

**- Vaccination**

## Long-term side-effects of Covid vaccine

Any side effects from the vaccine happen within days and weeks, not years (and it's been 18 months). Hannah Martin writes.

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Some people who are still deciding whether or not to get the Covid-19 vaccine may be unsure and hesitant because they're concerned about unknown side effects popping up in the long-term.



They also might have heard that clinical trials for the Pfizer and other Covid-19 vaccines are ongoing – follow-up research for Pfizer, for example, won't be complete until early 2023. If this is you, you might be wondering: is it just safer to wait and see?

It is true that reports of new side effects can sometimes take months to emerge in the general population. However, this isn't because the adverse events themselves take a long time to occur after vaccination – they don't.

Instead, it's because some side effects are so uncommon that they can't be detected in clinical trials, which typically involve thousands of people. Extremely rare reactions to Covid-19 vaccines, such as myocarditis, have only emerged after the vaccine had been given to many millions of people.

However, these and other adverse events appear soon after a person has been vaccinated – not years down the road.

Vaccinologist Helen PetousisHarris says it's important to remember that every vaccine is new when it is introduced. There is never 10 years' worth of data to rely on when a new vaccine is developed, because it hasn't been widely used until then.

Vaccine history shows there are "no effects that suddenly spring up years and years down the track", Petousis-Harris says. This has not happened with any vaccine, and there is no mechanism for this to happen.

Take for example the Janssen vaccine – after about 7 million doses were administered in the US, and about 20 million doses in the UK, the vaccine was found to be linked to a very rare blood clot. But the blood clots themselves occurred within three weeks of vaccination. It is also important to note that we do have long-term data on Covid-19 vaccines, and a lot of it.

The first participants in clinical trials, such as the 43,000 people enrolled in Pfizer's phase 3 clinical trial, are now a year and a half down the track. 6.13 billion doses of Covid19 vaccines have been administered to people around the world. 44.5 per cent of the world's population has received at least one dose, and 25 million doses are administered every day.

From what we know already, serious side effects that could cause a long-term health problem are “extremely unlikely” following any vaccination, including Covid-19 vaccination, the CDC states.

The one exception to this is the potential for enhanced disease – where a vaccinated person experiences more severe disease than someone who has not been vaccinated.

This is extremely unlikely but is a known phenomenon, which has been seen in three vaccines in the past: an old measles vaccine (not used today), an experimental RSV vaccine in the 1960s, and a dengue fever vaccine (still in use).

The potential for enhanced disease is studied before a vaccine reaches humans. If it was going to happen, you would expect to see it in clinical trials.

With billions vaccinated and lots of disease circulating, if this was going to happen with Covid-19 vaccines “it would have happened by now”, Petousis-Harris says.

All the evidence we have suggests this is very unlikely with Covid-19 vaccines, as vaccinated people have been found to have much milder disease if they do become infected with the virus that causes Covid-19.

Reporting disclosure: Dr David Murdoch, an infectious diseases expert at Otago University and a member of The Whole Truth: Covid19 Vaccination expert panel provided expert advice for this post, along with University of Auckland associate professor and vaccinologist Dr Helen PetousisHarris. It was reviewed by The Whole Truth: Covid-19 Vaccination expert panel member Dr Dianne Sika-Paotonu, an immunologist and senior lecturer in pathology and molecular medicine at Otago University.