Guide to COVID-19 Vaccination Schedules

This resource summarizes key information about COVID-19 vaccination schedules. Reference CDC's [Clinical Considerations for Use of COVID-19 Vaccines](https://www.cdc.gov/vaccines/hcp/COVID-19/index.html) for detailed information and recommendations.

**Table 1: FDA authorized Pfizer-BioNTech COVID-19 vaccines**

<table>
<thead>
<tr>
<th>Authorized for ages</th>
<th>Monovalent</th>
<th>Bivalent</th>
</tr>
</thead>
<tbody>
<tr>
<td>EUA</td>
<td>Fact Sheet</td>
<td>Fact Sheet</td>
</tr>
<tr>
<td>Vial cap color</td>
<td>Maroon</td>
<td>Orange</td>
</tr>
<tr>
<td>Label border color</td>
<td>Maroon</td>
<td>Orange</td>
</tr>
<tr>
<td>Dilution required</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Primary dose</td>
<td>3 mcg (0.2 mL)</td>
<td>10 mcg (0.2 mL)</td>
</tr>
<tr>
<td>Booster dose</td>
<td>N/A</td>
<td>10 mcg (0.2 mL)</td>
</tr>
<tr>
<td>Storage</td>
<td>Ultra-cold freezer for up to 12 months from date of manufacture; Refrigerator up to 10 weeks; Room temperature up to 12 hours</td>
<td>Ultra-cold freezer for up to 12 months from date of manufacture; Refrigerator up to 10 weeks; Room temperature up to 12 hours</td>
</tr>
<tr>
<td>Thaw time required</td>
<td>Refrigerator 2 hours; Room temperature 30 minutes</td>
<td>Refrigerator 4 hours; Room temperature 30 minutes</td>
</tr>
<tr>
<td>Beyond-use date</td>
<td>12 hours after puncture</td>
<td>12 hours after puncture</td>
</tr>
</tbody>
</table>
### Table 2: FDA authorized Moderna COVID-19 vaccines

<table>
<thead>
<tr>
<th>Authorized for ages</th>
<th>Monovalent</th>
<th>Bivalent</th>
</tr>
</thead>
<tbody>
<tr>
<td>6 months – 5 years</td>
<td>6 – 11 years</td>
<td>12 years and older</td>
</tr>
<tr>
<td>EUA</td>
<td>Fact Sheet</td>
<td>Fact Sheet</td>
</tr>
<tr>
<td>Vial cap color</td>
<td>Dark blue</td>
<td>Dark blue</td>
</tr>
<tr>
<td>Label border color</td>
<td>Magenta</td>
<td>Purple*</td>
</tr>
<tr>
<td>Dilution required</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Primary dose</td>
<td>25 mcg (0.25 mL)</td>
<td>50 mcg (0.5 mL)</td>
</tr>
<tr>
<td>Booster dose</td>
<td>N/A</td>
<td>25 mcg (0.25 mL)</td>
</tr>
<tr>
<td>Storage</td>
<td>Freezer until expiration date; Refrigerator for 30 days; Room temperature for 24 hours</td>
<td>Freezer until expiration date; Refrigerator for 30 days; Room temperature for 24 hours</td>
</tr>
<tr>
<td>Thaw time required</td>
<td>Refrigerator for 2 hours followed by 15 minutes at room temperature; OR room temperature for 45 minutes</td>
<td>Refrigerator for 2 hours followed by 15 minutes at room temperature; OR room temperature for 45 minutes</td>
</tr>
<tr>
<td>Beyond-use date</td>
<td>12 hours after puncture</td>
<td>12 hours after puncture</td>
</tr>
</tbody>
</table>

* Multiple dose vials with a dark blue cap and teal label border color are also intended for primary dose series in patients 6-11 years. All administration and storage requirements are the same. However, these vials are not currently available.
### Table 3: FDA authorized Novavax COVID-19 vaccine

<table>
<thead>
<tr>
<th>Authorized for ages</th>
<th>12 years and older</th>
</tr>
</thead>
<tbody>
<tr>
<td>EUA</td>
<td>Fact Sheet</td>
</tr>
<tr>
<td>Vial cap color</td>
<td>Royal blue</td>
</tr>
<tr>
<td>Label border color</td>
<td>No color</td>
</tr>
<tr>
<td>Dilution required</td>
<td>No</td>
</tr>
<tr>
<td>Primary dose</td>
<td>5 mcg rS/50 mcg Matrix-M (0.5 mL)</td>
</tr>
<tr>
<td>Booster dose</td>
<td>≥18 years only: 5 mcg rS/ 50 mcg Matrix-M (0.5 mL)</td>
</tr>
<tr>
<td>Storage</td>
<td>Do not freeze; Refrigerator until expiration date; Room temperature for 6 hours</td>
</tr>
<tr>
<td>Thaw time required</td>
<td>N/A</td>
</tr>
<tr>
<td>Beyond-use date</td>
<td>6 hours after puncture</td>
</tr>
</tbody>
</table>

### Table 4: FDA authorized Janssen COVID-19 vaccine

<table>
<thead>
<tr>
<th>Authorized for ages</th>
<th>18 years and older</th>
</tr>
</thead>
<tbody>
<tr>
<td>EUA</td>
<td>Fact Sheet</td>
</tr>
<tr>
<td>Vial cap color</td>
<td>Light Blue</td>
</tr>
<tr>
<td>Label border color</td>
<td>No color</td>
</tr>
<tr>
<td>Dilution required</td>
<td>No</td>
</tr>
<tr>
<td>Primary dose</td>
<td>5x10^10 viral particles (0.5 mL)</td>
</tr>
<tr>
<td>Booster dose</td>
<td>5x10^10 viral particles (0.5 mL)</td>
</tr>
<tr>
<td>Storage</td>
<td>Do not freeze; Refrigerator until expiration date; Room temperature for 12 hours</td>
</tr>
<tr>
<td>Thaw time required</td>
<td>If vaccine is still frozen upon receipt, thaw in refrigerator for later use; Thaw at room temperature for 1 hour for immediate use</td>
</tr>
<tr>
<td>Beyond-use date</td>
<td>Refrigerator for 6 hours after puncture; OR room temperature for 2 hours after puncture</td>
</tr>
</tbody>
</table>
COVID-19 vaccination schedules: key concepts
The following diagrams summarize the current COVID-19 vaccination schedules based on age (diagram 1 and 3) and based on age for people who are moderately or severely immunocompromised (diagram 2 and 4). When using the diagrams below, reference the tables (above) for the appropriate dose based on the product and the indication (primary or booster dose). Comprehensive guidance on timing, spacing, and interchangeability is available. The key concepts listed below have been compiled for ease of reference.

1. All time intervals listed in the diagram below indicate the minimum time interval between doses.
2. COVID-19 vaccines may be administered without regard to timing of other vaccines. This includes simultaneous administration of COVID-19 vaccine and other vaccines on the same day.
3. The Pfizer-BioNTech COVID-19 Vaccine and Moderna COVID-19 Vaccine are supplied as different products containing the same vaccine formulation. The dilution requirements and recommended use differ for each product. It is important to adhere to the recommended product options and use for each age group.
4. Pfizer-BioNTech, Moderna, and Novavax COVID-19 Vaccines are preferentially recommended in most situations compared to Janssen (J&J) COVID-19 Vaccine; the Janssen (J&J) COVID-19 Vaccine may be considered in some situations.
5. The same vaccine product should be used for all doses of the primary series, if possible. Exceptions and guidance for special circumstances, including managing age transitions, is available.
6. Persons with a recent SARS-CoV-2 infection may consider delaying a primary series or booster dose by 3 months from symptom onset or positive test (if infection was asymptomatic).
7. An 8-week interval in the primary series may be optimal for some people ages 6 months and older, and especially for males ages 12 through 39 years, who are not moderately or severely immunocompromised, and for whom there is not increased concern about community transmission or severe disease.
8. Individuals aged ≥18 years may choose which bivalent vaccine they receive as a booster dose.
9. For people who previously received one or more monovalent booster doses, the bivalent booster dose is administered at least 2 months after the last monovalent booster dose.
10. People ages 18 years and older who completed primary vaccination using any COVID-19 vaccine and have not received any previous booster dose(s) may receive a monovalent Novavax booster dose at least 6 months after completion of the primary series if they are unable to receive an mRNA vaccine (i.e., mRNA vaccine contraindicated or not available) or unwilling to receive an mRNA vaccine and would otherwise not receive a booster dose.
Diagram 1: Most adolescents and children 6 months through 11 years

Ages 6 months – 4 years
- First Dose: Pfizer-BioNTech (Maroon cap)
- Second Dose: Pfizer-BioNTech (Maroon cap)
- Third Dose: Pfizer-BioNTech (Maroon cap)

Ages 6 months – 5 years
- First Dose: Moderna (Blue cap/Magenta label)
- Second Dose: Moderna (Blue cap/Magenta label)

Ages 5 – 11 years
- First Dose: Pfizer-BioNTech (Orange cap)
- Second Dose: Pfizer-BioNTech (Orange cap)

Ages 6 – 11 years
- First Dose: Moderna (Blue cap/Purple label)
- Second Dose: Moderna (Blue cap/Purple label)

Bivalent Booster Dose
- If ≥ 5 years: Pfizer-BioNTech (Orange cap)
- If ≥ 6 years: Moderna Dark Blue cap/Gray label
  OR
  Pfizer-BioNTech (Orange cap)

*See key concept 7.
Diagram 2: Adolescents and children 6 months through 11 years with moderate to severe immunocompromise

- **Ages 6 months – 4 years**
  - First Dose: Pfizer-BioNTech (Maroon cap)
  - 3 weeks
  - Second Dose: Pfizer-BioNTech (Maroon cap)
  - Third Dose: Pfizer-BioNTech (Maroon cap)

- **Ages 6 months – 5 years**
  - First Dose: Moderna (Blue cap/Magenta label)
  - 4 weeks
  - Second Dose: Moderna (Blue cap/Magenta label)
  - Third Dose: Moderna (Blue cap/Magenta label)

- **Ages 5 – 11 years**
  - First Dose: Pfizer-BioNTech (Orange cap)
  - 3 weeks
  - Second Dose: Pfizer-BioNTech (Orange cap)
  - Third Dose: Pfizer-BioNTech (Orange cap)

- **Ages 6 – 11 years**
  - First Dose: Moderna (Blue cap/Purple label)
  - 4 weeks
  - Second Dose: Moderna (Blue cap/Purple label)
  - Third Dose: Moderna (Blue cap/Purple label)

- **Bivalent Booster Dose**
  - If ≥ 5 years: Pfizer-BioNTech (Orange cap)
  - If ≥ 6 years: Moderna Dark Blue cap/Gray label
  - OR: Pfizer-BioNTech (Orange cap)
Diagram 3: Most people 12 years and older

Ages ≥ 12 years

First Dose
Pfizer-BioNTech (Gray cap)

First Dose
Novavax (Royal Blue cap)

First Dose
Moderna (Red cap/Light Blue label)

Second Dose
Pfizer-BioNTech (Gray cap)

Second Dose
Novavax (Royal Blue cap)

Second Dose
Moderna (Red cap/Light Blue label)

Bivalent Booster Dose†
Pfizer-BioNTech (Gray cap)

OR
Moderna (Dark Blue cap/Gray label)

Single Dose
Janssen (J&J) (Light Blue cap)

≥ 2 months

Bivalent Booster Dose†
Pfizer-BioNTech (Gray cap)

OR
Moderna (Dark Blue cap/Gray label)

*See key concept 7.
†See key concept 10.
Diagram 4: People 12 years and older with moderate to severe immunocompromise

Ages > 12 years

First Dose
Pfizer-BioNTech (Gray cap)

Second Dose
Pfizer-BioNTech (Gray cap)

Third Dose
Pfizer-BioNTech (Gray cap)

≥ 2 months

Bivalent Booster Dose†
Pfizer-BioNTech (Gray cap)

OR
Moderna (Dark Blue/Gray label)

First Dose
Moderna (Red cap/Light Blue label)

Second Dose
Moderna (Red cap/Light Blue label)

Third Dose
Moderna (Red cap/Light Blue label)

≥ 4 weeks

First Dose
Novavax (Royal Blue cap)

Second Dose
Novavax (Royal Blue cap)

≥ 4 weeks

First Dose
Novavax (Royal Blue cap)

Second Dose
Pfizer-BioNTech (Gray cap)

Third Dose
Pfizer-BioNTech (Gray cap)

≥ 2 months

Bivalent Booster Dose†
Pfizer-BioNTech (Gray cap)

OR
Moderna (Dark Blue/Gray label)

Ages > 18 years

Single Dose
Janssen (J&J) (Light Blue cap)

Additional mRNA Dose
Pfizer-BioNTech (Gray cap)

OR
Moderna (Red cap/Light Blue label)

≥ 2 months

Bivalent Booster Dose†
Pfizer-BioNTech (Gray cap)

OR
Moderna (Dark Blue/Gray label)

†See key concept 10.
**Diagram 5: Monoclonal antibodies (EVUSHELD) for COVID-19 pre-exposure prophylaxis**

In addition to the recommended COVID-19 vaccination schedule, tixagevimab/cilgavimab (EVUSHELD), a combination of two monoclonal antibodies, should be administered to people who are moderately or severely immunocompromised every 6 months for pre-exposure prophylaxis to supplement vaccination. Reference CDC’s [guidance](https://www.cdc.gov) and current [treatment guidelines](https://www.cdc.gov) for more information on the use of EVUSHELD.