

KISS: COVID Vaccination

This KISS provides information on how we can use the current vaccines and anticipated questions from our patients (or ones they have already asked!). This does not replace required training for vaccinators.

KISS: Using the COVID Vaccines

Pfizer	AstraZeneca
mRNA vaccine coding for SARS-CoV-2 spike protein	Adenovirus vector-based carrying spike protein genetic sequence into cells
Storage: -80 to -60oC, once thawed store at +2 to +8oC for up to 5 days (NHSE currently say use within 3.5 days), or 2h at 25oC. Thawing takes 3h in fridge, or 30mins at 25oC for immediate use. Vaccine must be used within 6 hours of dilution.	Storage: +2 to +8oC for 6months. Once vial is opened use within 6h at room temperature or 48h if in fridge.
Package: 195 vials with 5 doses per vial = 975 doses per pack. Supplied with NaCl to dilute.	Package: comes in packs of 10 vials. Vial contains 8-10 doses.
Dose: vial should be diluted with 1.8ml of NaCl, then gently inverted 10x (do not shake). It should be off-white with no visible particulates. Each dose is 30mcg in 0.3ml of diluted product, each vial has 5 doses. Excess product should be discarded.	Dose: a single dose is 0.5ml. It does not require dilution but has to be drawn up in a 1ml syringe (which will be supplied with the vaccine). There may be excess product after the 8-10 doses are used. Do not use if discoloured or particulates.
Number of doses: 2, at least 21 days apart. For operational purposes 28 days may be preferred.	Number of doses: 2, at least 28 days apart.
Administration: IM in the deltoid is preferred, anterolateral thigh if very low muscle bulk. Use a 1ml syringe 23g/25ml needed (provided)	Administration: same, except 23 or 25g needle is fine.
Adverse Events: no significant safety concerns. ▶ Injection site pain >80% (usually not red/swollen) ▶ Fatigue >60% ▶ Headache >50% ▶ Fever with myalgia, arthralgia & chills 10-20% ▶ Lymphadenopathy <1%. ▶ AE severe enough to interfere with daily activity includes fatigue 4% and headache 2%.	Adverse Events: no significant safety concerns, rates of Sx decreased with age ▶ Injection site pain 61-88% ▶ Fatigue & headache 65-86% - short-lived, mild to moderate, unusual after 2nd dose ▶ Mild fever in 48h after 1st dose ~25% <55yo, 0%>55yo; none after 2nd dose

Contra-indications (both vaccines)

- *Very few people cannot receive these vaccines.*
- *Should not be given to people who have had:*
 - *A confirmed anaphylactic reaction to a previous dose of a COVID-19 vaccine*
 - *A confirmed reaction to any components of the COVID-19 vaccine*
 - This is tricky as the components have not been published either but note they do not contain egg like the flu vaccine as they are made using a different technique.
- *As of 9th Dec MHRA advise the Pfizer vaccine should NOT be given to patients with a history of significant allergic reaction to another vaccine, medicine or food until further notice.*
- *Not recommended in pregnant women or while breastfeeding.* This is not due to data indicating a safety concern, but insufficient evidence to routinely recommend use. With this in mind, women do not routinely need to be asked about LMP and pregnancy testing prior to vaccination is not required. Termination should not be recommended after inadvertent vaccination during pregnancy, but these cases should be reported and followed up by the Public Health Immunisation Department.

Precautions (both vaccines)

- Postpone if acutely unwell. In minor illness without fever/systemic features it is ok to give.

Frequently asked (already!!!) or anticipated questions

Can I choose which vaccine I get?

Not currently, we will have to get what we are given based on the availability of supplies. As on December 8th only the Pfizer/BioN-Tech vaccine has approval for use in the UK and will be rolled out first. It is anticipated that the AstraZeneca/Oxford vaccine will be approved within a handful of weeks and will be distributed shortly after.

Should I have the vaccine if I've already had COVID?

Yes. Given a number of uncertainties such as poor performance of tests (or no access) and durability of immunity after true infection it is recommended that eligible people still have the vaccine. In the data from the trials of the two current vaccines there has been no safety issues with people who have had COVID receiving the vaccine and it hasn't resulted in a bad reaction (i.e. from a 'primed' immune system).

Will the vaccine make me feel unwell?

You may experience mild side effects from the vaccines such as soreness at the injection site (usually the muscle of your upper arm like with the flu vaccination), headache, fatigue and mild fever. These happen in around half to three quarters of people and usually resolve in 2 days. Around 1 in 25 people with the Pfizer vaccine have side effects such as fatigue or headaches unpleasant enough to interfere with daily activities.

Will paracetamol effect the response?

If you do get troubling symptoms such as fever or pain it is ok to take paracetamol in the usual doses as required. Fever can be seen with the AstraZeneca vaccine but they report that paracetamol use does not affect the subsequent immune response.

I have long covid. Should I get the vaccine?

Prolonged symptoms of COVID is not a contra-indication to having the COVID vaccines, but national advice is that if people are seriously debilitated, still under active investigation, or have evidence of recent deterioration, deferral of vaccination could be considered. This is not really due to safety concerns, more that a change in those prolonged symptoms may be incorrectly attributed to the vaccine.

I am taking steroid tablets. Is the vaccine safe and will it be as effective?

There are very few people who cannot have the vaccines. It is safe in people who may be immunosuppressed as it is not a truly live vaccine. National guidance specifically identifies immunosuppressed people as a clinical risk group who should receive the immunisation, including those on high dose steroids, disease modifying and biologic therapies such as methotrexate and rituximab, anyone with haematological malignancy, anyone undergoing chemo- or radiotherapy, transplant recipients, and more. It is possible the vaccine may not make as strong an antibody response as for people who do not have immunosuppression but it is very likely to be better than having no vaccine. It remains important to follow current advice to avoid exposure to SARS-CoV-2 even after your vaccination.

I have angina. Can I have the vaccine?

Yes. Chronic heart disease, including ischaemic heart disease which requires regular medication, is an indication you are in a higher risk clinical group which should receive the vaccine. This also includes people with severe chronic respiratory disease (including people with asthma requiring continuous or frequent use of oral steroids to control symptoms or who have history of asthma attacks requiring hospital treatment - people with well controlled asthma are not considered higher risk), chronic liver, kidney or neurological disease or diabetes, including diabetes controlled by diet.

I'm taking warfarin. Can I have the vaccine?

Yes. People with bleeding disorders or those taking anti-coagulation medication can still have the vaccine if the clinician feels it can be given safely knowing your individual bleeding risk. It is still given intra-muscularly. If the bleeding disorder requires treatment such as clotting factor medicine for haemophilia, the vaccine should be scheduled for shortly after the treatment. People taking anti-coagulation can have the vaccine as long as they are stable. For those on warfarin as long as you are up to date with your regular testing and the last result was below the upper limit of your therapeutic range it should be safe to proceed. Use a 23 or 25g needle for the vaccination and apply firm pressure over the site for at least 2 minutes afterwards. Bruising may still occur.

Can I have other vaccines at the same time as the COVID vaccine?

This is not currently recommended. While it is likely to be safe, occasionally the immune response is less potent when some vaccinations are given together. Administering other vaccines with the COVID vaccines has not been tested so we do not know whether it would impact on the level of protection you might otherwise gain. It is therefore the preferred option that the COVID vaccine is not given within 7 days of previous vaccinations, however if you do attend it can still be considered if you are unlikely or unable to attend after the 7 days to avoid delay on your treatment.

What if I do not have the second dose on time?

Two doses of the same vaccine is required to produce a full immune response to SARS-CoV-2. It is recommended that this is given 4 weeks after the initial vaccination. We do not have data to give a definitive answer about the effect of a delay in your second dose. However, experience from other vaccines tells us that even with a delay, after the booster doses people will usually still develop good immunity. The main issue is that they will have been less protected during that delay than if they had already received the booster dose.

What if I have a different vaccine for my second dose?

The preferred option is that people have the same vaccine for both doses. However, it is possible that due to supply constraints this may not be possible. While this has yet to be tested with the two current vaccines, the good news is that it is thought where vaccines work via a similar process you should still get good protection even with different vaccines. The Pfizer and AstraZeneca vaccines both result in a specific part of the SARS-CoV-2 virus called the spike protein becoming recognised by your immune system to develop immunity. It is therefore felt that even with a dose of each of the currently available vaccines you are still likely to produce a good immune response.

I had the my first dose but then found out I am pregnant. Should I be worried?

Specific trials in pregnant women of the two COVID vaccines have not been carried out, but broadly there is no known risk from non-live vaccines (while the AstraZeneca vaccine contains live adenovirus this is non-replicating so cannot cause infection in the mother or developing baby). Nevertheless, given the lack of safety data the advice is avoid vaccination until after your delivery and not while you are breastfeeding. If you have had the vaccine the advice is to avoid pregnancy for 2 months. If you find out you are pregnant shortly after a dose of vaccine do not be alarmed. If you still need a 2nd dose this should be postponed until after delivery. There is no known risk to the fetus but as these are new vaccines it is recommended that you are followed by the national immunisation authority. We do not recommend termination of pregnancy in the event of inadvertent immunisation as adverse effects on the baby are thought to be very unlikely.

Can my child have the vaccination?

The vaccines have yet to be tested in children <12 years old (these trials are underway) and so have not been licensed for use in this group. Given the very low risk of COVID-19 infection to children they are not currently part of the national vaccination programme, however it may be that children with specific underlying medical conditions may be considered after the initial roll-out phase.

I have had a nasty reaction to my first COVID vaccine dose.

People with possible anaphylaxis after their 1st dose should not have further COVID-19 vaccinations. If you do have any adverse reaction after your vaccination you can report this to the Medicines and Healthcare products Regulatory Agency via their Yellow Card Scheme ([click here](#)) which collects data on side effects to help us understand medicines better and advise people about them more accurately in the future.

As with anything about the current COVID pandemic, these recommendations are currently accurate but may change as our experience of the disease and with the vaccinations grows.