Table 1. Recommended COVID-19 vaccination schedule for people who are not moderately or severely immunocompromised by COVID-19 vaccination history, September 15, 2023

Updated (2023–2024 Formula) mRNA COVID-19 vaccines

Ages 12 years and older

COVID-19 vaccination history prior to updated (2023–2024 Formula) mRNA vaccine*	Updated (2023–2024 Formula) mRNA vaccine	Number of updated (2023–2024 Formula) mRNA doses indicated	Dosage (mL/ug)	Vaccine vial cap and label colors§	Interval between doses
Unvaccinated	Moderna	1	0.5 mL/50 ug	Dark blue cap; blue label	—
	Pfizer-BioNTech	1	0.3 mL/30 ug	Gray cap; gray label	—
1 or more doses any mRNA	Moderna OR	1	0.5 mL/50 ug	Dark blue cap; blue label	At least 8 weeks after last dose
	Pfizer-BioNTech	1	0.3 mL/30 ug	Gray cap; gray label	At least 8 weeks after last dose
1 or more doses Novavax or Janssen, including in combination with any mRNA vaccine dose(s)	Moderna OR	1	0.5 mL/50 ug	Dark blue cap; blue label	At least 8 weeks after last dose
	Pfizer-BioNTech	1	0.3 mL/30 ug	Gray cap; gray label	At least 8 weeks after last dose

*COVID-19 vaccination history refers to previous receipt of dose(s) of Original monovalent mRNA or bivalent mRNA vaccine or a combination of the two; for people ages 12 years and older, Novavax COVID-19 Vaccine dose(s), alone or in combination with any mRNA vaccine dose(s); and for people ages 18 years and older, Janssen COVID-19 Vaccine dose(s), alone or in combination with any mRNA vaccine dose(s).

†An **8-week** interval between the first and second COVID-19 vaccine (Moderna, Novavax, and Pfizer-BioNTech) doses might be optimal for some people as it might reduce the small risk of myocarditis and pericarditis associated with these vaccines.

‡The FDA EUA provides that children who transition from age 4 years to age 5 years during the Pfizer-BioNTech vaccination series complete the 3-dose series with updated (2023–2024 Formula) Pfizer-BioNTech COVID-19 Vaccine for ages 6 months–4 years, 0.3 mL/3 ug (yellow cap; yellow label). The FDA EUA provides that children who transition from age 4 years to age 5 years during the Moderna vaccination series complete the 2-dose series; there is no dosage change.

§Updated (2023–2024 Formula) Moderna COVID-19 Vaccine and updated (2023–2024 Formula) Pfizer-BioNTech COVID-19 Vaccine are also available in a prefilled, single-dose syringe for people ages 12 years and older.

People ages 65 years and older are recommended to receive 1 dose of updated (2023–2024 Formula) mRNA vaccine; an additional dose of COVID-19 vaccine is not recommended at this time. ACIP will continue to evaluate available data on the epidemiology of COVID-19 and the safety and effectiveness of COVID-19 vaccines. Based on these assessments, ACIP will update COVID-19 vaccine policy and guidance as needed, especially for people at increased risk for severe COVID-19, including people ages 65 years and older.

An 8-week interval between the first and second mRNA COVID-19 vaccine (Moderna, Pfizer-BioNTech) doses and between the first and second doses of Novavax COVID-19 Vaccine might be optimal for some people as it might reduce the small risk of myocarditis and pericarditis associated with these COVID-19 vaccines. Under the current COVID-19 vaccination schedule, the extended interval applies only to children ages 6 months–4 years, depending on their vaccination history (Table 1), and people ages 12 years and older receiving Novavax vaccine.

While absolute risk remains small, an elevated risk for myocarditis and pericarditis has been observed among mRNA COVID-19 vaccine recipients, particularly in males ages 12–39 years (see COVID-19 vaccination and myocarditis and pericarditis for additional information). Cases of myocarditis and pericarditis were identified in clinical trials of Novavax COVID-19 Vaccine and through passive surveillance during post-authorization use outside the United States.

A 3-week interval between the first and second doses of Novavax and Pfizer-BioNTech COVID-19 vaccines and a 4-week interval between the first and second doses of Moderna COVID-19 Vaccine continue to be recommended for people who are moderately or severely immunocompromised, adults ages 65 years and older, and in situations when the fullest possible protection needs to be achieved sooner (e.g., increased concern about an individual's higher risk for severe disease).

Table 2. Recommended COVID-19 vaccination schedule for people who are moderately or severely immunocompromised by COVID-19 vaccination history, September 15, 2023

Updated (2023–2024 Formula) mRNA vaccines

COVID-19 vaccination history prior to updated (2023–2024 Formula) vaccine[†]	Updated (2023–2024 Formula) mRNA vaccine	Number of updated (2023–2024 Formula) mRNA doses indicated[‡]	Dosage (mL/ug)	Vaccine vial cap and label colors[§]	Interval between doses
Unvaccinated	Moderna	3	0.5 mL/50 ug	Dark blue cap; blue label	Dose 1 and Dose 2: 4 weeks Dose 2 and Dose 3: At least 4 weeks
	Pfizer-BioNTech	3	0.3 mL/30 ug	Gray cap; gray label	Dose 1 and Dose 2: 3 weeks Dose 2 and Dose 3: At least 4 weeks
1 dose any Moderna	Moderna	2	0.5 mL/50 ug	Dark blue cap; blue label	Dose 1: 4 weeks after last dose Dose 1 and Dose 2: At least 4 weeks
2 doses any Moderna	Moderna	1	0.5 mL/50 ug	Dark blue cap; blue label	At least 4 weeks after last dose
1 dose any Pfizer-BioNTech	Pfizer-BioNTech	2	0.3 mL/30 ug	Gray cap; gray label	Dose 1: 3 weeks after last dose Dose 1 and Dose 2: At least 4 weeks
2 doses any Pfizer-BioNTech	Pfizer-BioNTech	1	0.3 mL/30 ug	Gray cap; gray label	At least 4 weeks after last dose
3 or more doses any mRNA vaccine	Moderna OR	1	0.5 mL/50 ug	Dark blue cap; blue label	At least 8 weeks after last dose
	Pfizer-BioNTech	1	0.3 mL/30 ug	Gray cap; gray label	At least 8 weeks after last dose
1 or more doses of Novavax or Janssen, including in combination with any mRNA vaccine dose(s)	Moderna OR	1	0.5 mL/50 ug	Dark blue cap; blue label	At least 8 weeks after last dose
	Pfizer-BioNTech	1	0.3 mL/30 ug	Gray cap; gray label	At least 8 weeks after last dose

EXTENDED CARE

Description of Moderate and Severe Immunocompromising Conditions and Treatment

Moderate and severe immunocompromising conditions and treatments include **but are not limited to**:

- Active treatment for solid tumor and hematologic malignancies
- Hematologic malignancies associated with poor responses to COVID-19 vaccines regardless of current treatment status (e.g., chronic lymphocytic leukemia, non-Hodgkin lymphoma, multiple myeloma, acute leukemia)
- Receipt of solid-organ transplant or an islet transplant and taking immunosuppressive therapy
- Receipt of chimeric antigen receptor (CAR)-T-cell therapy or hematopoietic cell transplant (HCT) (within 2 years of transplantation or taking immunosuppressive therapy)
- Moderate or severe primary immunodeficiency (e.g., common variable immunodeficiency disease, severe combined immunodeficiency, DiGeorge syndrome, Wiskott-Aldrich syndrome)
- Advanced HIV infection (people with HIV and CD4 cell counts less than 200/mm^3, history of an AIDS-defining illness without immune reconstitution, or clinical manifestations of symptomatic HIV) or untreated HIV infection
- Active treatment with high-dose corticosteroids (i.e., 20 mg or more of prednisone or equivalent per day when administered for 2 or more weeks), alkylating agents, antimetabolites, transplant-related immunosuppressive drugs, cancer chemotherapeutic agents classified as severely immunosuppressive, tumor necrosis factor (TNF) blockers, and other biologic agents that are immunosuppressive or immunomodulatory (e.g., B-cell-depleting agents)

Factors to consider in assessing the general level of immune competence in a patient include disease severity, duration, clinical stability, complications, comorbidities, and any potentially immune-suppressing treatment.

For additional information about the degree of immune suppression associated with different medical conditions and treatments, providers can consult ACIP's General Best Practice Guidelines for Immunizations, the CDC Yellow Book, and the Infectious Diseases Society of America policy statement, 2013 IDSA Clinical Practice Guideline for Vaccination of the Immunocompromised Host

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