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IN BRIEF

Booster Doses of mRNA-Based COVID-19 Vaccines for All Adults

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On November 19, the FDA expanded the Emergency Use Authorizations (EUAs) for the mRNA-based COVID-19 vaccines manufactured by Pfizer/BioNTech (*Comirnaty*) and Moderna (*Spikevax*) to include administration of a booster dose for all adults ≥ 18 years old after primary immunization with either the same COVID-19 vaccine or a different one.¹ Booster doses of these vaccines were previously authorized only for select populations (age ≥ 65 years or persons at high risk for severe COVID-19). The EUA for the adenovirus-based vaccine manufactured by Johnson & Johnson was amended in October 2021 to include administration of a booster dose for all adults ≥ 18 years old after primary immunization with the Johnson & Johnson vaccine.^{2,3}

Note: On December 9, the FDA expanded the EUA of the Pfizer/BioNTech COVID-19 vaccine to include a booster dose for adolescents 16-17 years old; the CDC endorsed use of booster doses in this age group. A full review of such use will be published in a future issue.

The CDC recommends a COVID-19 booster dose for all adults ≥ 18 years old.⁴ A single booster dose of either **mRNA-based** COVID-19 vaccine can now be administered ≥ 6 months after a primary series of an mRNA-based vaccine or ≥ 2 months after a single primary dose of the Johnson & Johnson vaccine in all adults ≥ 18 years old.^{5,6} A single booster dose of the **adenovirus-based** COVID-19 vaccine can be administered to any adult ≥ 2 months after a single primary dose of the Johnson & Johnson vaccine or ≥ 6 months after a primary series of an mRNA-based vaccine (see Table 1).⁷ ■

Additional Content Available Online

COVID-19 Vaccine Dosing Recommendations and Comparison Chart
http://medicalletter.org/downloads/1636f_table.pdf
 COVID-19 Vaccine Comparison Chart
http://medicalletter.org/downloads/1621g_table.pdf

Table 1. Indications and Dosage Regimens for COVID-19 Vaccines^{1,2}

Indication	Pfizer-BioNTech (<i>Comirnaty</i>)	Moderna (<i>Spikevax</i>)	Johnson & Johnson/Janssen
Primary immunization	≥ 16 yrs: 30 mcg (0.3 mL) IM at 0 and 3 weeks 12-15 yrs: 30 mcg (0.3 mL) IM at 0 and 3 weeks 5-11 yrs: 10 mcg (0.2 mL) IM at 0 and 3 weeks	≥ 18 yrs: 100 mcg (0.5 mL) IM at 0 and 4 weeks	≥ 18 yrs: 5×10^{10} vp (0.5 mL) IM once
Additional primary dose for immunocompromised persons	≥ 12 yrs: 30 mcg (0.3 mL) IM ≥ 4 weeks after second primary dose	≥ 18 yrs: 100 mcg (0.5 mL) IM ≥ 4 weeks after second primary dose	Not authorized
Booster dose for all adults ³ after a Pfizer-BioNTech or Moderna primary series ⁴	30 mcg (0.3 mL) IM ≥ 6 months after last primary dose	50 mcg (0.25 mL) IM ≥ 6 months after last primary dose	5×10^{10} vp (0.5 mL) IM ≥ 6 months after last primary dose
Booster dose for all adults after a Johnson & Johnson primary dose	30 mcg (0.3 mL) IM ≥ 2 months after primary dose	50 mcg (0.25 mL) IM ≥ 2 months after primary dose	5×10^{10} vp (0.5 mL) IM ≥ 2 months after primary dose

vp = viral particles

- CDC. COVID-19 vaccine booster shots. November 29, 2021. Available at: <https://bit.ly/3GvAkUw>. Accessed December 9, 2021.
- The Pfizer-BioNTech vaccine has received full FDA licensure for use as a 2-dose primary series in patients ≥ 16 years old. All other recommendations are based on FDA Emergency Use Authorizations (EUAs).
- Adolescents 16-17 years old who completed a primary series with the Pfizer/BioNTech COVID-19 vaccine can receive a booster dose (30 mcg) of the same vaccine ≥ 6 months after the last primary dose.
- After either a 2- or 3-dose primary series.

1. FDA News Release. Coronavirus (COVID-19) update: FDA expands eligibility for COVID-19 vaccine boosters. November 19, 2021. Available at: <https://bit.ly/3FQS6S7>. Accessed December 9, 2021.
2. Booster doses of COVID-19 vaccines. *Med Lett Drugs Ther* 2021; 63:186.
3. FDA News Release. Coronavirus (COVID-19) update: FDA takes additional actions on the use of a booster dose for COVID-19 vaccines. October 20, 2021. Available at: <https://bit.ly/3vJJPLy>. Accessed December 9, 2021.
4. CDC News Release. CDC expands eligibility for COVID-19 booster shots to all adults. November 19, 2021. Available at: <https://bit.ly/3cFk1aJ>. Accessed December 9, 2021.
5. FDA. Fact sheet for health care providers administering vaccine (vaccination providers). Emergency Use Authorization (EUA) of the Pfizer-BioNTech COVID-19 vaccine to prevent coronavirus disease 2019 (COVID-19). November 19, 2021. Available at: <https://bit.ly/37fX1NG>. Accessed December 9, 2021.
6. FDA. Fact sheet for healthcare providers administering vaccine (vaccination providers). Emergency Use Authorization (EUA) of the Moderna COVID-19 vaccine to prevent coronavirus disease 2019 (COVID-19). November 19, 2021. Available at: <https://bit.ly/3nosyIA>. Accessed December 9, 2021.
7. FDA. Fact sheet for healthcare providers administering vaccine (vaccination providers). Emergency Use Authorization (EUA) of the Janssen COVID-19 vaccine to prevent coronavirus disease 2019 (COVID-19). November 19, 2021. Available at: <https://bit.ly/3e6KEaD>. Accessed December 9, 2021.

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