

# The dangerous new variant of Coronavirus

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COVID-19, which is caused by SARS-CoV-2, has snatched countless lives over the past one year. The pandemic is still in headway from the beginning of 2020 to present. During this period, scientists also have formulated at least three vaccine types by the end of last year. When the vaccination programme is in developed and developing countries, there is another new crisis raised worldwide — the danger of a new variant.

The constant changes in the virus and the new variants are part of the life cycle of a virus. Such new variants of seventh new coronavirus strain SARS-CoV-2 have also been found in human and animal bodies. This changing process is called a mutation, and such modifications are regular. As the flu virus changes every year, we get the flu every year because of the newly mutated virus.

In the past year, the coronavirus has also strived to change itself by ratifying the body's immune system, medication, or vaccine attacks. Most of these variants have been slightly altered or barely modified in the structure or trait.



Some of the variants are weaker than before, while others are more stringent.

This change has led to the spotting of three new variants of the Coronavirus in the human body since late last year. Three countries: England, South Africa, and Brazil, have seen three new types of variants. B.1.1.7 variant originated in England; South African variant is B.1.351

and the latest Brazilian variant B.1.1.28 found in the human body recently. Brazilian variant of SARS-CoV-2, is also known as P.1.

Two strains of SARS-CoV-2 virus have been found in Brazil so far. One in June, another in December last year. Scientists indicate that the new variant B.1.1.28 found in Manaus in the northern province of Amazonia

in December last year is a severe type. This strain has been found in Japan and recently England also.

World Health Organisation officials, including the Health Authority of England, are more concerned about the new Brazilian variant because this variant spreads faster than the other two variants and can attack the body more severely. Why is

this newfound Brazilian variant is more destructive than the other two?

When a new coronavirus penetrates the body, it attacks cells with a specific part. This part is called spike protein. The part with which the protein ambushes the cells is called receptor binding domain (RBD). Scientists have found that the spike protein of the Brazilian variant has three mutations: K417T, E484K, and N501Y. One of these mutations is in the RBD section.

The mutation happened in E484K, a spike protein in the RBD segment. Now scientists are concerned about this mutation of E484K proteins because they formulated antibodies of the vaccine was designed based on this protein. As a result, the virus can easily bypass the body's antibody or antibodies generated by the vaccine will work weakly to identify the virus.

Although it is not clear how much resistance the new variant will develop against the vaccine, it is apparent that the new variant spreads rapidly and impose the body at significant risk.

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## DID YOU KNOW?



Devastatingly pervasive: 1 in 3 women globally experience violence

STAR HEALTH DESK

Violence against women remains devastatingly pervasive and starts alarmingly young, shows new data from the World Health Organisation (WHO) and partners. Across their lifetime, 1 in 3 women, around 736 million, are subjected to physical or sexual violence by an intimate partner or sexual violence from a non-partner — a number that has remained largely unchanged over the past decade.

This violence starts early: 1 in 4 young women (aged 15-24 years) who have been in a relationship will have already experienced violence by an intimate partner by the time they reach their mid-twenties.

"Violence against women is endemic in every country and culture, causing harm to millions of women and their families, and has been exacerbated by the COVID-19 pandemic," said Dr Tedros Adhanom Ghebreyesus, WHO Director-General.

Intimate partner violence is by far the most prevalent form of violence against women globally (affecting around 641 million). However, 6% of women globally report being sexually assaulted by someone other than their husband or partner. Given the high levels of stigma and under-reporting of sexual abuse, the true figure is likely to be significantly higher.

Preventing violence requires addressing systemic economic and social inequalities, ensuring access to education and safe work, and changing discriminatory gender norms and institutions. Successful interventions also include strategies that ensure essential services are available and accessible to survivors, that support women's organisations, challenge inequitable social norms, reform discriminatory laws and strengthen legal responses, among others.

Source: World Health Organisation (WHO)

## HEALTH bulletin



### Surgery should be delayed for at least seven weeks following a COVID-19 diagnosis

New international research published in *Anaesthesia* (a journal of the Association of Anaesthetists) concludes that surgery should be delayed for seven weeks after a patient tests positive for SARS-CoV-2, since the data show that surgery that takes place between 0 and 6 weeks after diagnosis is associated with increased mortality.

The study is by the COVIDSurg Collaborative: a global collaboration of over 15,000 surgeons working together to collect a range of data on the COVID-19 pandemic. This study's lead authors are Dr Dmitri Nepogodiev (Public Health) and Dr Aneel Bhanu (Surgeon) of the University of Birmingham, UK.

While it is known that infection with SARS-CoV-2 during surgery increases mortality and international guidelines recommend surgery should be delayed for patients testing positive for COVID-19, there is little evidence regarding the optimal duration of delay.

Dr Dmitri Nepogodiev says: "We found that patients operated 0-6 weeks after SARS-CoV-2 infection diagnosis are at increased risk of postoperative death, as were patients with ongoing symptoms at the time of surgery. We recommend that whenever possible surgery should be delayed for at least 7 weeks after a positive SARS-CoV-2 test result, or until symptoms resolve if patients have ongoing symptoms for 7 weeks or more after diagnosis."

## Should you take vaccine if you are COVID-19 affected?

DR GOLAM NABI

As there is no specific treatment so far to overcome the deadly disease of COVID-19, sufferers are only managed symptomatically and supportively. So how we can get rid of this disease? There are two ways: one is herd immunity, which is hard to get at the cost of many lives, and another is the vaccine. A vaccine to prevent COVID-19 is perhaps the best hope for ending the pandemic.

We have heard about the COVID-19 vaccine since the emerging of the disease. The quick development and approval of a vaccine may increase our hesitancy about its safety or effectiveness. We might think that the COVID-19 vaccine is not safe because it was rapidly developed. The emergency situation warranted an emergency response, that does not mean that companies bypassed safety protocols or perform adequate testing.

This vaccine was created using a novel technology based on the molecular structure of the virus. The novel methodology to develop a COVID-19 vaccine allows it to be free from materials of animal origin and synthesised by an efficient, cell-free process without preservatives.

If you already had COVID-19 and recovered, what should you do? There is not enough information currently available to say if or how long after infection someone is protected from getting COVID-19 again. This is called natural immunity. Early evidence suggests natural immunity from COVID-19 may not last very long, but more studies are needed to better understand this. The Centres for



Disease Control (CDC) recommends getting the COVID-19 vaccine, even if you have had COVID-19. However, those that had COVID-19 should delay vaccination until about 90 days from diagnosis. People should not get vaccinated if in quarantine after exposure or if they have COVID-19 symptoms.

While the vaccine may prevent you from getting sick, it is unknown at this time if you can still carry and transmit the virus to others. Until more is understood about how well the vaccine works, continuing with precautions such as mask-wearing and physical distancing will be important. While some people that receive the vaccine may develop symptoms as their immune system responds, remember that this is common when receiving any vaccine and not considered

serious or life-threatening. You cannot get COVID-19 infection from the COVID-19 vaccines; they are inactivated vaccines and not live vaccines.

It is important to recognise that getting the vaccine is not just about survival from COVID-19. It is about preventing the spread of the virus to others and preventing infection that can lead to long-term negative health effects. While no vaccine is 100% effective, they are far better than not getting a vaccine. The benefits certainly outweigh the risks in healthy people.

The article is compiled from various sources including The World Health Organisation, Mayo Clinic Health System and Centres for Disease Control websites. The writer is an Associate Professor of Medicine at Z H Sikder Women's Medical College and Hospital, Dhaka.

## Guideline

### Colorectal cancer screening is suggested for persons aged 45-49 years

The American College of Gastroenterology (ACG) now suggests that colorectal cancer screening begin as early as age 45 in average-risk individuals. Previously, the ACG recommended screening this early only for African Americans.

This conditional recommendation, based on low-quality evidence, accompanies the group's continued strong recommendation for screening average-risk individuals aged 50 to 75 years.

The new recommendation, an update from the group's 2009 guideline, follows similar moves by the U.S. Preventive Services Task Force in 2020 (draft recommendation) and the American Cancer Society in 2018.

The guideline authors note that colorectal cancer incidence is increasing in people younger than 50 in the United States.

/StarHealthBD

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Being diagnosed with kidney disease can be a huge challenge, both for the patient and those people around them. Its diagnosis and management, particularly in advanced stages of kidney disease, impacts severely upon their lives by reducing their, and that of family and friends, ability to participate in everyday activities like work, travel and socializing.

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