

Immunity to COVID-19

Infection with SARS-CoV-2

Vaccination with COVID-19 vaccines used in the UK

What it means for you

Immune response

Length of protection

Variants

- 
- May become **very unwell** with COVID-19.
 - Potential to develop long-term complications (long COVID).
 - Can spread virus to others.
- 
- **Varies hugely** between people. Many factors impact immune response effectiveness e.g. age.
 - May be linked with disease severity; people who experience more severe illness are more likely to have higher antibody levels.
- 
- Not fully known; protection wanes over time & duration varies between people.
 - Most people maintain immune cells that **protect against severe disease**.
- 
- **Reinfection common with Omicron variant.**
 - Research ongoing on effects of variants on immunity from previous infection.
 - Antibodies may be less effective against reinfection with viral variants while T cells may offer cross-protection.

- 
- Significantly reduces chance of developing COVID-19, becoming very unwell & death.
 - Induces an immune response in a **safe & controlled way**.
 - Reduces chance of spreading virus to others & developing long COVID.
 - Cannot give you COVID-19.
- 
- Varies but most (even older people) produce a **strong immune response**.
 - Booster dose improves immunity.
 - Vaccination boosts any immunity already present from previous infection.
- 
- Research ongoing but so far two doses **protect against severe disease** although protection wanes over time & duration varies between people.
 - Booster dose improves length of protection.
- 
- **Three doses provide strong protection** against many current variants.
 - Research ongoing on effects of variants on immunity from vaccines.
 - Breakthrough infection possible but after booster is likely to cause milder symptoms.
 - High antibody levels after booster likely to cross-protect against new variants.

Information in this infographic is correct as of February 2022.



Vaccines for COVID-19 are safe and highly effective at preventing severe disease and death. Even if you've had COVID-19, vaccination will safely boost whatever immunity you have from previous infection.

