

IPCRG practice driven answers on COVID-19 and respiratory questions



What evidence is available to support the recommended dosing intervals for the current SARS-CoV-2 vaccines?

What the research says

There are currently no systematic data to determine optimal dosing regimens for SARS-CoV-2 vaccines. Manufacturer-recommended dosing intervals for evaluation in clinical trials of current SARS-CoV-2 vaccines were selected based on expert opinion and informed by experience with other vaccines. Regulatory agencies base their marketing approval on the dosing intervals evaluated in the clinical trials conducted by the manufacturers. Clinical trials of current SARS-CoV-2 vaccines did not compare the effectiveness of the recommended (3–4 weeks) and extended dosing intervals (2–3 months). Some evidence is available for the Oxford-AstraZeneca vaccine in a relatively small number of individuals that a dosing interval of 2–3 months offered numerically higher efficacy than among those who received their second dose within 6 weeks (Voysey et al 2020).

What this means for your clinical practice

- SARS-CoV2 vaccination should be delivered in line with National guidance on dosing schedule.
- In exceptional circumstances, such as in the case of someone having a first inoculation in one country and then moving to another country, the recommendations summarised in the table below may be referred to.

Useful links and supporting references

Iacobucci G, Mahase E. Covid-19 vaccination: What's the evidence for extending the dosing interval? *BMJ* 2021;372:n18. Available at: <https://www.bmj.com/content/372/bmj.n18>. Accessed March 2021.

Voysey M, et al. Safety and efficacy of the ChAdOx1 nCoV-19 vaccine (AZD1222) against SARS-CoV-2: an interim analysis of four randomised controlled trials in Brazil, South Africa, and the UK. *Lancet* 2021;397:99-111. Available at: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7723445/>. Accessed March 2021.

WHO. Will COVID-19 vaccines provide long-term protection? Available at: <https://www.who.int/emergencies/diseases/novel-coronavirus-2019/covid-19-vaccines>. Accessed March 2021.

Status of SARS-CoV-2 Vaccines within WHO EUL/PQ evaluation process (17 March 2021)^a <i>Last updated: 23 March 2021</i>			
Name of vaccine Manufacturer	Regulatory Agency	Manufacturers recommended dosing schedule	Duration of immunity
BNT162b/COMIRNATY (INN tozinameran) <i>Pfizer, Biontech</i>	EMA	2 doses, 21 days apart	No data
AZD1222 <i>AstraZeneca, University of Oxford</i>	Core – EMA Non-COVAX	2 doses, 4–12 weeks apart ^b	No data
AZD1222 <i>AstraZeneca, University of Oxford, SK BIO</i>	MFDS Korea	2 doses, 4–12 weeks apart ^b	No data
Covishield (ChAdOx1_nCoV-19) <i>Serum Institute of India</i>	DCGI	2 doses, 4–12 weeks apart ^b	No data
SARS-CoV-2 Vaccine (Vero Cell), Inactivated <i>Sinopharm/BBIBP</i>	NMPA	2 doses (interval not yet specified; trials ongoing)	No data
SARS-CoV-2 Vaccine (Vero Cell), Inactivated <i>Sinovac</i>	NMPA	2 doses (interval not yet specified; trials ongoing)	No data
mRNA-1273 <i>moderna</i>	EMA	2 doses, 28–42 days apart	No data
Ad26.COV2.S <i>Janssen, Johnson&Johnson</i>	EMA	Single dose	No data
Sputnik V <i>The Gamaleya National Center</i>	Russian NRA	2 doses, 21 days apart	No data
Convidicea (Ad5-nCoV) <i>CanSinoBio</i>	NMPA	Single dose	No data
[Name not available] <i>Novavax</i>	EMA	2 doses (interval not yet specified; trials ongoing)	No data
EpiVacCorona <i>Vector State Research Centre of Virology and Biotechnology</i>	Russian NRA	2 doses, 21–28 days apart	No data
Recombinant Novel Coronavirus Vaccine (CHO Cell) <i>Zhifei Longcom, China</i>	NMPA	Under evaluation	No data
SARS-CoV-2 Vaccine, Inactivated (Vero Cell) <i>IMBCAMS, China</i>	NMPA	2 doses (interval not yet specified; trials ongoing)	No data
Inactivated SARS-CoV-2 Vaccine (Vero Cell) <i>Sinopharm/WIBP</i>	NMPA	2 doses, 21 days apart	No data

DCGI, Drugs Controlled General of India; EMA, European Medicines Agency; EUL/PQ, Emergency Use Listing/Prequalification; MFDS, Ministry of Food and Drug Safety; NMPA, National Medical Products Administration

^aList of vaccines obtained from: World Health Organization. <https://www.who.int/emergencies/diseases/novel-coronavirus-2019/covid-19-vaccines>. Accessed March 2021.

^bWHO recommends an interval of 8–12 weeks; additional dosing regimens under evaluation.

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