



## A Review on Covid Omicron XBB 1.5 Variant

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### Abstract

This review explores the important implications of the rising prevalence of the SARS-CoV-2 Omicron subvariant for public health . The XBB Omicron subvariant has demonstrated increased transmissibility through an apparent propensity for immune evasion All pandemic viruses have eventually adapted to human hosts so that they become more transmissible and less virulent. Our multiscale investigation provided evidence suggesting that XBB is the first documented SARS-CoV-2 variant increasing its fitness through recombination rather than single mutations. The XBB Omicron subvariant is rapidly becoming the dominant strain of severe acute respiratory syndrome coronavirus-2 (SARS-CoV-2) in October 2022 and is one of several variants circulating globally with the potential to dominate autumn/winter waves in different countries.. This is to be expected in the natural evolution of a virus in a population highly vaccinated with a vaccine targeting the spike protein of the original Wuhan strain of the virus.

**Keywords:** Omicran, mutation,subvariant,vaccination

### Introduction

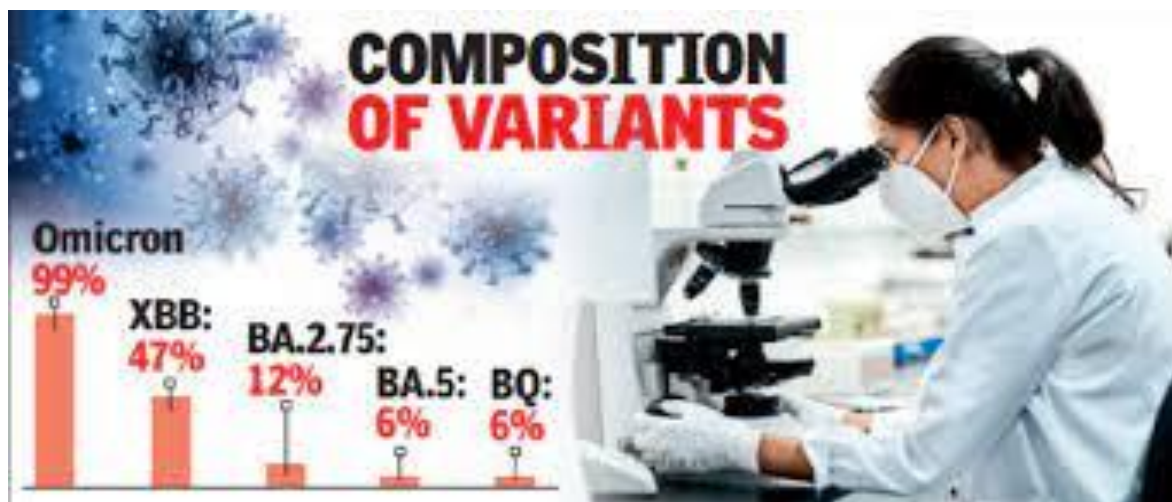
Since the SARS-CoV-2 virus first emerged in Wuhan, China in late 2019, its genetic material has experienced numerous changes, some of which have altered how easily it is transmitted, the severity of disease it causes and the performance of COVID-19 vaccines, diagnostics and treatments against it. These changes, or mutations, occur when a virus replicates or makes copies of itself. A virus that has mutated in this way is referred to as a variant.<sup>1</sup>

Although some of these changes have no impact on how the virus behaves, others may affect some of its properties such as how easily it is transmitted or its ability to overcome our immune defences. Those changes that are advantageous to the virus tend to spread more, meaning that variants harbouring them gradually replace other circulating variants over time<sup>2,3</sup>

### Alarming mutations

If one of these so-called variants possesses genetic markers that are predicted to affect its transmission, how well diagnostics, treatments or vaccines work, or if they appear to be responsible for an increased proportion of cases, it is labelled a “variant of interest”. A “variant of concern” meets these criteria, but also shows evidence of being more contagious, causing more severe disease, or being less susceptible to public health measures, vaccines, diagnostic tests and/or therapeutics.

Although some of the variants of concern that have been identified so far appear able to partially evade the immunity generated by vaccination, current evidence confirms COVID-19 vaccines still help to reduce the spread of COVID-19 and are highly effective at reducing hospitalisation and deaths associated with the disease.<sup>4</sup>



### Greek alphabet

In May 2021, the WHO began assigning variants of interest and variants of concern letters of the Greek alphabet. This was both to make them easier to remember, and to remove the stigma associated with referring to them by the country where they were first detected, which isn't necessarily reflective of where they first emerged and may disincentivise countries from reporting their existence.

Some of these variants of interest, such as Eta, Iota and Kappa, have since been taken off the WHO's watchlist, because they are no longer considered a threat. Other letters of the Greek alphabet, such as “Nu” and “Xi”, have not been assigned to a variant. The WHO told Reuters that these letters had been skipped because “Nu” is too easily confused with “new”, and “Xi” is a common last name.

## Variants of concern

Here's a round-up of the latest information on the current variants of concern being monitored by the WHO and its international networks of experts:

### Alpha (B.1.1.7)

First detected in the United Kingdom, and designated a variant of concern in December 2020, Alpha has now been verified in 192 locations worldwide (as of 3 December 2021). It contains several key mutations in the spike protein – the key the virus uses to gain entry to human cells – that mark it out from the original Wuhan strain. One is a N501Y mutation, which improves spike protein binding to cellular receptors making the virus more contagious. It also contains a D614G mutation, thought to enhance viral replication and a P681H mutation, the function of which is unclear, but which has emerged spontaneously many times.

Alpha is estimated to be around 50% more transmissible (contagious) than the original Wuhan strain, although there is considerable variation between studies. It is also thought to be associated with increased disease severity, although the data on this is also mixed. Fortunately, COVID-19 vaccines and monoclonal antibody treatments remain highly effective against it.

The WHO is also monitoring the spread of an Alpha variant that contains an additional E484K mutation, which may help the virus to slip past the body's immune defences by evading neutralising antibodies generated through vaccination or previous infection.

### Beta (B.1.351)

The Beta variant was first detected in South Africa and was also designated a variant of concern in December 2020. Since then it has been verified in 139 locations worldwide (as of 3 December 2021), although there is some evidence that its global prevalence may be decreasing as the Delta variant takes over. In addition to three of the mutations observed in the Alpha (or Alpha plus) variant (E484K, N501Y, and D614G), Beta contains a K417N mutation, which may help the virus avoid neutralising antibodies generated through vaccination or previous infection.

It is thought to be around 50% more transmissible than previous variants, but there's little evidence that Beta is associated with more severe disease. The main concern is reduced neutralisation by antibodies generated through vaccination or as a result of previous infection, which could mean that people who have already recovered from COVID-19 are at greater risk of being reinfected or that vaccines may be less effective against it. Even so, recent real-world data from Canada suggested one dose of the Oxford/AstraZeneca vaccine was 82% effective against hospitalisation or death caused by either the Beta or Gamma variants. And two doses of several widely-used vaccines, such as the Pfizer/BioNTech and Moderna vaccines, appear to offer strong protection against it.

### **Gamma (P.1)**

Designated a variant of concern in January, 2021, Gamma was first detected in Brazil, but has now been verified in 98/239 locations worldwide (as of 3 December, 2021). Like some other variants of concern, it contains E484K, N501Y, and D614G mutations. It also contains a K417T mutation – associated with increased binding to human cells, which may make it easier for the virus to spread – and an H655Y mutation, the function of which is unknown.

According to a study recently published in Science, the Gamma variant may be 1.7 to 2.4 times more transmissible than non-variants of concern, while people who have recovered from COVID-19 are afforded only 54 to 79% of the protection against reinfection with the Gamma variant, compared to other variants. The good news is that existing COVID-19 vaccines seem to work well against it.

### **Delta (B.1.617.2)**

The Delta variant was first detected in India in May 2021 and has now been verified in 176 locations worldwide, rapidly overtaking existing variants to become the dominant variant in many countries. Delta contains the D614G mutation, plus many additional ones not seen in other variants of concern. These include an L452R mutation, which is thought to increase infectivity, and may help the virus to evade destruction by immune cells; a T478K mutation, thought to help it avoid recognition by the immune system; and a P681R mutation, which is associated with an enhanced ability to trigger severe disease. There have also been reports of a ‘Delta plus’ variant, which was first identified in Nepal and carries an additional K417N mutation.

The Delta variant is estimated to be 40-60% more transmissible than the Alpha variant, and roughly twice as transmissible as the original Wuhan strain of SARS-CoV-2. Data from Scotland, suggested it was associated with roughly double the risk of hospitalisation compared with Alpha. Although data suggests vaccines are slightly less effective against preventing infection with the Delta variant – particularly among those who were vaccinated longest ago – they remain strongly protective against severe disease.

### **What is Omicron variant details?**

Omicron is **the latest variant of the coronavirus**. According to World Health Organization, the Omicron variant (B. 1.1. 529) is a variant of concern because it mutates very rapidly.

### **Omicron (B.1.1.529)**

Omicron was rapidly identified in numerous countries in November, 2021, after South African scientists alerted the WHO to a sudden increase in COVID-19 cases in Gauteng province, coinciding with the variant’s detection. The first known confirmed Omicron infection was from a specimen collected on 9 November 2021. As of 3 December 2021, it had been verified at 22 locations worldwide, including parts of North and South America, Europe, Africa, Asia and Australia. Omicron has a large number of mutations, some of which are

concerning. These include N501Y, D614G, K417N and T478K mutations, which are also found in other variants of concern, plus many others which have not yet been characterised.

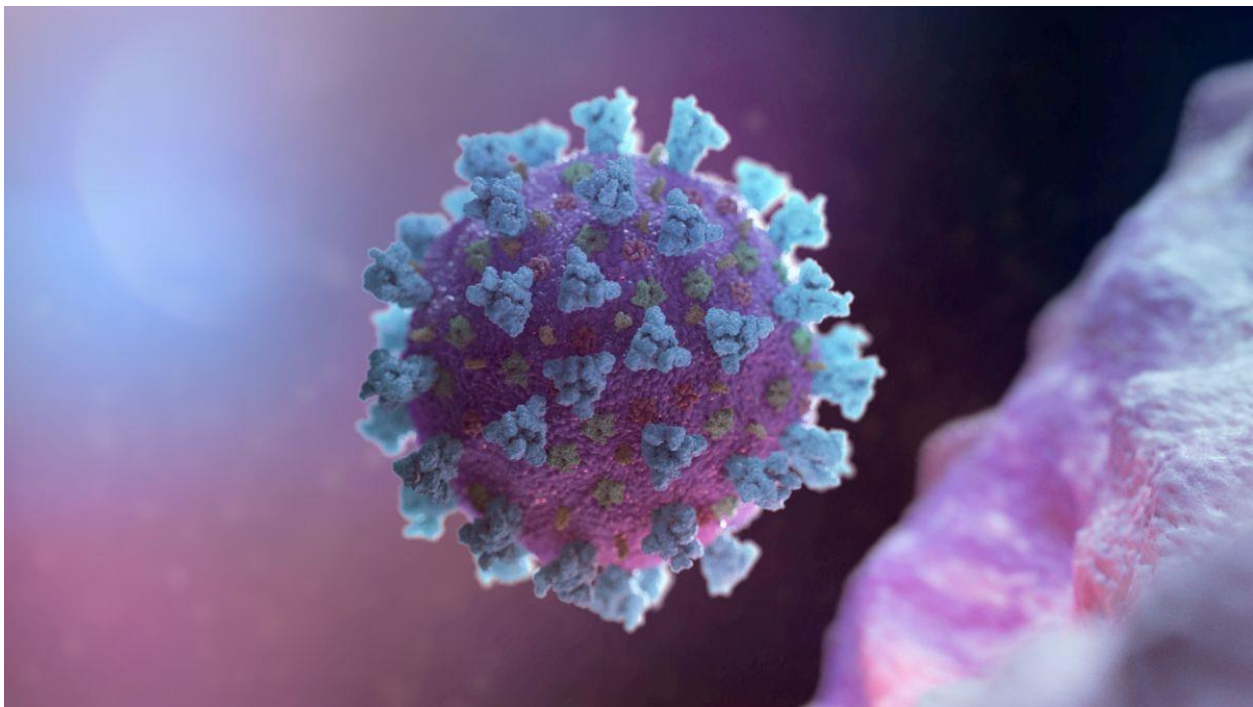
Preliminary evidence from epidemiologists in South Africa suggests an increased risk of reinfection with Omicron, compared to other variants of concern. The nature of the mutations has also prompted concerns that it could be partially resistant to existing COVID-19 vaccines, although tests to assess this are ongoing. It is not yet clear whether Omicron is more easily spread from person to person compared to other variants, or whether infection with it causes more severe disease<sup>5-7</sup>

### **What is new about the omnicron virus?**

Updated Oct. 19, 2022. The omicron subvariant of COVID-19, BA.5, has become one of the dominant strains of the virus in the U.S. **It's the most easily spread strain to date and is able to evade immunity from COVID infection and vaccination.**

### **What is different about Omicron variant?**

Omicron **spreads more easily than earlier variants**, including the Delta variant. Anyone with Omicron infection, regardless of vaccination status or whether or not they have symptoms, can spread the virus to others. Data suggest that Omicron can cause reinfection, even in people who have recovered from COVID-19.



Omicron XBB 1.5

### **How is Omicron XBB.1.5 different from other Covid-19 variants?**

Omicron XBB.1.5 is a recombinant strain that is both more immune-evasive and better at infecting than other variants. It is also believed to have a tighter bind to the ACE2 receptor, which may explain its higher level of transmissibility.

### What is the R-value of Omicron XBB.1.5?

The R-value, or reproductive number, of Omicron XBB.1.5 is much worse than previous variants, meaning it is more contagious. Multiple models show that it is “much worse in transmission R-value and infection rate than previous variants – faster by LEAPS and BOUNDS,” according to virologist Eric Feigl Ding.



### Is Omicron XBB.1.5 causing a surge in hospitalizations in the US and UK?

Yes, Omicron XBB.1.5 is believed to be responsible for the surge in hospitalizations in the US and UK. All US states where XBB.1.5 is dominant are witnessing a surge in hospitalization, and it has been flagged as being responsible for a surge in Covid cases and hospitalizations in New York.

### Is Omicron XBB.1.5 a concern in India?

The first case of XBB.1.5 has been confirmed in Gujarat. Public health authorities in Maharashtra state in India are focused on preventing the spread of Omicron XBB.1.5 due to its proximity to Gujarat. So far, XBB.1.5 has not been detected in Maharashtra.

### Is Omicron XBB.1.5 a “super variant”?

Virologist Eric Feigl Ding has referred to Omicron XBB.1.5 as a “super variant” and the “next big one” due to its highly contagious and immune-evasive nature.

### Is Omicron XBB.1.5 more contagious than previous variants?

Yes, Omicron XBB.1.5 is more contagious than previous variants, with a much worse R-value than previous strains.

### Can vaccines protect against Omicron XBB.1.5?

Yes, vaccines are effective against Omicron XBB.1.5. According to Dr. Michael Osterholm, an infectious disease expert at the University of Minnesota, “The vaccines that we have right now are working quite well against this variant.” However, he cautions that “we may need booster shots down the road, six months or a year from now.”



### **Is Omicron XBB.1.5 a new variant?**

Omicron XBB.1.5 is a new recombinant strain that is a mixture of different variants. It is not a “typical Omicron,” but a special recombination mixture variant that has further mutated.

### **How is Omicron XBB.1.5 spreading?**

It is not clear how Omicron XBB.1.5 is spreading, but it is believed to be more contagious than previous variants and has been linked to a surge in hospitalizations in the US and UK. Public health authorities in India are taking precautions to prevent its spread.

### **What are the symptoms of omicron subvariants?**

#### **Omicron XBB 1.5 Symptoms**

- There are multiple **Omicron XBB 1.5 Symptoms** which are prevailing in the individuals who are getting infected.
- First symptom belonging to this virus is that Omicron Virus creates a congestion in your Chest due to which you may feel difficulty in breathing.

- Secondly, this variant may cause high fever and headache in some individuals being infected with it.
- Moreover, Fatigue is also being felt by the individuals who are infected in Gujarat recently.
- Apart from this some people are also pointing towards insomnia due to this virus leading to disturbance of their schedule.

The symptoms of the latest omicron subvariants are mostly similar to those of the earlier version of omicron.<sup>8-</sup>  
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Dr. Roy Gulick, the chief of infectious diseases at Weill Cornell Medical Center and NewYork-Presbyterian, said typical symptoms of the omicron subvariants include:

- Sore throat
- Hoarse voice
- Cough
- Fatigue
- Nasal congestion
- Runny nose
- Headache
- Muscle aches

Unlike earlier variants like delta that affected the lungs, omicron and its subvariants tend to cause more upper respiratory symptoms, said Dr. Armando Meza, chief of infectious disease at Texas Tech University Health Sciences Center in El Paso. Those symptoms can include congestion, sore throat and changes in taste and smell.

Dr. Joseph Khabbaza, a pulmonary and critical care physician at the Cleveland Clinic, said symptoms can be vague, similar to what is seen with any kind of flu-like virus.

Still, it is virtually impossible for people to rely on symptoms to self-diagnose an illness. Doctors urge people who have any cold symptoms or flu-like symptoms to get tested.

Meza noted that when people are tested for Covid, the tests don't look for which variant the person has.

“We assume that the most prevalent variant in the community is the one that they got infected with,” he said. “There really shouldn't be a big difference in terms [of symptoms] that you can tell one from the other. It's really more of a subtle difference that you find out after the fact.”



## **Does the vaccine or booster protect against the omicron subvariants?**

In August, the Food and Drug Administration authorized a new version of the Covid booster that targets the spike protein of both the BA.4 and BA.5 subvariants. This booster also targets the original strain of the virus that was first detected in Wuhan, China, in late 2019.

As of December, the updated booster has been authorized for everyone ages 6 months and older.

During the first omicron wave, the variant caused a milder illness in people who were up to date on their Covid vaccinations.<sup>11-13</sup>

Researchers from the Centers for Disease Control and Prevention reported in November that the updated bivalent booster was better at preventing symptomatic Covid infections than the original booster shots.

Later CDC research found that the updated boosters are more effective at preventing hospitalization than the original booster, particularly for adults ages 65 and up.

## **Do the omicron subvariants cause severe illness?**

Omicron and its subvariants have, for the most part, caused less fatal infections than previous variants, Meza said, especially compared to what was seen with the delta variant and the original strain of the virus.

Part of the decrease in severity may be because the virus tends not to burrow deeply into the lungs as much as previous variants, but remains higher up in the respiratory tract, experts say.

In that way, the illness may act more like bronchitis than pneumonia, said Dr. Hugh Cassiere, the director of critical care services for Sandra Atlas Bass Heart Hospital at North Shore University Hospital on Long Island, New York.

“Usually patients with acute bronchitis tend not to be short of breath. They tend to cough and produce sputum,” Cassiere said. “Patients with pneumonia tend to be short of breath and feel more fatigued than bronchitis in general.”

Khabbaza said that recently, Covid cases he’s seen in the ICU have had a lesser degree of severity than earlier in the pandemic: Patients haven’t needed to be on oxygen for as long and have stayed in the hospital for shorter periods of time.

Another possible factor in decreased severity is increased prior immunity. “People are also getting less sick because their immune system has seen it already,” Khabbaza said.

## When do omicron subvariant symptoms start?

The time it takes for an infected person to develop symptoms after an exposure is shorter for the omicron variant than for previous variants — from a full week down to as little as three days or less, according to the Centers for Disease Control and Prevention.

The B.1.1.529 (Omicron) variant of SARS-CoV-2 (the virus that causes COVID-19) was first detected in specimens collected on November 11, 2021, in Botswana and on November 14 in South Africa;\* the first confirmed case of Omicron in the United States was identified in California on December 1, 2021 (1). On November 29, the Nebraska Department of Health and Human Services was notified of six probable cases<sup>†</sup> of COVID-19 in one household, including one case in a man aged 48 years (the index patient) who had recently returned from Nigeria. Given the patient's travel history, Omicron infection was suspected. Specimens from all six persons in the household tested positive for SARS-CoV-2 by reverse transcription–polymerase chain reaction (RT-PCR) testing on December 1, and the following day genomic sequencing by the Nebraska Public Health Laboratory identified an identical Omicron genotype from each specimen. Phylogenetic analysis was conducted to determine if this cluster represented an independent introduction of Omicron into the United States, and a detailed epidemiologic investigation was conducted. This activity was reviewed by CDC and was conducted consistent with applicable federal law and CDC policy.

The index patient, who was unvaccinated, had a history of domestically acquired symptomatic SARS-CoV-2 infection confirmed by RT-PCR a year prior in November 2020. He reported unmasked close contact<sup>¶</sup> with a masked, coughing person on November 20, 2021, during an international conference in Nigeria, which included attendees from multiple African countries. Before his return trip to the United States, he completed required pretravel testing with receipt of a negative antigen test result on November 21. Upon his return on November 23, while still asymptomatic, he had unmasked close contact with five household contacts. One household contact was fully vaccinated\*\* (second Pfizer-BioNTech vaccine dose received in August 2021) and had previous symptomatic COVID-19 (RT-PCR confirmed in November 2020), three were unvaccinated and had previous symptomatic COVID-19 (RT-PCR confirmed in November 2020), and one was unvaccinated and had mild upper respiratory symptoms in November 2020, just before illness onset in the other household members, but received a negative SARS-CoV-2 RT-PCR test result at that time. No household members reported underlying medical conditions or immunocompromising conditions known to increase the risk for severe COVID-19 or diminish response to vaccination.<sup>14</sup>

On November 24, 2021, the index patient experienced symptoms consistent with COVID-19 and initially received a positive SARS-CoV-2 antigen test result from a local medical center on November 26. All six household members (median age = 18.5 years; range = 11–48 years) experienced symptom onset during November 24–26; median interval between earliest possible exposure to the index patient and symptom onset

was 73 hours (range = 33–75 hours). The index patient and the four household contacts with previous confirmed infections described the symptoms and severity of their recent COVID-19 infection as being similar to or milder than those during their first infection. The five reinfected patients experienced fewer current symptoms, including loss of taste (none), loss of smell (none), and subjective fever (two), compared with symptoms reported during their first infections (four, four, and four, respectively). The unvaccinated patient without a previous COVID-19 diagnosis experienced cough, joint pain, congestion, fever, and chills. None required hospitalization for either their first or second infections. Twelve close community contacts of the family were identified. Four consented to testing for SARS-CoV-2 (median of 10.5 days postexposure; range = 10–11 days); specimens from these four close contacts tested negative.<sup>15-17</sup>

Epidemiologic and clinical features of Omicron infection are still being described. Observations from this investigation, which included one patient who experienced reinfection<sup>¶¶</sup> after having been fully vaccinated, four patients who experienced reinfection, and one who experienced their first infection, suggest a shorter incubation period and a clinical syndrome similar to or milder than that associated with previously described variants in persons who have been vaccinated or previously infected, and add to existing evidence suggesting an increased potential for reinfection.<sup>\*\*\*</sup> Whereas the median SARS-CoV-2 incubation period has been described as  $\geq 5$  days (2,3), and closer to 4 days for the SARS-CoV-2 B.1.617.2 (Delta) variant,<sup>†††</sup> the median incubation period<sup>§§§</sup> observed in this cluster was approximately 3 days. Although few clinical descriptions of Omicron infections are available, mild illness among vaccinated patients has been reported (4). It is unknown whether the mild clinical syndromes or differing symptom descriptions are a result of existing immunity or altered clinical features associated with Omicron infection. The five reinfections, including one after full vaccination, might be explained by waning immunity, the potential for partial immune evasion by Omicron, or both. Conclusions drawn from these observations are limited by small sample size. More data will be needed to fully understand the epidemiology of the Omicron variant<sup>18-19</sup>.

Travel history of the index patient and phylogenetic analysis of the secondary cases indicate an international introduction of the Omicron variant, consistent with other early cases identified in the United States (1). The recent emergence of Omicron, which is now projected to be the dominant variant in the United States,<sup>¶¶¶</sup> reinforces the importance of vaccination, in coordination with other prevention strategies (e.g., masking and physical distancing), to protect people from COVID-19, slow transmission, and reduce the likelihood of new variants emerging. In addition, the rapid identification and epidemiologic characterization of this cluster underscore the importance of robust and timely genomic surveillance to detect and respond to emerging SARS-CoV-2 variants of concern<sup>20</sup>.

## **How long do omicron subvariant symptoms last?**

Earlier in the pandemic, Covid symptoms could drag on.

“A lot of these patients are not having the symptoms for the 10 to 12 days that I saw when there were no vaccinations,” said Dr. Rahul Sharma, the emergency physician-in-chief at NewYork-Presbyterian/Weill Cornell Medicine.

Sharma noted that, in general, symptoms appear to be shorter and milder in vaccinated people compared to unvaccinated people.

For vaccinated people, emergency room or hospital stays are also typically shorter with the omicron subvariants, Sharma said.

“What I can tell you is that patients that are unvaccinated are definitely our sicker patients,” Sharma said. “Those are the patients that are more likely to go to the ICU. Those are the patients that are more likely to be admitted to the hospital.”

Dr. Ryan Maves, an infectious diseases and critical care physician at Wake Forest University School of Medicine in North Carolina, agreed, saying the overwhelming majority of Covid patients he sees in the intensive care unit are unvaccinated.

## **When should I get tested for Covid?**

Dr. William Schaffner, an infectious diseases expert at Vanderbilt University Medical Center in Nashville, Tennessee, advised that anyone who has been in contact with an infected person get tested about 72 hours after the exposure.

“If you’ve been exposed and now you’re asking yourself, ‘When should I get tested?’ I think you would best wait at least three days to see if you’ve turned positive,” he said.

If you have a known exposure to someone with Covid but don’t have any symptoms, the CDC recommends waiting at least five full days before testing.

## **How long am I contagious with an omicron subvariant?**

A person is generally contagious a day or two before symptoms begin and at least two or three days after. Then, as the immune system kicks in, contagiousness should start to go down.

The CDC recommends that during the first five days of a mild Covid illness, you should isolate to avoid spreading the infection to others. Then, if you no longer have symptoms, wear a mask around others for the next five days.

If you test negative on two consecutive rapid tests 48 hours apart, you can take the mask off before day 10, the CDC says.

### **Could infection with an omicron subvariant lead to long Covid?**

During the first omicron wave, some experts said the variant could lead to long Covid, even with mild cases. A June study from British researchers found that the omicron variant appears less likely to cause long Covid symptoms than delta, although all of the 41,361 adult participants who regularly reported their Covid symptoms on a phone app had been vaccinated.

Patients with long-term symptoms can experience crushing fatigue, irregular heart rhythms and other issues months after their initial Covid infections. That occurred during the first wave of the pandemic, and it continued to lead to long Covid issues through the delta wave.

Previous research suggests that vaccination can reduce the risk for long Covid.

### **Summary Points About Omicron XBB.1.5 Variant Of COVID 19**

A novel recombinant strain called XBB.1.5 is more immune evasive and more contagious than BQ and XBB variations.

The XBB1.5 outperformed the BQ1 version by 108%. But as more data became available, XBB1.5 continued to improve and is currently 120% quicker. It spreads more quickly than Omicron BF does.

The BQ.1 and the BQ.1.1 sub-variants are no longer the most often found coronavirus alterations, having been replaced by the XBB.1.5 omicron subvariant.

A recombinant of two sub-variants that evolved from the BA.2 omicron subvariant produced the XBB subvariant, from which XBB.1.5 descends. This indicates that it has genetic material from two coronavirus variants that descended from the BA.2 subvariant.

India is where the omicron sub-variants XBB and XBB.1 were originally discovered. Some researchers have suggested that XBB.1.5 might have mutated in New York.

Data from the US Centers for Disease Control and Prevention has indicated that the highly contagious Omicron XBB.1.5 subvariant is now to blame for over 40% of COVID-19 cases in the country.<sup>21,22</sup>

## Covid XBB 1.5 Vaccine

<b>Virus Name</b>	<b>Coronavirus</b>
<b>Variant Name</b>	<b>Omicron XBB 1.5</b>
<b>Discovered in</b>	<b>USA (New york)</b>
<b>Mutant From</b>	<b>Omicron</b>
<b>R Value</b>	<b>High</b>
<b>Covid XBB 1.5 Vaccine</b>	<b>Earlier Vaccine will Work</b>
<b>Symptoms of XBB 1.5</b>	<b>High Fever, Congestion in Chest, Weakness</b>

People across the World and in India are hereby informed that **Covid XBB 1.5 Vaccine** is not developed yet but all of you can get jabbed with Booster Dose to protect yourself. In India, precaution Dose developed by Serum Institute can be taken by individuals to protect themselves from Covid XBB 1.5 Variant. In India, only one case from Gujarat is discovered so far which belongs to Omicron XBB.1.5 Variant. Various Symptoms of this virus are discussed below for your reference which will be helpful for you. Moreover, Precautions are also given here for your reference



# COVID XBB 1.5 VARIANT

## Covid XBB 1.5 Variant Precautions

- You need to take care of all the **Covid XBB 1.5 Variant Precautions** in order to protect yourself and your Family.
- Secondly, you must be aware of the crowded places and avoid going to crowded places at rush hours.
- Stay at your home instead of going out until or unless you have emergency work.
- Make sure you wear the mask at all times and use the sanitizer after touching any surface in a public place.
- Maintain Social Distance at Public Places, Transport and Offices to avoid the infection.
- Get yourself jabbed with Covid vaccine and Booster dose to make yourself immune.

## Coronavirus XBB.1.5 Remedies

- There are multiple **Coronavirus XBB.1.5 Remedies** which you can do at home to stay immune against this variant.
- First one is to eat the Vitamins and Nutrients that may increase your Immunity against the virus.
- Secondly, you must be vaccinated with the vaccines available in your country for this particular strain.
- You should eat Homemade food, avoid Junk Food and have healthy Green Food at your Home.
- You should Avoid International Travel at all cost because most of the XBB 1.5 Variant Cases are accounted in Outside India.
- In order to enjoy yourself at your home, you should watch the Hockey World Cup 2023 with your Family.

### How do you stop omicron Covid?

Dr. Anthony Fauci, National Institute of Allergy and Infectious Diseases Director, says he expects vaccine boosters to be critical in addressing the Omicron variant.

### How to Protect Yourself

- Focus on what is known.
- Get vaccinated.
- Get boosted.
- Wear a mask.
- Be informed.

## How to Protect Yourself

So what can you do to avoid getting infected with Omicron or other variants of COVID-19, especially in the midst of a holiday season filled with socializing, events and travel?

- **Focus on what is known.** Rather than making decisions based on speculation about Omicron—which is likely to change from day to day—remember that the biggest threat in the U.S. right now is still the Delta variant. At least five states have set new all-time high COVID-19 records since Thanksgiving.
- **Get vaccinated.** Vaccines are the best line of defense against COVID-19 variants, according to the CDC. Although breakthrough infections occur, vaccines are effective at preventing severe illness, hospitalization and death. Anyone age 5 and older is eligible for a vaccine.
- **Get boosted.** Booster shots help improve waning immunity that occurs over time. All adults ages 18 and up are eligible for a booster shot at least 6 months after the second dose of a Pfizer-BioNTech or Moderna vaccine or 2 months after a Johnson & Johnson vaccine.
- **Wear a mask.** Regardless of which variants are circulating, wearing a mask around other people is still one of the best ways to slow the spread of the virus. This is true whether you've been vaccinated, boosted or not.
- **Be informed.** If you're traveling, attending an event or visiting family and friends, be aware of what's required of you. You may need to show proof of vaccination and/or get tested within a specific timeframe. You may also need to take extra precautions based on who you're around or where you're headed.

Information about the Omicron variant will continue to develop in the coming days, weeks and months. In the meantime, the best line of defense is to do the same things you have done to protect yourself against other strains of COVID-19.

## Conclusion

This new virus outbreak has challenged the economic, medical and public health infrastructure of China and to some extent, of other countries especially, its neighbours. Time alone will tell how the virus will impact our lives here in India. More so, future outbreaks of viruses and pathogens of zoonotic origin are likely to continue. Therefore, apart from curbing this outbreak, efforts should be made to devise comprehensive measures to prevent future outbreaks of zoonotic origin. We hope that the rapidly developing research on the current COVID-19 pandemic will help provide the new information needed to fill these gaps.

**Conflict of Interest;** The authors declared no conflict of interest.



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