FONDAZIONE
PER LA RICERCA FARMACOLOGICA
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COVID-19 authorised vaccines

The **Human Medicines Committee (CHMP) at EMA** assessed the use of the following vaccines against COVID-19

Vaccine	Description	Status	Target population	Date of approval	Agreed PIP	More information
Nuvaxovid (also known as NVX-CoV2373)	Nuvaxovid contains a version of the spike protein that has been produced in the laboratory. It also contains an 'adjuvant', a substance to help strengthen the immune responses to the vaccine. When a person is given the vaccine, their immune system will identify the protein in the vaccine as foreign and produce antibodies and T cells against it. If the vaccinated person comes into contact with SARS-CoV-2 virus, the immune system will recognise the spike protein on the virus and be prepared to attack it.	Positive CHMP opinion recommending conditional marketing authorisation, granted by the European Commission	People aged from 18 years and older	December 2021	EMEA-002941-PIP01-20	• https://www.ema.europa.eu/en/news/ema-recommends-nuvaxovid-authorisation-eu • https://ec.europa.eu/commission/presscorner/detail/en/ip_21_6966

COVID-19 Vaccine Janssen Ad26.COV2.S	Ad26.COV2.S contains genetic instructions for the spike protein which is present on the surface of SARS-CoV-2 coronavirus. When a person is given the vaccine, their cells will read the genetic instructions and produce the spike protein. The immune system will then treat this protein as foreign and produce antibodies and T cells against it	Positive CHMP opinion recommending conditional marketing authorisation, granted by the European Commission	People aged from 18 years and older	March 2021	EMEA-002880-PIP01-20	• https://www.ema.europa.eu/en/news/ema-recommends-covid-19-vaccine-janssen-authorisation-eu • https://ec.europa.eu/commission/presscorner/detail/en/ip_21_1085
Vaxzevria (previously COVID-19 Vaccine AstraZeneca)	Vaxzevria is made up of another virus (adenovirus) that was modified to contain the gene coding the spike protein. The vaccine delivers the SARS-CoV-2 gene into cells that will use the gene to produce the spike protein. The immune system will treat this protein as foreign and produce antibodies and T cells against it. If, later on, the person comes into contact with SARS-CoV-2 virus, their immune system will recognise it and be ready to defend the body against it. The adenovirus in the	Positive CHMP opinion recommending conditional marketing authorisation, granted by the European Commission	People aged from 18 years and older	January 2021	EMEA-002862-PIP01-20	• https://www.ema.europa.eu/en/news/ema-recommends-covid-19-vaccine-astrazeneca-authorisation-euù • https://ec.europa.eu/commission/presscorner/detail/en/ip_21_306

	vaccine cannot reproduce and does not cause disease					
Spikevax (previously COVID-19 Vaccine Moderna)	Spikevax contains a molecule called messenger RNA (mRNA) which has instructions for making the spike protein. This is a protein on the surface of the SARS-CoV-2 virus which the virus needs to enter the human cells. When a person is given the vaccine, the cells will read the mRNA instructions and temporarily produce the spike protein. The person's immune system will then recognise this protein as foreign and produce antibodies and T cells to attack it. If, later on, the person comes into contact with the virus, their immune system will recognise it and be ready to defend the body against it. The mRNA from the vaccine is broken down shortly after vaccination	• Positive CHMP opinion recommending conditional marketing authorisation, granted by the European Commission • Extension of indication for to include use in children aged 12 to 15 (July 2021)	People aged from 12 years and older	January 2021	EMEA-002893-PIP01-20	• https://www.ema.europa.eu/en/news/ema-recommends-covid-19-vaccine-moderna-authorisation-eu • https://ec.europa.eu/commission/presscorner/detail/en/ip_21_3 • https://www.ema.europa.eu/en/news/covid-19-vaccine-spikevax-approved-children-aged-12-17-eu
Comirnaty	Comirnaty contains the genetic material (mRNA) encoding for the	• Positive CHMP opinion	People aged 12 years and older	December 2020	EMEA-002861-PIP02-20	• https://www.ema.europa.eu/en/news/ema

	spike protein and it is covered in small lipid particles that prevent the mRNA from being degraded. The human cells will read the genetic material and temporarily produce the spike protein. The immune system will then treat this protein as foreign and produce antibodies and T cells against it. The mRNA from the vaccine is broken down shortly after vaccination. If, later on, the person comes into contact with SARS-CoV-2 virus, the immune system will recognise it and be ready to defend the body against it	recommending conditional marketing authorisation, granted by the European Commission • Extension of indication for to include use in children aged 12 to 15 (May 2021)				-recommends-first-covid-19-vaccine-authorisation-eu • https://ec.europa.eu/commission/presscorner/detail/en/IP_20_2466 • https://www.ema.europa.eu/en/news/first-covid-19-vaccine-approved-children-aged-12-15-eu