sore throat
- A runny nose
- A blocked nose
- Sneezing
- A cough without phlegm
- A headache
- A cough with phlegm
- A hoarse voice
- Muscle aches and pains
- An altered sense of smell

A publication in the [National Journal of Medicine](#) reports that muscle aches and pains (also known as myalgia) can be the onset symptom of 36% of patients with COVID-19.

Loss of smell and taste, high fever and breathlessness were regarded as the 'classic' symptoms when COVID was first discovered. But with Omicron emerging and vaccination coverage increasing, the symptoms related to the infection changed. The symptoms that were widely reported include sore throat, runny nose, headache and fatigue.

Isolation Recommendations

- People who are infected but asymptomatic or people with mild COVID-19 should isolate through at least day 5 (day 0 is the day symptoms appeared or the date the specimen was collected for the positive test for people who are asymptomatic). They should wear a mask through day 10. A [test-based strategy](#) may be used to remove a mask sooner.
- People with [moderate](#) or [severe](#) COVID-19 should isolate through at least day 10. Those with severe COVID-19 may remain infectious beyond 10 days and may need to extend isolation for up to 20 days.
- People who are [moderately or severely immunocompromised](#) should isolate through at least day 20. Use of serial testing and consultation with an infectious disease specialist is recommended in these patients prior to ending isolation.

Treatments

Therapeutic	Type of treatment	Start time after symptoms first appear
Paxlovid	Oral antiviral (pills)	As soon as possible and up to 5 days
Lagevrio (molnupiravir)	Oral antiviral (pills)	As soon as possible and up to 5 days
Veklury® (remdesivir)	IV infusion antiviral	As soon as possible and up to 7 days
Evusheld	Long-acting antibody combination (injection)	Preventative, before exposure

Treatments

- Paxlovid and Lagevrio (molnupiravir), authorized for patients with mild-to-moderate COVID-19, with strong scientific evidence they can reduce the risk of progressing to severe disease, including hospitalization and death. If you have a positive COVID-19 test and symptoms, contact your health care provider to see if these treatment options are right for you.
- Veklury (remdesivir) for adults and certain pediatric patients with COVID-19. This is an intravenous therapy (IV). The FDA has also approved the **immune modulators** Olumiant (baricitinib) and Actemra (tocilizumab) for certain hospitalized adults with COVID-19.
- **Monoclonal antibody treatments** for COVID-19 for the treatment, and in some cases prevention (prophylaxis), of COVID-19 in adults and pediatric patients. Monoclonal antibodies are laboratory-made molecules that act as substitute antibodies. They can help your immune system recognize and respond more effectively to the virus, making it more difficult for the virus to reproduce and cause harm. However, laboratory studies have found that the activity of anti-SARS-CoV-2 mAbs against specific variants and subvariants can vary dramatically. Because of this, these products are not expected to be effective treatments for COVID-19 in areas where the circulating variants and subvariants are resistant to mAbs. The COVID-19 Treatment Guidelines Panel (the Panel) **recommends against** the use of anti-SARS-CoV-2 mAbs for the treatment of COVID-19 **(AIII)** because the dominant Omicron subvariants in the United States are not expected to be susceptible to these products.

Treatments

Evusheld is a prevention therapy for people who have a weakened immune system.

Evusheld contains two monoclonal antibodies (tixagevimab and cilgavimab) to help your body fight the virus that causes COVID-19.

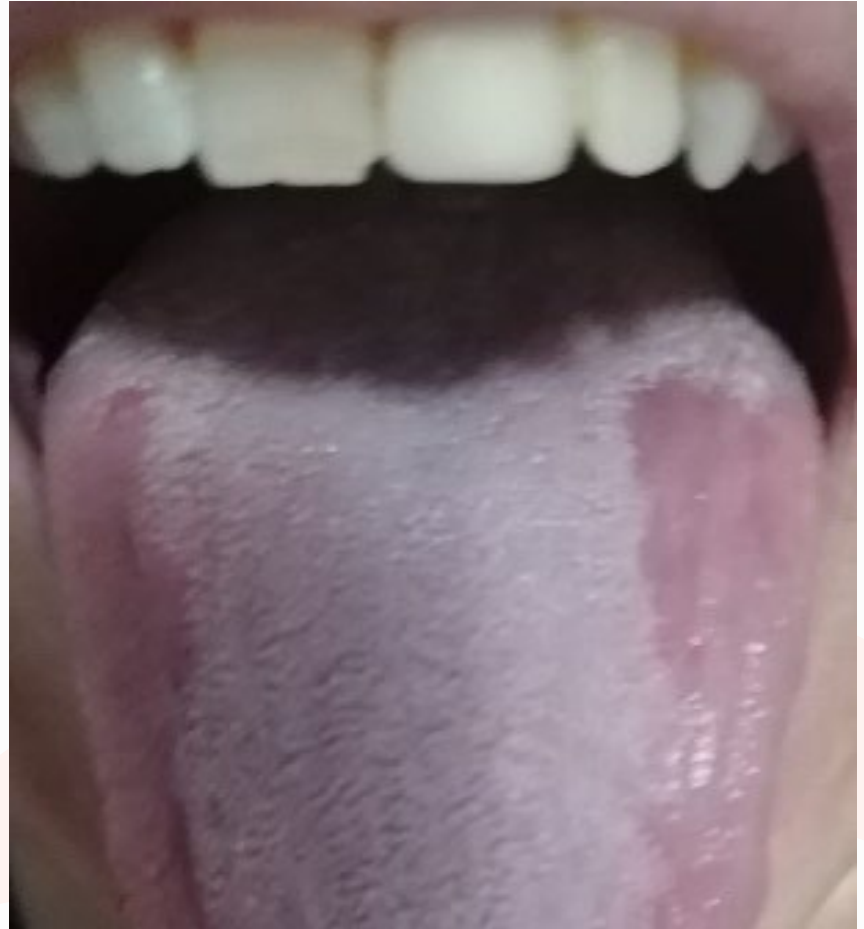
Evusheld should be given before you are exposed to or infected with COVID-19. Evusheld is intended to help prevent serious consequences of COVID-19, such as hospitalization or death. If you test positive for COVID-19 before or after you receive Evusheld, there are medications that can help prevent your symptoms from getting worse.

Evusheld is used in adults and children (12 years of age and older, weighing at least 88 pounds [40 kg]) for prevention of COVID-19 in persons:

- Who are not currently infected with SARS-CoV-2, the virus that causes COVID-19, and who have not had recent known close contact with someone who is infected with SARS-CoV-2; AND
- Who have moderate to severe immune compromise due to a medical condition or have received immunosuppressive medicines or treatments and may not mount an adequate immune response to COVID-19 vaccination; OR
- For whom vaccination with any available COVID-19 vaccine, according to the approved or authorized schedule, is not recommended, due to a history of severe adverse reaction to a COVID-19 vaccine(s) or COVID-19 vaccine ingredient(s).

COVID-19 and Oral Lesions

- Many articles have been published regarding the spread of the virus and the role that saliva plays in its transmission and diagnosis
- During this period, despite the implications of saliva for virus transmission and the possibility of salivary glands as a reservoir, few oral manifestations have been reported



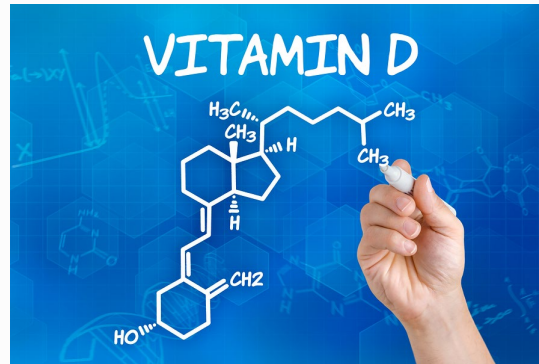
COVID-19 and Oral Lesions



- Salivary Glands
- Xerostomia



COVID-19 and Oral Health Concerns



Oral Health and Covid-19 Disease



Coronavirus patients who have been hospitalized are far more likely to die of respiratory failure if they suffered from periodontitis before contracting COVID-19, according to an international team of dental researchers.

According to the researchers, COVID-19 patients who suffer respiratory failure face grim odds for recovery, with almost 80% of those placed on ventilators in the United States since the beginning of the pandemic dying.

The researchers further note that their findings underscore the need for people who believe they may have gingivitis or more serious gum disease to get their teeth and gums checked and cleaned as soon as possible.



Thank you