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Guidance

COVID-19 vaccination and blood clotting

Updated 4 May 2021

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The UK vaccination programme has been very successful with more than 30 million people vaccinated and more than 6,000 lives already saved.

What is the concern?

Recently there have been reports of a very rare condition involving blood clots and unusual bleeding after vaccination. This is being carefully reviewed but the risk factors for this condition are not yet clear.

Although this condition remains extremely rare there appears to be a higher risk in people shortly after the first dose of the AstraZeneca (AZ) vaccine. Around 4 people develop this condition for every million doses of AZ vaccine doses given.

This is seen slightly more often in younger people and tends to occur between 4 days and 2 weeks following vaccination.

This condition can also occur naturally, and clotting problems are a common complication of COVID-19 infection. An increased risk has not yet been seen after other COVID-19 vaccines but is being carefully monitored.

Benefits and risks of the vaccination

Age	Risk from COVID-19	Benefit of vaccination	Risk of vaccination
Over 50 years of age or having underlying medical conditions	Low – catching infection, passing on infection	1 dose – more than 80% reduction: deaths, hospitalisation, intensive care	Uncommon – sore arm, feeling tired, headache, general aches, flu like symptoms
	Moderate – Long COVID	2 doses – more than 95% reduction: deaths	Extremely rare – clotting problems
	Very high – hospitalisation, intensive care admission, death		
30 to 49 years of age	Low – hospitalisation, intensive care admission, death	1 dose – between 60% and 70% reduction: catching infection, passing on infection	Common – sore arm, feeling tired, headache, general aches, flu like symptoms
	Moderate – Long COVID	2 doses – more than 85% reduction: catching and passing on infection	Extremely rare – clotting problems

Age	Risk from COVID-19	Benefit of vaccination	Risk of vaccination
	High – catching mild infection, passing on infection		
18 to 29 years of age	Very low – hospitalisation, intensive care admission, death	1 dose – between 60% and 70% reduction: catching infection, passing on infection	Very common – sore arm, feeling tired, headache, general aches, flu like symptoms
	Moderate – Long COVID	2 doses – more than 85% reduction: catching and passing on infection	Extremely rare – clotting problems
	Very high – catching mild infection, passing on infection		

What to look out for after vaccination

Although serious side effects are very rare, if you experience any of the following from around 4 days to 4 weeks after vaccination you should seek medical advice urgently:

- a new, severe headache which is not helped by usual painkillers or is getting worse
- a headache which seems worse when lying down or bending over
- an unusual headache that may be accompanied by:
 - blurred vision, nausea and vomiting
 - difficulty with your speech
 - weakness, drowsiness or seizures
- new, unexplained pinprick bruising or bleeding
- shortness of breath, chest pain, leg swelling or persistent abdominal pain

What you should do next

Over 50 years of age or with underlying medical conditions

All older adults (including health and social care workers over 50 years of age), care home residents, health and social care workers^[footnote 1] and adults with certain medical conditions were prioritised in the first phase of the programme because they were at high risk of the complications of COVID-19.

The Medicines and Healthcare products Regulatory Agency (MHRA) and the Joint Committee on Vaccination and Immunisation (JCVI) advises that you should still receive any of the available COVID-19 vaccines^[footnote 2]. The benefits of vaccination in protecting you against the serious consequences of

COVID-19 outweigh any risk of this rare condition. You should also complete your course with the same vaccine you had for the first dose.

If your first dose was with **AZ** vaccine without suffering this rare condition you should have the second dose on time as you may still be at high risk of the complications of COVID-19. Having the second dose will give you higher and longer lasting protection and tends to cause less of the common side effects (including short lived headache).

If you are a healthy person over 30 to 50 years of age

The **MHRA** and the **JCVI** advises that all adults in this age group (including health and social care workers) should still receive any of the available COVID-19 vaccines.

The benefits of vaccination in protecting you against the serious consequences of COVID-19 outweigh any risk of this rare condition. You should also complete your course with the same vaccine you had for the first dose.

If you are a healthy younger person aged 18 to 29

The **MHRA** and the **JCVI** continue to monitor the benefits and safety of the **AZ** vaccine in younger people. You should carefully consider the risk to both you and your family and friends of COVID-19 before making a decision.

Currently **JCVI** has advised that it is preferable for people under 30 to have a vaccine other than **AZ**. If you choose to have another COVID-19 vaccine you may have to wait to be protected. You may wish to go ahead with the **AZ** vaccination after you have considered all the risks and benefits for you.

About the second dose

If you have already had a first dose of **AZ** vaccine without suffering any serious side effects you should complete the course. This includes people aged 18 to 29 years who are health and social care workers, unpaid carers and family members of those who are immunosuppressed. It is expected that the first dose of the vaccine will have given you some protection, particularly against severe disease.

Further information can be found at NHS.UK (<https://www.nhs.uk/conditions/coronavirus-covid-19/coronavirus-vaccination/>).

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1. This includes unpaid carers and family members of those who are immunosuppressed.
 2. If you have certain rare blood clotting disorders then you should discuss whether you can have the **AZ** vaccine with your specialist.

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