COVID-19 Vaccine
Quick Reference Guide for Healthcare Professionals

The table below provides basic information on the proper storage, preparation, and administration of the currently authorized COVID-19 vaccine products in the United States. For additional information and detailed clinical guidance go to the manufacturers’ website and CDC’s webpages listed.

General Information

<table>
<thead>
<tr>
<th></th>
<th>Pfizer-BioNTech</th>
<th>Moderna</th>
<th>Janssen</th>
</tr>
</thead>
</table>

Storage & Handling

<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>How Supplied</td>
<td>Multidose vial: 10 doses</td>
<td>Multidose vial: 6 doses</td>
<td>Multidose vial: Maximum of 15 primary-series doses or 20 booster doses. Do not puncture the vial stopper more than 20 times.</td>
</tr>
<tr>
<td>Diluent</td>
<td>0.9% sodium chloride (preservative-free, normal saline) provided in the ancillary kit. Do NOT use other diluent.</td>
<td>Do NOT dilute prior to use.</td>
<td>None</td>
</tr>
<tr>
<td>Storage Temperatures: Before Puncture</td>
<td>Between: -90°C and -60°C (-130°F and -76°F) until the expiration date 2°C and 8°C (36°F and 46°F) for up to 10 weeks 8°C and 25°C (46°F and 77°F) for a total of 12 hours prior to dilution Do NOT freeze or store in a standard freezer</td>
<td>Between: -90°C and -60°C (-130°F and -76°F) until the expiration date -25°C and -15°C (-13°F and 5°F) for up to 2 weeks 2°C and 8°C (36°F and 46°F) for up to 1 month (31 days) Up to 25°C (77°F) for a total of 2 hours (prior to dilution)</td>
<td>Between: -50°C and -15°C (-58°F and 5°F) until the expiration date 2°C and 8°C (36°F and 46°F) for up to 30 days 8°C and 25°C (46°F and 77°F) for a total of 24 hours</td>
</tr>
<tr>
<td></td>
<td>1.3 mL of diluent</td>
<td>1.8 mL of diluent</td>
<td></td>
</tr>
</tbody>
</table>
# COVID-19 Vaccine

**Quick Reference Guide for Healthcare Professionals**

## Vaccine Administration

<table>
<thead>
<tr>
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<tbody>
<tr>
<td><strong>Type of Vaccine</strong></td>
<td>mRNA</td>
<td>mRNA</td>
<td>Viral vector</td>
</tr>
<tr>
<td><strong>Primary Series Schedule</strong></td>
<td>2-doses, separated by 21 days; both doses must be the appropriate Pfizer-BioNTech Vaccine formulations for recipient’s age</td>
<td>2 doses, separated by 28 days; both doses must be Moderna Vaccine</td>
<td>1 dose An mRNA COVID-19 vaccine series is preferred over Janssen COVID-19 Vaccine for primary vaccination.</td>
</tr>
<tr>
<td><strong>Additional (3rd) Dose for Moderately or Severely Immunocompromised People</strong></td>
<td>At least 28 days after completion of the primary series (2nd dose)</td>
<td>At least 28 days after completion of the primary series (2nd dose)</td>
<td>Not authorized as an additional primary dose. See booster dose schedule.</td>
</tr>
</tbody>
</table>

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* CDC recommends following manufacturer’s instructions for transporting vaccine.

† There may be instances when the only option is to transport mixed vaccine in a vial or predrawn syringe. See the U.S. Pharmacopeia COVID-19 Vaccine Toolkit: Operational Considerations for Healthcare Practitioners ([https://www.usp.org/covid-19/vaccine-handling-toolkit](https://www.usp.org/covid-19/vaccine-handling-toolkit)) for guidance in transporting vaccine under these conditions.

‡ COVID-19 vaccines and other vaccines may be administered without regard to timing, including simultaneous administration.
# COVID-19 Vaccine
## Quick Reference Guide for Healthcare Professionals

<table>
<thead>
<tr>
<th>Booster Schedule</th>
<th>Pfizer-BioNTech</th>
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<th>Janssen</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ages 5 through 11 years (orange cap)</td>
<td>At least 5 months after the last dose of a COVID-19 mRNA vaccine primary series (i.e., after the 2nd dose or the additional [3rd] dose for moderately and severely immunocompromised persons)</td>
<td>At least 5 months after the last dose of a COVID-19 mRNA vaccine primary series (i.e., after the 2nd dose or the additional [3rd] dose for moderately and severely immunocompromised persons)</td>
<td>At least 2 months (8 weeks) after the primary series dose of Janssen COVID-19 Vaccine.</td>
</tr>
<tr>
<td>Ages 12 years and older (purple cap)</td>
<td>• Persons who received a Janssen COVID-19 Vaccine as the primary series should receive a booster dose at least 2 months after the Janssen vaccine. • Use of heterologous (mix and match) booster doses is allowed for persons 18 years of age and older. Only a Pfizer-BioNTech vaccine should be administered to patients 12-17 years of age.</td>
<td>• Persons who received a Janssen COVID-19 Vaccine as the primary series should receive a booster dose at least 2 months after the Janssen vaccine. • Use of heterologous (mix and match) booster doses is allowed for persons 18 years of age and older.</td>
<td>• Persons who received a COVID-19 mRNA vaccine primary series (i.e., after the 2nd dose or the additional [3rd] dose for moderately and severely immunocompromised persons) can receive a Janssen booster dose at least 5 months after the primary series. mRNA vaccines are preferred.</td>
</tr>
<tr>
<td>Ages 12 years and older (gray cap)</td>
<td></td>
<td></td>
<td>• Use of heterologous (mix and match) booster doses is allowed. mRNA vaccines are preferred.</td>
</tr>
</tbody>
</table>

For additional information, see Interim Clinical Considerations for Use of COVID-19 Vaccines Currently Approved or Authorized in the United States [https://www.cdc.gov/vaccines/covid-19/clinical-considerations/covid-19-vaccines-us.html#considerations-covid19-vax-immuncompromised](https://www.cdc.gov/vaccines/covid-19/clinical-considerations/covid-19-vaccines-us.html#considerations-covid19-vax-immuncompromised)

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<tr>
<th>Primary Series, Additional Primary, and Booster Dosage</th>
<th>Pfizer-BioNTech</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Ages 5 through 11 years (orange cap)</td>
<td>0.2 mL for primary doses</td>
<td>0.3 mL for all doses</td>
<td>0.5 mL (primary series or additional primary doses)</td>
</tr>
<tr>
<td>Ages 12 years and older (purple cap)</td>
<td>An additional primary dose or booster dose is not recommended at this time.</td>
<td>0.25 mL (booster dose)</td>
<td>0.5 mL (primary series or booster dose)</td>
</tr>
<tr>
<td>Ages 18 years and older (gray cap)</td>
<td></td>
<td>An additional primary dose is not recommended.</td>
<td></td>
</tr>
</tbody>
</table>

* COVID-19 vaccines and other vaccines may be administered without regard to timing, including simultaneous administration.
† Although mRNA vaccines are preferentially recommended in most situations over the Janssen COVID-19 Vaccine, the Janssen COVID-19 Vaccine may be considered in some situations. See Interim Clinical Considerations at [www.cdc.gov/vaccines/covid-19/clinical-considerations/covid-19-vaccines-us.html#primary-series](https://www.cdc.gov/vaccines/covid-19/clinical-considerations/covid-19-vaccines-us.html#primary-series) for additional information.
‡ Vastus lateralis muscle in the anterolateral thigh may be used. A 1.5 inch needle should be used, although a 1 inch needle may be used if the skin is stretched tightly and subcutaneous tissues are not bunched.
### Pfizer-BioNTech

- **Ages 5 through 11 years (orange cap)**
  - Thawing Frozen Vaccine: Between 2°C and 8°C (36°F and 46°F) or Room temperature up to 25°C (77°F) for 30 minutes. Vials must reach room temperature before dilution. **Do NOT** refreeze thawed vaccine.
  - Mixing Vaccine: Allow vial(s) to reach room temperature before mixing. Mix vaccine with 1.3 mL of 0.9% sodium chloride (preservative-free, normal saline).
- **Ages 12 years and older (purple cap)**
  - Thawing Frozen Vaccine: Between 2°C and 8°C (36°F and 46°F) or Room temperature up to 25°C (77°F) for 30 minutes. Vials must reach room temperature before dilution. **Do NOT** refreeze thawed vaccine.
  - Mixing Vaccine: Allow vial(s) to reach room temperature before mixing. Mix vaccine with 1.8 mL of 0.9% sodium chloride (preservative-free, normal saline).
- **Ages 12 years and older (gray cap)**
  - Thawing Frozen Vaccine: Between 2°C and 8°C (36°F and 46°F) or Room temperature up to 25°C (77°F) for 30 minutes. Vials must reach room temperature before dilution. **Do NOT** refreeze thawed vaccine.
  - Mixing Vaccine: Allow vial(s) to reach room temperature before mixing. Mix vaccine with 1.8 mL of 0.9% sodium chloride (preservative-free, normal saline).

### Moderna

- **Ages 18 years and older**
  - Thawing Frozen Vaccine: Between 2°C and 8°C (36°F and 46°F) or Room temperature up to 25°C (77°F) for 30 minutes. Vials must reach room temperature before dilution. **Do NOT** refreeze thawed vaccine.
  - Mixing Vaccine: Do NOT mix with any diluent.

### Janssen

- **Ages 18 years and older**
  - Thawing Frozen Vaccine: Do NOT freeze.
  - Mixing Vaccine: Do NOT mix with any diluent.

### Contraindications/Precautions

#### Contraindications

- History of:
  - Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to component of the COVID-19 vaccine
  - Known diagnosed allergy to a component of the vaccine (see [https://www.cdc.gov/vaccines/covid-19/clinical-considerations/covid-19-vaccines-us.html#Appendix-C](https://www.cdc.gov/vaccines/covid-19/clinical-considerations/covid-19-vaccines-us.html#Appendix-C) for a list of vaccine components)
  - For the Janssen COVID 19 Vaccine, thrombosis with thrombocytopenia syndrome (TTS) following receipt of a previous Janssen COVID-19 Vaccine (or other COVID-19 vaccines not currently authorized in the United States that are based on adenovirus vectors)

#### Precautions

- Most people determined to have a precaution to a COVID-19 vaccine at their appointment can and should be administered vaccine.
- Immediate allergic reaction to any non-COVID-19 or injectable therapy (i.e., intramuscular, intravenous, or subcutaneous vaccines or therapies [excluding subcutaneous immunotherapy for allergies, i.e., “allergy shots”])
  - This includes non-COVID-19 vaccines and therapies with multiple components and the component(s) that elicited the reaction is unknown
- Immediate (within 4 hours after vaccination) non-severe, allergic reaction to a previous dose of the COVID-19 vaccine
- Contradiction to one type of COVID-19 vaccines (mRNA) is a precaution to other types of COVID-19 vaccines (Janssen)
- Moderate to severe acute illness

### Post-Vaccination Observation

- **30 minutes:** People with a history of a contraindication to another type of COVID-19 vaccine product, immediate (within 4 hours of exposure) non-severe allergic reaction to a COVID-19 vaccine, immediate allergic reaction of any severity to a non-COVID-19 vaccine or injectable therapies, anaphylaxis due to any cause
- **15 minutes:** All other persons

### Most Common Adverse Events

- **Injection site:** pain, swelling, redness
- **Systemic:** fatigue, headache, muscle pain, chills, fever, joint pain
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* Vastus lateralis muscle in the anterolateral thigh may be used. A 1.5 inch needle should be used, although a 1 inch needle may be used if the skin is stretched tightly and subcutaneous tissues are not bunched.

† For the purpose of this guidance, an immediate allergic reaction is defined as any hypersensitivity-related signs or symptoms such as urticaria, angioedema, respiratory distress (e.g., wheezing, stridor), or anaphylaxis that occur within 4 hours following exposure to a vaccine or medication.