

## Frequently Asked Questions - Covid Vaccination and the Christian Response

- **Is Covid19 really that bad?**

In the past year worldwide, there have been over 114 million people infected and over 2.5 million deaths from Covid; 22 million people are currently infected, with 90,000 of these in serious or critical condition in hospitals. While Covid statistics are worse for those aged over 65, 5% of Covid deaths (125,000 people) have been aged under 45. Aotearoa New Zealand, while not experiencing the large waves of infection seen in other countries, is actively fighting Covid19 - the best protection for our communities in the future, even as people of faith and especially as people of faith, is to be vaccinated so we have immunity against any Covid infection we encounter. **Covid19 is a virus that kills – our decision about vaccination can mean life or death for ourselves and others.**

- **What are the four Covid19 Vaccines on order for New Zealand?**

The NZ Government has ordered four different Covid19 vaccines, produced using 3 different scientific technologies. This is enough for New Zealand and our Pacific neighbours, and has given us flexibility depending on the vaccines' performances in other countries that use them before we do, and their future availabilities. Specifically, these vaccines are:

- 1) **Pfizer-BioNTech** (EU) as of March 8, NZ has ordered enough for 5 million people. Approved by NZ Medsafe, vaccinations of MIQ and border staff are underway. Requires -80°C storage, 2 doses several weeks apart.
- 2) **Oxford-AstraZeneca** (UK) for 3.8 million people, approval pending, 4°C storage, 2 doses several weeks apart.
- 3) **Janssen** (Johnson and Johnson, US) for 5 million people, approval pending, 4°C storage, just 1 dose.
- 4) **Novavax** (US) for 5.36 million people, approval pending, 4°C storage and 2 doses several weeks apart.

- **How do these different vaccines work?**

All four vaccines use only the spike protein of the Covid19 virus to prompt an immune response in a vaccinated person. This spike protein is a characteristic feature of the outer coating of the Covid19 virus, and on its own is key to initiating an effective immune response after a vaccination. A vaccinated person's immune response involves immediate attack on the 'invading' spike protein by antibodies and immune cells, and creates an immune memory of the Covid19 spike protein for protection against future infections. The differences between the vaccines are whether it is the DNA or RNA information for the spike protein or the actual pre-made spike protein being used as the active ingredient of the vaccine.

1) The **Pfizer-BioNTech vaccine** is made with a newer **mRNA technology**, where the active part of the vaccine is the Covid19 spike mRNA. When used in a vaccine, this mRNA is able to enter our cells local to the injection site, and prompt these cells to produce spike protein which then starts an immune response against the virus. Importantly, after the spike protein is produced according to the vaccine mRNA information, the mRNA is quickly destroyed by our cell enzymes.

2) and 3) Both the **Oxford- AstraZeneca vaccine and Janssen vaccine** are produced using **viral vectors**, where DNA for the Covid19 spike protein is exchanged with DNA inside a harmless virus such as the common cold adenovirus. The altered adenovirus containing the Covid spike DNA is injected as the active part of the vaccine and used by the vaccinated person's cells to produce spike proteins to alert their immune system

4) The **Novavax** vaccine is made using traditional **protein-adjuvant technology** where the spike protein is first made in the lab, and bonded to a large plant molecule (adjuvant) that is known to further boost the immune response of the vaccinated person. This Spike protein-adjuvant molecule then is the active ingredient of the Novavax vaccine.

- **Are any of these vaccines live or infectious?**

Each vaccine contains either the information (as mRNA or DNA) or pre-made protein for just the Covid19 spike protein, and **because there is no intact or live Covid19 virus present in the vaccine, the vaccine cannot give you Covid.** None of the vaccines contain any human or other cellular material from their production.



- **Have these vaccines been developed too quickly to be safe?**

Several countries have urgently worked together, sharing information and building on years of past research, to manufacture Covid19 vaccines in historically record time. This **global sharing of technologies has allowed speed in vaccine production, while still ensuring full and carefully testing.** In New Zealand, Medsafe is responsible for checking safety and effectiveness of medicines from all available global information, before allowing their use in this country. Worldwide, there is a rapidly increasing amount of data being generated from the millions of people now vaccinated, as well as from the rigorous phase 3 human clinical trials required for each vaccine before commercial manufacture is permitted. Since NZ is in the fortunate position of having contained Covid19 infection, we have been able to observe how other countries go with their vaccinations before beginning our vaccination, allowing Medsafe to fully assess vaccine applications informed by a very large body of evidence.

- **Can DNA or RNA vaccines change our own human DNA when injected as a vaccine?**

**Vaccines cannot affect or interact with our DNA when we are vaccinated, nor become part of our own DNA.**

After vaccination, Covid spike proteins are made inside the cells local to the injection site, and the RNA or DNA from the vaccine is then destroyed by our own cell enzymes, as would happen with any other viral DNA or RNA.

- **What is the ethical implication of a vaccine made using cells associated with a historical abortion?**

Both the Oxford-AstraZeneca and Janssen vaccines are produced using human embryonic cell-lines (HEK293 and Per.C6) that act as laboratory cell factories. Human embryonic cell-lines are the best cells to produce human vaccines, while embryonic cells are valuable as they can divide without limit. HEK293 cells were first used in 1973 in the Netherlands from the kidney cells of a legally aborted human foetus, and this cell-line has proved to be an essential tool worldwide for vaccine production such as rubella, chickenpox, shingles and cystic fibrosis. Likewise, the Per.C6 cell-line originated using retinal cells from a human foetus in 1985.

It is useful to ethically weigh the lifesaving and ongoing value to human health of these vaccines produced or tested with a small number of available human embryonic cell-lines, with the compromise that the original source of each cell-line was a single aborted foetus. To be considered in this balance:

- i) laboratory use was not the reason for either of these two abortions
- ii) after production of viral vector spike protein, no human foetal cells or cell parts remain in the final vaccine.
- iii) while only Oxford-AstraZeneca and Janssen vaccines are produced using human embryonic cell-lines, Pfizer-BioNTech and Novavax have been tested at some stage using human embryonic cell-lines
- iv) the Vatican has advised the Catholic church that **a greater good comes from using a vaccine if there is not an alternative, even if the vaccine has ethically compromised origins.**

(For more info see: [www.interchurchbioethicscouncil.org.nz](http://www.interchurchbioethicscouncil.org.nz) Covid19 vaccines and their link with abortions)

- **What is the urgency to be vaccinated if I am young and healthy?**

In order to **provide protective herd immunity** (where the virus cannot infect enough people to keep replicating itself), **70-90% of people in a population need to be vaccinated.** A recent poll showed that currently 70-75% of New Zealanders would be willing to be vaccinated, while 20% were undecided. Older people and immuno-compromised people are more susceptible to dying from Covid19, but younger and healthy people are still vulnerable to being infected, transmitting Covid19 to others and suffering from debilitating long-term Covid19 effects. **Our individual vaccination decision very much affects others as well as ourselves.**

- **What is our role and response as Christians and church communities?**

- be informed and proactive about sharing factual, evidence-based information with others - **sharing truth rather than misinformation so that Covid vaccination is fully understood by everyone.**
- consider the importance of **the life-saving benefit to all by being vaccinated against Covid.**
- use our unique influence for many parts of our New Zealand society, reaching corners of our communities where other communications may not reach, **promoting vaccine equity and access for everyone.**
- be **witnesses of care in our communities** by using effective church communication based on factual information about Covid vaccination, openly discussing any ethical questions being asked, and assisting health officials in any way when it's our turn to be vaccinated.

