What is the Omicron variant?

Omicron, a variant of concern

The SARS-CoV-2 variant B.1.1.529 has been classified as a variant of concern and named Omicron by the World Health Organization (WHO), after researchers in South Africa identified and reported the variant on Nov. 24, 2021.

According to the WHO, Omicron is concerning because it has several mutations that may increase the risk of how easily it spreads and the severity of illness it causes.

This new variant has been detected in multiple countries, including the United States, as of Dec. 2, 2021.

What experts are saying about Omicron

Preliminary research and findings

In the Dec. 2, 2021, episode of the AMA COVID-19 video update, Andrea Garcia, JD, MPH, director of science, medicine & public health, AMA, states that there are three key areas that scientists are focusing on when a new variant, such as Omicron, emerges:

1. whether the variant spreads faster or is more transmissible
2. whether it is evading immune response and
3. whether it causes more serious illness than other variants.

While worldwide studies are underway, preliminary research suggests that Omicron may spread more easily than other variants and there may be an increased risk of reinfection in those who previously had COVID-19. More data are needed to know if Omicron breakthrough infection or reinfections cause more severe illness or death than other variants.

Scientists are also working to determine if Omicron’s mutations have implications for the benefits provided by existing COVID-19 therapeutic treatments. Reduction in the susceptibility to certain
treatments is likely.

Vaccine efficacy, boosters and coronavirus variants

The emergence of the Omicron variant further emphasizes the importance of vaccination and boosters. The U.S. Food and Drug Administration (FDA)-approved or authorized vaccines are expected to be effective against severe illness, hospitalization and death.

"New variants emerge when we have a large proportion of a population unvaccinated."

—Andrea Garcia, JD, MPH, director of science, medicine & public health, AMA

Vaccination is important “at the community level, at the country level or at the global level,” because it “not only helps protect the individual and those around them, it also gives the virus fewer opportunities to mutate in a way that can be harmful to all of us,” said Garcia during her interview on Omicron, vaccine mandates and the COVID pill.

Centers for Disease Control and Prevention director, Rochelle Walensky, MD, MPH, said in a media statement,

"CDC has expanded its capacity for genomic sequencing over the past nine months and we have more tools to fight the variant than we had at this time last year from vaccines to boosters to the prevention strategies that we know work including masking in indoor public settings, washing your hands frequently and physical distancing. These methods work to prevent the spread of COVID-19, no matter the genetic sequence."

Get vaccinated

Regardless of concerns about which variant—Delta or Omicron—is more worrisome, the course of action for the population remains the same: “Get vaccinated, get vaccinated, get vaccinated,” says Peter Hotez, MD, PhD, dean of National School of Tropical Medicine at Baylor College of Medicine and co-director of the Texas Children’s Hospital Center for Vaccine Development.

According to Dr. Hotez, people should get their booster shot if they have received their initial vaccinations. This will give people up to 30- to 40-fold increase in their virus-neutralizing antibodies and prolong their immune response.

For those who have been infected and recovered, data already exist for Delta showing that people are less susceptible to reinfection if they are vaccinated on top of that. It is important for children to get
vaccinated too.

“Get everyone fully vaccinated, and there is a high likelihood you will get partial protection…. Be mindful and be aware.”

—Peter Hotez, MD, PhD, dean of National School of Tropical Medicine at Baylor College of Medicine and co-director of the Texas Children’s Hospital Center for Vaccine Development

Explore other AMA resources on COVID-19

The AMA’s COVID-19 resource center has evidence-based news, guidance, videos, podcasts, research highlights and more on the pandemic. Read about the latest on COVID-19 vaccines.

Other key COVID-19 resources include:

- JAMA Network™ coronavirus resource center
- AMA Ed Hub™ coronavirus education center
- AMA Journal of Ethics COVID-19 Ethics resource center
- What physicians need to know about boosters
- COVID-19 vaccine boosters mix and match: what evidence shows

Reviewed by: Andrea Garcia, JD, MPH, director of science, medicine & public health, AMA

Reviewed on: December 10, 2021