IMPERIAL_EM

COVID INFORMATION GROUP

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CoVID-19 Vaccines: FAQs

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"I'M NOT AT RISK, I DON'T NEED IT"

HERD IMMUNITY:

- To defeat CoVID-19, **our best chance worldwide is to achieve herd immunity**. This is resistance to the spread of an infectious disease within a population that is based on **pre-existing** immunity of a **high proportion** of individuals, either as a result of **previous infection** or **vaccination**.

Vaccine protection is both for yourself and for others

- In this way, it stops the disease from circulating.
- Imagine the orange figures are at-risk populations, and those who choose to get vaccinated are in blue.
  - At-risk populations include **those who cannot have the vaccine** because their immune system is too weak: neonates, patients with immunosuppression eg., chemotherapy. Others may be **non-responders** to the vaccine. And the **elderly** are particularly at-risk, as their immune system is less effective.
- **Those who get vaccinated will protect all these people.**
- Diseases previously thought to have disappeared, **have made a comeback** because of falling herd immunity eg., measles

"WHAT IF I JUST HAVE THE ONE DOSE?"

The remarkable effectiveness data in the other CIG vaccines poster are possible **only after two doses of the vaccine**

- Pfizer/BioNTech 52% (1st dose): 95% (both doses)
- Oxford/AstraZeneca 59% : 90%
- Moderna 80-90% : 94.1%

One dose does not confer sufficient immunity

"IT WAS DEVELOPED TOO FAST, SO IT MAY NOT BE SAFE"

There are many safety measures put in place that are ongoing even after a vaccine is approved for use.
Before a clinical trial commences, it must have approval. Safety reporting processes are a key factor in granting ethical approval
During a clinical trial, if an unexpected adverse event is noted, this is carefully reported and the trial co-ordinating centre can quickly decide whether or not there is a true safety concern.
After launch of the vaccine, rigorous safety systems monitor closely for adverse events, which can sometimes identify adverse events that may not have been seen in clinical trials. This is critical to ensure that benefits continue to outweigh the risks. Ongoing assessment of safety is a standard process with any vaccine or medication.

The remarkable speed with which the trials have been completed does NOT mean the vaccines are unsafe

"mRNA? SOUNDS DODGY"

mRNA=**messenger RNA**, single strand DNA, found in all human cells
The mRNA is **coated** in a lipid globule (so it can get in to the cell), and after injection it either enters arm muscle cells in the arm, white blood cells in the axillary lymph node.
The mRNA **stimulates the cells to generate proteins** which resemble (but are NOT) the **spike protein** of SARS-CoV-2, the virus which causes CoVID-19
This naturally-coded protein then **primes the host immune system**
The injected mRNA **degrades & disappears within a week.**
mRNA is unable to alter DNA (in fact, it's DNA which codes for mRNA during protein synthesis, not the other way round)

"IT WON'T WORK FOR VERY LONG ANYWAY."

We currently do not know how long immunity would last. Perhaps a booster shot would be required, a fairly simple solution
Some diseases **don't** have lifetime immunity eg., the common cold, whereas some **do**, eg., measles
What we do know is that **without vaccination there is very little chance of defeating the virus**

"THE VACCINE WASN'T TESTED ON PEOPLE OF COLOUR"

This is not correct

People of Colour (POC) were actively sought out precisely to address this concern, and because of worse reported outcomes in POC in CoVID-19. **The percentage of POC in the UK = 13%**

- Pfizer/BioNTech: **17.1%** of participants were POC
- Oxford/AstraZeneca: **17.3%**
- Moderna: **37%**

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