

Latest findings from antibody surveillance study published

- Over 154,000 participants took part in a home surveillance study for COVID-19 antibodies between 26 January and 8 February
- Findings published by Imperial College London and Ipsos MORI show 13.9% of the population in England had antibodies against COVID-19
- 17,000 participants had received at least one dose of a COVID-19 vaccine, with 91% of people across all ages testing positive for antibodies after 2 doses of the Pfizer vaccine
- Overall vaccine confidence is high with 92% having accepted or planning to accept a vaccine offer

For the first time, the study captures participants who have received a COVID-19 vaccine, and also gathers insight into how different groups feel about vaccines.

Over 154,000 participants tested themselves at home using a finger prick test between 26 January and 8 February, showing 13.9% of the population had antibodies either from infection or vaccination.

Of these participants, over 17,000 said they had received at least one COVID-19 vaccine dose. The data shows 87.9% of people over the age of 80 tested positive for antibodies after 2 doses of the Pfizer/BioNTech vaccine, rising to 95.5% for those under the age of 60 and 100% in those aged under 30.

The findings show high confidence levels in the vaccine. Over 90% of those surveyed reported that they would be willing to accept, or had already had, a vaccination for COVID-19.

Today's report provides insight on antibody responses following infection, or for some participants, vaccination. It does not provide insight on other elements of immune responses following vaccination – such as the presence of T-cells – nor does it assess vaccine effectiveness, including whether a vaccine prevents severe disease, hospitalisation or death.

Health and Social Care Secretary Matt Hancock said:

These findings shed more light on rates of antibodies across the UK and among different groups, as we continue to strengthen our understanding of COVID-19.

It is fantastic to see over 90% of people surveyed would accept or had already accepted a vaccine, as we continue to expand the roll-out.

I urge anyone who has been invited for a vaccine to book an appointment. And while we are seeing rates of the virus gradually

decline it is important we all hold our resolve and follow the rules as we deliver on our cautious but irreversible approach to easing lockdown.

The key findings from the report are:

- over 154,000 participants took the antibody test, with 13.9% testing positive for antibodies among vaccinated and unvaccinated people
- antibody prevalence in unvaccinated people remains highest in London (16.9%), and in people of black (22.1%) and Asian (20%) ethnicities, and those aged 18 to 24 years (14.5%)
- over 17,000 participants said they had received one or more vaccine doses, with the majority receiving the Pfizer/BioNTech vaccine
- after 2 doses of the Pfizer/BioNTech vaccine, the proportion of participants who tested positive for antibodies was high across all age groups (100% in those under 30, and 87.9% in those 80 and over)
- for individuals who received a single dose of the Pfizer/BioNTech vaccine after 21 days, the proportion testing positive for antibodies was 94.7% in those under 30 – the proportion testing positive was lower at older ages, ranging from 73.7% at 60 to 64 years to 34.7% in those aged 80 and over
- overall vaccine confidence is high, with 92% having accepted or planning to accept a vaccine offer
- vaccine confidence varied by age, sex and also by ethnicity, highest in those of white (92.6%) and lowest of black (72.5%) ethnicity

The findings on antibody response following a single dose align with existing research that suggests those aged over 80 take longer to develop an antibody response to infection and the immune response is not as strong.

Antibodies are just one component of the body's immune response produced by COVID-19 infection or vaccination. Vaccines also induce T-cell related protection, independent of antibody production. T-cell responses may vary significantly between vaccines and may be particularly important in influencing duration of protection.

The Joint Committee on Vaccination and Immunisation (JCVI) noted that in Pfizer's clinical trial, protection against coronavirus was very high (89%) between 14 and 21 days after vaccination, despite very low levels of antibodies measured at the same time. This suggests that early antibody response does not correlate with clinical protection.

There is still insufficient information to say how protected a person may be from COVID-19 based on a positive antibody test result, and it does not mean they are immune. It is vital everyone continues to follow the rules in order to keep themselves and those around them safe.

Data from a Public Health Scotland study published this week has found that hospital admissions 4 weeks after the first dose were reduced by 85% and 94% for the Pfizer and AstraZeneca jabs respectively. Public Health England's SIREN study also shows good evidence that the Pfizer/BioNTech vaccine helps

to interrupt virus transmission, and that one dose is effective against the virus from 3 to 4 weeks after the first dose.

PHE's analysis of routine testing data also shows that one dose is 57% effective against symptomatic COVID-19 disease in those aged over 80. This effect occurs from about 3 to 4 weeks after the first dose. Early data suggests the second dose in over 80s improves protection against symptomatic disease by a further 30%, to more than 85%.

Professor Helen Ward, lead author for the REACT study of population prevalence, said:

It is very encouraging to see that uptake and confidence in the vaccination programme is so high, and that most people develop a detectable antibody response after one dose. Our findings suggest that it is very important for people to take up the second dose when it is offered. We know that some groups have concerns about the vaccine, including some people at increased risk from COVID-19, so it is really important that they have opportunities to discuss these and find out more.

Kelly Beaver, Managing Director – Public Affairs, Ipsos MORI said:

It's deeply encouraging to see such high levels of positivity towards receiving a COVID-19 vaccine among the population in our latest REACT study. That combined with our findings on the antibody response in those vaccinated show a cause for cautious optimism.

The study uses a finger prick device to use at home and can tell someone if they tested positive for antibodies in under 15 minutes. Some studies, including the PHE antibody surveillance studies, take a larger sample of blood to analyse in the lab.

The REACT antibody data follows preliminary data from PHE on vaccine effectiveness showing clear protection from the first vaccine dose, particularly against severe disease. It supports the decision to maximise the number of people vaccinated with a single dose and delay a second dose.

The government and the NHS are working hard to encourage people in all communities to come forward and accept the offer of a jab. This includes working closely with the NHS and faith and community groups to support and reach people who are eligible for a vaccine by providing advice and information in over 13 languages. Over £23 million funding has already been allocated through the Community Champions scheme to 60 councils and voluntary groups across England to expand work to support those most at risk from COVID-19 and boost vaccine take-up.

[Download the REACT-2 round 5 pre-print report on Imperial College London's website](#)

Key findings between 26 January and 8 February

Overall prevalence of antibodies

- Over 154,000 participants took the antibody test, with an overall prevalence of antibodies of 13.9% among vaccinated and unvaccinated people
- Antibody prevalence in unvaccinated people remains highest in London (16.9%), and in people of black (22.1%) and Asian (20%) ethnicities, and those aged 18 to 24 years (14.5%)
- Antibody prevalence by employment type for participants who are unvaccinated was highest in healthcare and care home workers at 21.9% and 24.2% respectively. The prevalence among those working in public transport (12.2%), police and prison (11.9%), education (11.4%), childcare (11.4%) and personal care (11.1%) were also higher than in non key-workers (7.8%)

Vaccination

- Over 17,000 participants said they had received one or more vaccine doses. The majority received the Pfizer/BioNTech vaccine
- By age, the proportion vaccinated was highest in those aged 80 years or older (93.9%) followed by those aged 75 to 79 years (64.0%)
- By occupation, the proportion vaccinated was 68.9% in healthcare workers and 60.5% in care home workers
- After 2 doses of the Pfizer/BioNTech vaccine, the proportion of participants who tested positive was high across all age groups (100% in those under 30, and 87.9% in those 80 and over)
- For individuals who received a single dose of Pfizer/BioNTech vaccine after 21 days or more, the proportion testing positive was 94.7% in those under 30, and in those who had previously had COVID-19 (confirmed or suspected) at 88.8%. The proportion testing positive was lower at older ages ranging from 73.7% at 60 to 64 years to 34.7% in those aged 80 and over
- There were too few individuals reporting AstraZeneca/Oxford vaccine doses more than 21 days earlier to analyse the antibody responses

Vaccine confidence

- Overall vaccine confidence is high, with 92.0% having accepted or planning to accept a vaccine offer. This varied by age, being higher in older groups at 99.0% of those 80 years or older compared with 83.4% of 18 to 29 year olds. This varied by age at 93.6% in males and 90.7% in females
- Vaccine confidence also varied by ethnicity, being highest in those of white ethnicity (92.6%) and lowest among those of black ethnicity (72.5%)
- Vaccine confidence was slightly lower in care home (88.5%) than healthcare (92.1%) workers
- The 3 most commonly selected reasons for vaccine hesitancy were wanting to wait and see how the vaccine works, worried about long-term health effects, and worried about side effects

- Other common concerns shown in free-text comments were around current and planned pregnancy, future fertility and specific allergies or comorbidities