



# Covid “breakthrough” cases explained

Most hospitalisations and deaths from coronavirus have occurred among unvaccinated individuals, yet there have also been so-called breakthrough infections of fully vaccinated people

## Why breakthrough cases occur

No vaccine is **100 percent** effective at preventing infection in all cases. As more people have become vaccinated against Covid-19, so number of breakthrough cases has increased

## Natural virus evolution

**SARS-CoV-2** continues to mutate into variants that are more infectious and more adept at evading immunity provided by vaccination or previous Covid-19 infection

## Vaccine effectiveness

Research shows most vaccines are working to dramatically decrease risk of hospitalisation and death, even against highly-transmissible **Delta variant**. For example, Pfizer vaccine is **96 percent** effective against hospitalisation from Delta variant after two doses

## Individual immune response

Chances of getting seriously ill after vaccination are higher for those people with **health conditions** that affect immune system. Even in those with good immunity, vaccine protection is likely to wane over time

## Severity of illness

Infections among vaccinated people tend to be mild, with fewer symptoms. Severe cases are extremely rare

As of July 12, out of **159 million** fully vaccinated people, CDC\* recorded **5,492 cases** who were hospitalised or died from Covid-19 (equivalent to less than 1 in 29,000)

Share of cases aged 65 or over

**19 percent of total cases died**

\*Centres for Disease Control and Prevention

