

## **Breakthrough Infections FAQ**

Cases of vaccinated people being infected with COVID-19 remain uncommon but have increased in recent weeks. This is likely due to the more contagious delta variant of the virus that is now the dominant strain in New York City (NYC), as well as higher levels of community transmission overall. It is important, however, to distinguish between breakthrough infection (a positive diagnosis) and breakthrough disease (serious illness requiring hospitalization). The vaccines continue to offer good protection and are particularly strong at preventing severe disease.

### **What is a breakthrough infection?**

The Centers for Disease Control and Prevention (CDC) defines a vaccine breakthrough infection as a positive diagnosis in a person at least 14 days after their final dose of a COVID-19 vaccine (which means after the second dose of Moderna or Pfizer, or after the single dose of Johnson & Johnson/Janssen).

### **How common are breakthrough infections?**

Cases of breakthrough infections do occur and are expected with any vaccine. As of early August, 0.33% of fully vaccinated New Yorkers have been diagnosed with COVID-19.

### **Does this mean the vaccines are not working?**

No. **The vaccines are working, and no vaccine is 100% effective at preventing infection.** The data overwhelmingly show that vaccines protect people from hospitalization and death. New Yorkers who are vaccinated are nearly 10 times less likely to be hospitalized due to COVID-19. Less than 0.1% of fully vaccinated New Yorkers have been hospitalized and less than one hundredth of a percent (.0001) have died.

### **Does this mean vaccinated people can also transmit the virus?**

The COVID-19 vaccines authorized in the United States are highly effective at preventing severe disease and death, including against the delta variant. People who are fully vaccinated and get infected with the delta variant can spread the virus to others.

- Previous variants typically produced less virus in the body of infected, fully vaccinated people than in unvaccinated people. In contrast, the delta variant seems to produce the same high amount of virus in both unvaccinated and fully vaccinated people who become infected.
- However, people who are fully vaccinated appear to be infectious for a shorter period of time than people who are unvaccinated.

Unvaccinated people remain the greatest concern — they are much more likely to get and spread COVID-19, and have higher rates of severe disease, hospitalization and death.

### **Are breakthrough infections more common with new variants?**

It does appear to be the case that breakthrough infections are more common with new variants, especially with variants that are highly transmissible, such as delta. However, vaccines continue to provide highly effective protection from these variants, as well as earlier versions of the virus.