

Moderna Vaccine – What is it and why do you want it?

Most people recognize the names Pfizer and Astra-Zeneca, the 2 most common COVID vaccines in Canada. Moderna, is still almost unknown to many Canadians despite having been approved back in December. This is causing some people to refuse a Moderna vaccination, preferring to wait, sometimes weeks, for a dose of the Pfizer vaccine to become available, leaving them at an unneeded risk.

The Moderna vaccine is an mRNA vaccine, just like Pfizer. They both teach the body to make antibodies to the COVID virus spike protein. Pfizer, however, is a large, well-known multi-national pharmaceutical company. Moderna, was a small US company that specialized in mRNA technology. They have been researching, designing and testing mRNA-based vaccines and medications for over 10 years before COVID arrived. So, they had the expertise and experience to rapidly develop and test a COVID vaccine when needed, but not the international resources for worldwide distribution. Most of their initial production, more than 100 million doses, were purchased by the US government leaving little to send elsewhere. This vaccine had been so effective there, that US government pre-ordered 200 million booster doses of a modified version designed to protect against new and unknown variants.

US studies show that Pfizer and Moderna work equally well against all COVID variants. In fact, in a side-by-side comparison, it is hard to tell the difference between them. Even the side effects, which are usually mild, are the same. There is no risk of blood clots from either Moderna or Pfizer. However, like Pfizer, a few people, mostly young men, have developed myocarditis, which is an inflammation of the heart muscle, a few days after being vaccinated. This has mostly been a mild condition, causing some chest pain, a fast heartbeat, shortness of breath and tiredness. It is usually treated with bed rest and anti-inflammatory medications, and most people recover completely in a few days.

All vaccine companies are struggling with a worldwide shortage of the materials needed to make, package, ship and administer vaccines. Fortunately, the Moderna and Pfizer vaccines are so similar that they are essentially interchangeable. This means we can, if needed, give people a second dose of whichever vaccine is currently available. Previously, a single dose of any of our vaccines gave you excellent protection from COVID, but with the Delta variant, we need to get those second doses into people as soon as possible. This new variant is even more transmissible than the previous ones and twice as likely to cause severe illness. It can also infect people who have only had a single shot. Fortunately, you are still extremely well protected 2 weeks after your second shot – whether that is with Pfizer, Moderna or for those who choose, Astra-Zeneca.

COVID vaccines are a rare, precious, lifesaving, global resource. Canada is privileged to have access to multiple safe and effective vaccines. We cannot afford to waste a single dose. Refusing your shot leaves you at risk and makes it harder to get others vaccinated. We have done an amazing job so far, let's keep it up.

Kristin Morrison, M.D., F.R.C.P.C. (Pediatrics)