

Vaccines

Vaccines(usually 1 or 2 injections spaced a few weeks apart) are designed to prevent or at least reduce the risk of catching a specific infection (usually a virus because other medications are generally ineffective against viruses) Vaccines have virtually eliminated e.g. polio, smallpox, tetanus and whooping cough from our society. These infections and others posed serious risks to life last century.

Normally if your body gets invaded by a harmful virus, your immune system takes a number of days to fire up and produce counter measures such as antibodies. Meanwhile the virus has had time to multiply and become established within your body. Then a battle ensues between the virus and your antibodies causing fever, aches and pains, headaches etc with which we are familiar when we get a good dose of ‘flu’.

A vaccine is a way of stimulating your body to produce antibodies against the particular infection. Although these antibodies don’t persist, some of your T-cells (white blood cells) retain a memory of how to produce this specific antibody so that now if you become infected, your antibodies will fire up almost immediately. Certainly before the virus has a chance to get established.

No vaccine is 100% effective, but most are very good so that a few people may get a much milder version of the infection. Many viruses have an ability to change over time(mutate). if this change is big enough, then the vaccine loses its effectiveness and the vaccine would need to be upgraded (you would need to be re-vaccinated).

There are two main types of vaccine, live vaccines and those made from dead bits of viral protein. Live vaccines such as smallpox or yellow fever deliberately give you a mild dose of infection to stimulate antibodies without making you particularly unwell. These vaccines have a higher risk profile and can be dangerous for people who are immunocompromised.(e.g. take cortisone, prednisone, or immune suppressive drugs, or who have lost their spleen). The “dead” vaccines such as Covid-19 cannot give you an infection however mild and have a very safe profile. Serious allergies(anaphylaxis) occurs somewhere between 2-10 per one million injections. It usually would occur within half an hour of injection and is very treatable with early diagnosis. So don’t be alone straight after having the vaccine. Lower limb paralysis(Guillain-barre disease) occurs about one per million and may be permanent.(Pretty good odds compared to Covid-19 death rate of about 2%)

As we age our immune system is not as strong, so that it is possible that the vaccine may not be quite as effective, but it will certainly reduce the impact of the disease if you are unlucky enough to be one of the few people to still get infected.

Some conditions such as blood clotting occur spontaneously in the community, so some people who have been vaccinated will get blood clotting. In order to blame the vaccine for a particular side effect you would need to show that the vaccinated group gets that side effect at a significantly higher rate than a similar non-vaccinated group. As I write this, more than 10 million people have been vaccinated world wide and we are yet to hear of unexpected serious complications. It appears to be very safe.

My suggestion, **have the jab when it is available**, but do tell the doctor if you take medications or have any underlying medical conditions.

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