

# COVID-19 Vaccination

On the 2nd December 2020, the MHRA (Medicines and Healthcare products Regulatory Agency) approved the first safe and effective COVID-19 vaccine in the UK from Pfizer/BioNTech.

## How is the vaccine given?

The vaccine is given in two separate injections, 21 days apart, in the upper arm.

## Is it really safe?

Yes. The MHRA is an independent body of expert scientists and clinicians who have carried out a rigorous analysis of the data from over 40,000 volunteers involved in the clinical trials before approving the vaccine as both safe and effective for public use.

The MHRA is recognised world-wide for its high standards and thorough protocols. Whilst developments have been fast, no short-cuts have been taken and the same attention to detail has been maintained as any of the other vaccines already approved in the UK.

## Why have developments been so fast?

Advances in research and technology over recent years means vaccines today can be manufactured much faster than previously. In addition, the unprecedented urgency and global nature of the pandemic has meant:

- Securing funding and recruiting clinical trial volunteers has been much quicker than normal
- The world's scientists, clinicians and public health experts have all been working together with the same shared goal allowing for much faster progress.

## How effective is it?

Over 90% which means 9 out of 10 people who receive the vaccine will be protected from COVID-19\*

Comparatively, the existing flu vaccine is about 40-60% effective in any one year, meaning only half of patients who receive the vaccine are protected from flu.

The World Health Organisation (WHO) stated a COVID vaccine that was even 50% effective would still be worthwhile so this vaccine is much more than we had hoped for.

\*The exception to this may be people who are immunosuppressed, for example, individuals on medications that suppress their immune system e.g. for certain rheumatological conditions, following an organ transplant or those undergoing chemo/radiotherapy. These patients can still have the vaccine but may not mount as an effective a response to it when compared to those with a healthy immune system.

## What's in the vaccine?

A small piece of genetic code (mRNA) that deteriorates within a few days - this will not alter your own DNA in any way but teaches your body to replicate one of the protein spikes that sits on the coronavirus. Once these spikes are circulating in your body they are recognised by your immune system as foreign and so it develops antibodies to attack them, which are then stored in your body's immune memory. This means if you were to come into contact with the coronavirus in the future your immune system would be able to mount a response to attack the virus much faster by releasing the antibodies it already knows how to make from this past memory and therefore overcome the coronavirus before you even experience any symptoms from the disease.

Importantly, the vaccine does not contain the coronavirus itself, just the protein spike that sits on the virus - this means you cannot get coronavirus from the vaccine.

### **How long does it take to develop immunity?**

Your body's immune response starts as soon as a week after receiving the first dose, however it is thought that the full immune response does not develop until up to four weeks afterwards.

### **How long will the immunity last?**

We do not yet know yet, as long term follow up of clinical trial volunteers is on-going. We are likely to hear more about this in the up-coming months.

### **What side effects are there?**

Common side effects include pain around the injection site, which may be accompanied by local swelling or skin reactions. Fever, headache, swollen glands, muscle/joint aches and chills are also common and are part of the body's normal reaction to mounting an immune response. These side effects are common to all vaccine injections and normally subside within a few days. They can be treated with paracetamol if needed.

Pfizer will continue to follow up on their clinical trial participants for two years after their second vaccination dose to ensure there are no long term problems with the COVID-19 vaccine. It is worth noting historically long term side effects of vaccines are rare.

### **Do I still need the vaccine if I've already had COVID-19?**

The body's natural immunity to COVID is very variable depending on the patient and we do not know how long it will last. Vaccination, on the other hand, tends to provide much more consistent and longer lasting immunity therefore if you are eligible we would recommend you have the vaccine even if you have already had COVID-19.

### **How soon after having COVID-19 can I have the vaccine?**

The current advice is to wait at least four weeks from the day you first develop symptoms of COVID-19 or from the date of a positive test if you have no symptoms before having the vaccine.

### **Do I still need to follow social distancing guidelines if I've had the vaccine?**

Yes, for two reasons:

1. To protect others  
Whilst the vaccine can protect the individual receiving it from COVID-19 we do not yet have enough evidence to say whether it can prevent transmission to another person. We are likely to know more about this in the near future as clinical trials are on-going.
2. To protect yourself  
There is a small chance, around 1 in 10, that you could still get symptoms if you contract the virus even if you have had the vaccine, as no vaccine can be 100% effective.

### **Am I eligible for the vaccine?**

At present you are eligible for the vaccine if you are a care home resident or worker, aged 80 or over or a frontline health or social care worker.

As the vaccination programme expands more groups will become eligible likely in the following order:

1. All those 75 years of age and over
2. All those 70 years of age and over and the clinically extremely vulnerable individuals
3. All those 65 years of age and over
4. All individuals aged 16 years to 64 years with underlying health conditions which put them at higher risk of serious disease and mortality
5. All those 60 years of age and over
6. All those 55 years of age and over
7. All those 50 years of age and over

You should be contacted directly once you are eligible for the vaccine.

### **Will there be enough of the vaccine for everyone who needs it?**

To date the UK government has ordered 7 different types of vaccine and expects to receive 355 million doses, including 100 million of the Oxford-AstraZeneca vaccine. Even with everyone needing two doses, that is still enough for everyone in the UK.

### **Can I have my flu jab at the same time?**

No it is advised any vaccine, including flu, is given at least 7 days apart from the COVID vaccine.

### **Is it mandatory?**

No, even if you are eligible, it is still your decision whether or not you choose to go ahead with vaccination.

### **Who should not have the vaccine?**

- People with a history of severe allergic reactions
- Pregnant or breastfeeding women, or those who wish to fall pregnant within 8 weeks of having the vaccine
- Children less than sixteen years old

These recommendations have been stated as a safety precaution whilst we collect more data in these groups. It is likely these precautions could be relaxed once we have more information.

Patients with bleeding disorders or those on anticoagulants (blood thinning medications) are often still eligible for the vaccine but have been advised to discuss with their doctor first.

### **Can I choose which vaccine I have?**

At present there is only one vaccine approved vaccine in the UK but even as more vaccines become available you are unlikely to be able to choose which vaccine you have on the NHS. Rest assured that whichever vaccine you are offered, it will have met the same strict safety requirements before approval.

In the future, paying for private vaccinations may become a possibility, in which case you may be able to choose which vaccine you have.

It is also highly likely that future studies will look at the differences between the vaccines and perhaps examine if certain vaccines are more effective in specific patient groups, in which case the type of vaccine offered to individual patients may change.

### **Will the vaccine protect against new strains of coronavirus?**

All viruses mutate over time as part of their natural life cycle, however this usually only results in small changes. The COVID vaccine has already been tested against a number of mutant strains in clinical trials and has been found to be effective. However, a new strain VUI-202012/01 in the south of London has recently raised concerns due to the fact that it appears to be more infectious/transmissible than previous strains, although fortunately the disease severity seems to have remain unchanged. Scientists are in the process of evaluating the effectiveness of the vaccine against this new strain. Whilst we do not have the results from these trials yet they are hopeful that the vaccines we currently have will continue to offer protection against it.