

Preparing COVID-19 Vaccines for Administration

Updated 10/28/2022

It is best practice when administering COVID-19 vaccine to draw up the dose immediately before giving the vaccine. However, in some circumstances, such as mass vaccination events when multi-dose vials are used, it may be safer and more practical to prefill syringes.

These guidelines were developed from the [United States Pharmacopeia: COVID-19 Vaccine Handling Toolkit \(www.usp.org/covid-19/vaccine-handling-toolkit\)](https://www.usp.org/covid-19/vaccine-handling-toolkit).

They reflect current understanding of the available COVID-19 vaccines and their specific information. Vaccinators should make sure they have the most up-to-date information before administering vaccines. Please refer to the emergency use authorization (EUA) fact sheets for health care providers for the individual vaccines at [FDA: COVID-19 Vaccines \(www.fda.gov/emergency-preparedness-and-response/coronavirus-disease-2019-covid-19/covid-19-vaccines\)](https://www.fda.gov/emergency-preparedness-and-response/coronavirus-disease-2019-covid-19/covid-19-vaccines) and to [CDC: COVID-19 Vaccination \(www.cdc.gov/vaccines/covid-19/index.html\)](https://www.cdc.gov/vaccines/covid-19/index.html) for the most current information.

Health care workers supervising the preparation of the vaccines should ensure that personnel are adequately skilled, educated, and trained to correctly prepare COVID-19 vaccines.

Initial preparation

Considerations when preparing COVID-19 vaccines include:

- A dedicated room or area should be used to prepare vaccine.
 - The area should be cleared of any unnecessary items and cleaned with sanitizing wipes.
- Equipment should include a sharps container, alcohol wipes, and a sink and/or hand sanitizer.
- Perform hand hygiene by washing hands with soap and water for at least 30 seconds or use hand sanitizer rubbed between hands and fingers and allowed to dry.
- Wear powder-free gloves before preparing vaccines for administration.

Use aseptic technique

Aseptic technique should be used to prepare vaccines for administration to prevent the vaccines from being contaminated with microorganisms from the environment or from the people preparing them.

Aseptic technique considerations for vaccine preparation should include the following:

- Follow requirements related to competency and training of vaccine preparation and administration, as appropriate.
- Inspect vials for cracks or leaks.
- Inspect vaccine for discoloration or particulates before proceeding.
 - Pfizer and Moderna COVID-19 vaccine should be white to off-white in color and may contain white or translucent particles. Do not use if liquid contains other particulate matter or is discolored.
 - Janssen (Johnson & Johnson) COVID-19 vaccine should be colorless to slightly yellow, clear to very opalescent suspension. Do not use if liquid contains particulate matter or is discolored.
 - Novavax COVID-19 vaccine, adjuvanted should be colorless to slightly yellow, clear to mildly opalescent suspension, free from visible particles. Do not use if liquid contains particulate matter or is discolored.
- Disinfect entry points on the diluent and vaccine vials by wiping the vials with alcohol swabs.
- Allow the alcohol to dry before piercing stoppers with sterile needles.
- Avoid touching critical parts of the components being used for preparing the vaccines (e.g., needles, disinfected vial stoppers) to minimize microbial contamination.
- Place all used syringes and needles into a sharps container.

Withdrawing doses

Ensure complete doses are withdrawn and that safe practices are followed with these practices:

- If applicable, ensure needle and syringe are tightly luer-locked together.
- Consider using the smallest syringe appropriate for the dose to improve dose accuracy. For example, a 0.3 mL or 0.5 mL dose should be drawn up using a 1 mL syringe.
- The same needle should be used for withdrawal and administration. This eliminates the need to change needles and therefore reduces the risk of touch-contamination to the vaccine.
- Exercise care to avoid contaminating or bending the needle.
- Use safe practices when recapping the needle after withdrawing and before administration.
- Small air bubbles in the syringe can be ignored. Avoid tapping the syringe because of the theoretical risk of inactivating the vaccine or degraded quality.
- **Never** combine or “pool” partial doses from two or more vials to obtain one or more doses of vaccine.

Labeling considerations

Pre-drawn COVID-19 vaccine syringes prepared for administration must be labeled with legible identifying information to prevent errors during storage, dispensing, transport, and use.

Pre-drawn syringe labeling components

- Name and amount of vaccine.
- The exact beyond-use date and time.
 - COVID-19 vaccine products do not contain any preservative and expire hours after the vial is first punctured. To determine the date and time to discard, carefully read and follow the EUA fact sheet for health care providers and/or manufacturers' websites for each vaccine product regarding expiration and beyond-use dates.
- Lot number.
- Initials of preparer.

Syringes should be kept out of direct sunlight.

Examples of pre-drawn syringe labels

Pfizer-BioNTech COVID-19 Vaccine (30 mcg / 0.3 mL) IM suspension
Date & Time to discard (6 hours after dilution):
Lot no:
Initials of preparer(s):

Moderna COVID-19 Vaccine (100 mcg / 0.5 mL) IM suspension
Date & Time to discard (12 hours after puncture):
Lot no:
Initials of preparer(s):

Janssen Ad26 COVID-19 Vaccine (5×10¹⁰vp / 0.5 mL) IM suspension
Date & Time to discard:
(6 hours after vial puncture at 2°C to 8°C (36° to 46°F) or
2 hours after vial puncture at up to 25°C (77°F))
Lot no:
Initials of preparer(s):

Label example is from the USP handling toolkit.



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