COVID-19 Vaccine, Viral Vector (Janssen)

80:12 • Vaccines (AHFS primary)

Special Alerts:

Revisions to the Janssen COVID-19 Vaccine Fact Sheet: On December 14, 2021, FDA authorized revisions to the Janssen COVID-19 vaccine fact sheet for healthcare providers. A contraindication was added for individuals with a history of thrombosis with thrombocytopenia syndrome (TTS) following receipt of the Janssen COVID-19 vaccine or other adeno-virus vectored COVID-19 vaccine. Cases of TTS have been reported across a wide age range of adults ≥18 years of age, females between 30–49 years of age have the highest reporting rate (approximately 1 case/100,000 doses administered). Overall, approximately 15% of TTS cases have been fatal. Currently available evidence supports a causal relationship between TTS and the Janssen COVID-19 Vaccine. For additional information, consult the fact sheet for healthcare providers at https://www.fda.gov/media/146304/download.

Emergency Use Authorization (EUA) Changes for COVID-19 Vaccine (Janssen):

On October 20, 2021, FDA reissued the EUA for COVID-19 vaccine (Janssen) to expand authorization under the EUA to include use as a single homologous booster dose in adults who have received a primary series of the vaccine. On November 19, 2021, FDA reissued the EUA for COVID-19 vaccine (Janssen) to permit use of a single heterologous booster dose of the Janssen COVID-19 vaccine following completion of primary vaccination with another authorized or approved COVID-19 vaccine, where the eligible population(s) and dosing interval for the heterologous booster dose are the same as those authorized for a booster dose of the vaccine used for primary vaccination. The EUA for the COVID-19 vaccine (Janssen) vaccine now permits use of the vaccine to provide:

- A single-dose (0.5 mL) primary series in adults 18 years of age or older.
- A single homologous booster dose (0.5 mL) administered at least 2 months after completion of the primary series of the COVID-19 vaccine (Janssen) in adults 18 years of age or older.
- A single heterologous booster dose (0.5 mL) after completion of primary vaccination with another authorized or approved COVID-19 vaccine in adults 18 years of age or older. When a heterologous vaccine product is used for the booster dose, the dosing interval is the same as that authorized for a booster dose of the vaccine used for primary vaccination.

For additional information, consult the EUA at https://www.fda.gov/media/146303/download and the fact sheet for healthcare providers at https://www.fda.gov/media/146304/download.

National Alert Network (NAN) Alert Regarding Influenza and COVID-19 Vaccine Mix-ups:

On October 15, 2021, the National Alert Network (NAN) issued an alert to make vaccine providers aware of reports of accidental mix-ups between the influenza (flu) and COVID-19 vaccines. The alert is based on 16 cases reported to the Institute for Safe Medication Practices (ISMP) error reporting programs. Most of the reports ISMP has received involve administration of one of the COVID-19 vaccines instead of an influenza vaccine; in 3 cases, patients received an influenza vaccine instead of a COVID-19 vaccine. Because most of the errors were reported by consumers, details about the contributing factors were not provided in many cases. However, possible contributing factors include increased demand for vaccination services, the ability to administer the flu and COVID-19 vaccines during the same visit, syringes located next to each other, unlabeled syringes, distractions, and staffing shortages. The alert provides recommendations for preventing such vaccine mix-ups. For additional information, consult the NAN alert at https://www.ismp.org/sites/default/files/attachments/2021-10/NAN-20211015.pdf.

The American Society of Health-System Pharmacists, Inc. represents that the information provided in the accompanying monograph was formulated with a reasonable standard of care, and in conformity with professional standards in the field. Readers are cautioned that COVID-19 Vaccine (Janssen) is not an approved vaccine for coronavirus disease 2019 (COVID-19) caused by SARS-CoV-2, but rather, is being investigated for and is currently available under an FDA emergency use authorization (EUA) for active immunization to prevent COVID-19 in adults 18 years of age or older, use as a single booster dose in adults 18 years of age or older, and use as a heterologous booster dose following completion of primary vaccination with another authorized or approved COVID-19 vaccine in adults 18 years of age or older. The American Society of Health-System Pharmacists, Inc. makes no representations or warranties, express or implied, including, but not limited to, any implied warranty of merchantability and/or fitness for a particular purpose, with respect to the information contained in the accompanying monograph, and specifically disclaims all such warranties. Readers of this information are advised that ASHP is not responsible for the continued currency of the information, for any errors or omissions, and/or for any consequences arising from the use of the information contained in the monograph in any and all practice settings. Readers are advised to decisions regarding use of drugs are complex medical decisions requiring the independent, informed decision of an appropriate health care professional, and that the information contained in the monograph is provided for informational purposes only. The entire monograph for a drug should be reviewed for a thorough understanding of the drug's actions, uses and side effects. The American Society of Health-System Pharmacists, Inc. does not endorse or recommend the use of any drug. The information contained in the monograph is not a substitute for medical care.

Uses

Prevention of Coronavirus Disease 2019 (COVID-19)

COVID-19 vaccine (Janssen) is an adeno-virus vectored vaccine being investigated and used for the prevention of coronavirus disease 2019† (COVID-19) caused by SARS-CoV-2. The Janssen COVID-19 vaccine is one of various COVID-19 vaccines being evaluated for the prevention of COVID-19. Although efficacy and safety of COVID-19 vaccine (Janssen) have not been definitively established, the vaccine is available under an FDA emergency use authorization (EUA) for active immunization to prevent COVID-19 in individuals 18 years of age or older.


There currently are 3 different COVID-19 vaccines available for use in the US under FDA EUAs, including a viral vectored vaccine (Janssen COVID-19 vaccine) and 2 nucleoside-modified mRNA vaccines (Moderna COVID-19 vaccine and Pfizer-BioNTech COVID-19 vaccine). ACIP does not state a preference for any specific currently authorized COVID-19 vaccine when the vaccines are used within the scope of their respective EUAs and should be considered to be an alternative vaccine to receive the earliest vaccine available to them. However, currently available COVID-19 vaccines are not interchangeable with each other. (See Dosage under Dosage and Administration.)

Emergency Use Authorization

On February 27, 2021, FDA issued an EUA that permits use of COVID-19 vaccine (Janssen) to prevent COVID-19 in individuals 18 years of age or older. This EUA requires that the vaccine be administered by vaccination providers using a single-dose regimen as described in the EUA (see Dosage under Dosage and Administration) and that vaccination providers participate and comply with the terms and training required by CDC’s COVID-19 vaccination program, including monitoring and complying with CDC and/or emergency response stakeholder vaccine management requirements (e.g., requirements concerning obtaining, tracking, and handling vaccine) and emergency response considerations concerning COVID-19 and state/local jurisdiction’s Immunization Information System (IIS) or other designated systems.

FDA issued the EUA for COVID-19 vaccine (Janssen) after concluding that emergency use of the vaccine for the prevention of COVID-19 met the criteria for issuance of an EUA for the following reasons: SARS-CoV-2 can cause a serious or life-threatening disease or condition, including severe respiratory illness; based on the totality of scientific evidence available to FDA, it is reasonable to believe that the Janssen COVID-19 vaccine may be effective in preventing COVID-19 and, when used under the conditions described in the authorization, the known and potential benefits outweigh the known and potential risks; and there are no adequate, approved, and available alternatives to the emergency use of the vaccine to prevent COVID-19.

Issuance of the EUA for COVID-19 vaccine (Janssen) was based on FDA review of safety and efficacy data from an ongoing phase 3 clinical trial that enrolled 43,783 adults randomized 1:1 to receive the vaccine or saline control. (See Clinical Experience under Uses.)

The EUA for COVID-19 (Janssen) authorizes that distribution of the vaccine will be controlled by the US government, including CDC and/or other designee, for use consistent with the terms and conditions of the EUA. (See Restricted Distribution under Preparations.)

To mitigate the risks of this unapproved vaccine, the EUA requires that vaccination providers administering the Janssen COVID-19 vaccine comply with certain mandatory requirements. These requirements include providing the recipient or caregiver with information consistent with the EUA fact sheet for recipients and caregivers and ensuring that all vaccination administration errors and all serious adverse events potentially attributable to the vaccine are reported as specified in the EUA fact sheet for healthcare providers. (See EUA Requirements for Postvaccination Monitoring and Mandatory Vaccine Adverse Event Reporting under Cautions.)

For additional information, the Janssen COVID-19 vaccine EUA letter of authorization (https://www.fda.gov/media/146303/download), EUA fact sheet for
healthcare providers (https://www.fda.gov/media/146304/download), and EUA fact sheet for recipients and caregivers (https://www.fda.gov/media/146305/download) should be consulted.

**Clinical Experience**

Efficacy, safety, and immunogenicity of a single dose of COVID-19 vaccine (Janssen) for the prevention of COVID-19 are being evaluated in an ongoing multicenter, randomized, double-blind, placebo-controlled, phase 3 clinical trial in adults 18 years of age or older (NCT04505722; ENSEMBLE; study COV3001). At the time of FDA’s efficacy review of the vaccine for the EUA, the efficacy analysis population had been followed for a median of 8 weeks and data indicated that efficacy of a single dose of the Janssen COVID-19 vaccine in preventing protocol-defined moderate to severe/critical COVID-19 in individuals who were seronegative or had an unknown serostatus at baseline was 66.9% when cases occurring at least 14 days after vaccination were considered and 66.1% when cases occurring at least 28 days after vaccination were considered. Efficacy of a single dose of the vaccine in preventing protocol-defined severe/critical COVID-19 was 76.7 or 85.4% when cases occurring at least 14 or 28 days, respectively, after vaccination were considered.

This phase 3 trial enrolled adults in the US, South Africa, Brazil, Chile, Argentina, Colombia, Peru, and Mexico who were randomized 1:1 to receive a single IM dose of the Janssen COVID-19 vaccine (0.5-mL dose containing 5 × 10^8 virus particles of recombinant Ad26) or saline placebo, and randomization was stratified by age (18–59 years of age, 60 years of age or older) and presence or absence of comorbidities associated with an increased risk of progression to severe COVID-19. The study protocol allowed for inclusion of participants with stable preexisting medical conditions, defined as disease not requiring substantial change in therapy during the 3 months prior to enrollment, as well as participants with stable human immunodeficiency virus (HIV) infection. The co-primary efficacy end points were first occurrence of moderate to severe/critical COVID-19 with onset of symptoms at least 14 days after vaccination and onset at least 28 days after vaccination. The study protocol defined moderate COVID-19 as laboratory-confirmed SARS-CoV-2 infection and any one of the following new or worsening signs or symptoms: respiratory rate 20 breaths/minute or greater; abnormal oxygen saturation (SpO2) but still greater than 93% on room air at sea level; clinical or radiologic evidence of pneumonia; radiologic evidence of deep-vein thrombosis; or shortness of breath or difficulty breathing or any two of the following new or worsening signs or symptoms: fever (38°C or greater); heart rate 90 beats/minute or greater; shaking chills or rigors; sore throat; cough; malaise; headache; muscle pain (myalgia); GI symptoms; new or changing olfactory or taste disorders; or red or bruised appearing feet or toes. Severe/critical COVID-19 was defined as laboratory-confirmed SARS-CoV-2 infection and any one of the following symptoms at any time during the course of observation: clinical signs at rest indicative of severe systemic illness (respiratory rate 30 breaths/minute or greater, heart rate 125 beats/minute or greater, systolic blood pressure <80 mm Hg, or diastolic blood pressure <60 mm Hg, or requiring vasopressors); significant acute renal, hepatic, or neurologic dysfunction; admission to an intensive care unit (ICU); or death. SARS-CoV-2 testing was molecularly confirmed by a central laboratory based on a positive SARS-CoV-2 viral RNA result using a polymerase chain reaction (PCR)-based test.

Final determinations of severe/critical COVID-19 cases were made by an independent adjudication committee. The co-primary efficacy analysis population of 39,321 adults (19,630 received the Janssen COVID-19 vaccine and 19,691 received placebo) included 38,059 participants seronegative for SARS-CoV-2 at baseline and 1262 participants with unknown serostatus. Demographic and baseline characteristics were similar among participants who received the Janssen COVID-19 vaccine and those who received placebo. At the time of FDA’s review for the EUA, 116 cases of confirmed moderate to severe/critical COVID-19 had occurred in the vaccine group and 348 cases had occurred in the placebo group at least 14 days after vaccination and 66 and 193 cases had occurred in the vaccine and placebo groups, respectively, at least 28 days after vaccination. This corresponded to 66.9% vaccine efficacy in prevention of moderate to severe/critical COVID-19 when cases occurring at least 14 days after vaccination and 66.1% vaccine efficacy when considering cases occurring at least 28 days after vaccination. When central laboratory-confirmed and blind-adjudicated cases of severe/critical COVID-19 were evaluated, 14 and 60 such cases had occurred in the vaccine and placebo groups, respectively, at least 14 days after vaccination. This corresponded to 76.7% vaccine efficacy in prevention of severe/critical COVID-19 when considering cases occurring at least 14 days after vaccination and 85.4% vaccine efficacy when considering cases occurring at least 28 days after vaccination. There were no deaths related to COVID-19 reported in recipients of the Janssen COVID-19 vaccine compared with 5 COVID-19-related deaths in placebo recipients.

Exploratory geographic subgroup analyses of vaccine efficacy against moderate to severe/critical COVID-19 and against severe/critical COVID-19 using data for study participants in the US, Brazil, and South Africa were conducted. (See Table 1.) For these subgroup analyses, all COVID-19 cases accrued up to the primary efficacy analysis data cutoff date, including cases confirmed by the central laboratory and cases with documented positive SARS-CoV-2 PCR from a local laboratory that were still awaiting confirmation by the central laboratory, were analyzed. The concordance rate observed up to the data cut-off date between the PCR results from the local laboratory and the central laboratory was 90.3%.

<table>
<thead>
<tr>
<th>Country</th>
<th>Efficacy against Moderate to Severe/Critical COVID-19</th>
<th>Efficacy against Severe/ Critical COVID-19</th>
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<tbody>
<tr>
<td>US</td>
<td>74.4% at least 14 days after vaccination; 72% at least 28 days after vaccination</td>
<td>78% at least 14 days after vaccination; 85.9% at least 28 days after vaccination</td>
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<tr>
<td>Brazil</td>
<td>66.2% at least 14 days after vaccination; 68.1% at least 28 days after vaccination</td>
<td>81.9% at least 14 days after vaccination; 87.6% at least 28 days after vaccination</td>
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<tr>
<td>South America</td>
<td>52% at least 14 days after vaccination; 64% at least 28 days after vaccination</td>
<td>73.1% at least 14 days after vaccination; 81.7% at least 28 days after vaccination</td>
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Strain sequencing was conducted on samples obtained from study COV3001 participants who had centrally confirmed COVID-19 if viral load was sufficient (one sequence per case). As of February 12, 2021, 71.7% of samples from central laboratory-confirmed primary analysis cases had been sequenced. Results indicated that 96.4% of strains tested from US participants were identified as the Wuhan-H1 variant D614G; 94.5% of strains tested from participants in South Africa were identified as the 20H/501Y.V2 variant (B.1.351 lineage); and 69.4% of strains tested from participants in Brazil were identified as a variant of the P.2 lineage and 30.6% were identified as the Wuhan-H1 variant D614G. As of February 12, 2021, SARS-CoV-2 variants from the B.1.7 or P.1 lineages were not found in any of the sequenced samples from study participants.

**Dosage and Administration**

- **General**

  Appropriate medications and supplies used to assess and manage immediate allergic reactions must be immediately available in the event that an acute anaphylactic reaction occurs following administration of COVID-19 vaccines, including COVID-19 vaccine (Janssen). Healthcare personnel who are trained and qualified to recognize the signs and symptoms of anaphylaxis and administer IM epinephrine should be available at vaccination sites at all times. Vaccination locations that anticipate vaccinating large numbers of people (e.g., mass vaccination clinics) should plan adequate staffing and supplies (including epinephrine) for assessment and management of anaphylaxis. (See Hypersensitivity Reactions under Cautions.)

  Prior to administration of the Janssen COVID-19 vaccine, all individuals should be screened for contraindications and precautions to vaccination. Those with a contraindication to vaccination with the Janssen COVID-19 vaccine should not be vaccinated. (See Contraindications and see Warnings/Precautions under Cautions.)

  All individuals who receive a COVID-19 vaccine should be monitored for immediate adverse reactions according to CDC (ACIP) guidelines. When individuals with no contraindications to vaccination with the Janssen COVID-19 vaccine receive the vaccine, ACIP states that those with a history of an immediate allergic reaction of any severity to any other vaccine or injectable therapy and those with a history of anaphylaxis due to any cause not considered a contraindication should be observed for 30 minutes after receiving the vaccine, and that all other individuals should be observed for 15 minutes. A longer period of observation may be indicated for some individuals based on clinical concern (e.g., vaccinee develops pruritus and swelling confined to the injection site during their observation period). Vaccine recipients should be instructed to seek immediate medical care if they develop signs or symptoms of an allergic reaction after their observation period ends and they have left the vaccination site. (See Hypersensitivity Reactions under Cautions.)

  Syncope (vasovagal or vasopressor reaction; fainting) may occur following administration of parenteral vaccines; such reactions usually occur within 15 minutes following vaccine administration and are reported most frequently in adolescents and young adults. Appropriate measures should be taken to decrease the risk of injury if a patient becomes weak or dizzy or loses consciousness (e.g., vaccinees should sit or lie down during and for 15 minutes after vaccination). If syncope occurs, the patient should be observed until symptoms resolve.
At the time that the Janssen COVID-19 vaccine is administered, vaccine recipients or their caregivers should be given a vaccination record card that provides the name of the vaccine (Janssen COVID-19 vaccine) and the date the vaccine was administered.

Vaccine recipients or their caregivers should be provided with information on, and encouraged to participate in, CDC’s v-safe program, a voluntary smartphone-based tool that uses text messaging and web surveys to monitor for adverse effects in individuals who have received a COVID-19 vaccine. (See EUA Requirements for Postvaccination Monitoring and Mandatory Vaccine Adverse Event Reporting under Cautions.)

Prior to vaccination, vaccine recipients or their caregivers should be counseled about local and systemic adverse effects that may occur following vaccination. (See Cautions and see Advice to Patients.)

Antipyretics or analgesics (e.g., acetaminophen, nonsteroidal anti-inflammatory agents) may be taken for the treatment of postvaccination local or systemic symptoms, if medically appropriate. However, routine premedication for the purpose of preventing postvaccination symptoms in individuals receiving a COVID-19 vaccine is not currently recommended because information regarding possible impact on antibody response to the vaccine is not available at this time. Premedication with antihistamines prior to vaccination to prevent allergic reactions is not recommended; antihistamines do not prevent anaphylaxis and may mask cutaneous symptoms, which could lead to a delay in the diagnosis and management of anaphylaxis. (See Hypersensitivity Reactions under Cautions.)

Individuals who have received COVID-19 vaccine (Janssen) and are considered fully vaccinated against COVID-19 (see Dosage under Dosage and Administration) should follow current CDC guidance for fully vaccinated individuals. This may include wearing a mask and physically distancing if required by federal, state, local, tribal, or territorial laws, rules, and regulations and following CDC travel guidance and any applicable workplace or school guidance. (See Limitations of Vaccine Effectiveness under Cautions.)

■ Administration
COVID-19 vaccine (Janssen) is administered only by IM injection into the deltoid. Data are not available regarding concomitant administration of COVID-19 vaccine (Janssen) with other vaccines. (See Vaccines under Drug Interactions.)

■ IM Injection
COVID-19 vaccine (Janssen) is supplied as a suspension in multiple-dose vials. Although the Janssen COVID-19 vaccine is initially stored frozen by the manufacturer, the vaccine is shipped and stored refrigerated at a temperature of 2–8°C. (See Stability.)

The Janssen COVID-19 vaccine should not be diluted.

After removal from refrigeration, unused vials (i.e., unpunctured) may be stored for up to 12 hours at room temperature (9–25°C). After the first dose of Janssen COVID-19 vaccine is withdrawn from the multiple-dose vial, the vial should be held in a refrigerator (2–8°C) for up to 6 hours or at room temperature (up to 25°C) for up to 2 hours and must be discarded if not used within these time frames after first vial entry. The date and time of first use should be recorded on the vial label.

Before withdrawing each dose, the vaccine vial should be gently swirled in an upright position for 10 seconds and should not be shaken.

The Janssen COVID-19 vaccine should appear as a colorless to slightly yellow, clear to very opalescent suspension and should not be used if it is discolored or contains particulates.

To administer a dose of the Janssen COVID-19 vaccine, 0.5 mL of the vaccine should be withdrawn from the vial using aseptic technique and an appropriate syringe and needle and administered immediately.

Each multiple-dose vial of Janssen COVID-19 vaccine provides five 0.5-mL doses. Because the vaccine does not contain preservatives, it is critical that any vaccine remaining in the vial that does not constitute a full 0.5-mL dose should be discarded and should not be pooled with vaccine from other vials to create a dose.

■ Dosage
COVID-19 vaccine (Janssen) is administered as a single 0.5-mL dose. The 0.5-mL dose contains 5 x 10^6 virus particles of recombinant, replication-incompetent Ad26 (see Description). Janssen COVID-19 vaccine is not interchangeable with any other COVID-19 vaccine.

A single dose of the Janssen COVID-19 vaccine is considered a complete and valid vaccination series. Individuals should not receive more than one single, valid vaccination series for active immunization against COVID-19 (i.e., a single dose of Janssen COVID-19 vaccine or a 2-dose regimen of an mRNA vaccine [Moderna COVID-19 vaccine or Pfizer-BioNTech COVID-19 vaccine]).

Individuals are considered fully vaccinated against COVID-19 if at least 2 weeks have elapsed since they received a single dose of the Janssen COVID-19 vaccine or at least 2 weeks have elapsed since they completed a 2-dose vaccination series of an mRNA vaccine (Moderna COVID-19 vaccine or Pfizer-BioNTech COVID-19 vaccine). Those who have a contraindication to vaccination or who otherwise cannot complete a vaccination series are not considered fully vaccinated.

Safety and efficacy regarding use of the Janssen COVID-19 vaccine after a dose of an mRNA COVID-19 vaccine have not been established. However, ACIP states that, in limited, exceptional situations when an individual received the first dose of an mRNA COVID-19 vaccine but is unable to complete the vaccination series with either the same or different mRNA COVID-19 vaccine (e.g., due to a contraindication), a single dose of Janssen COVID-19 vaccine administered at least 28 days after the first dose of mRNA COVID-19 vaccine may be considered. (See Hypersensitivity Reactions under Cautions.) An individual who receives a single dose of the Janssen COVID-19 vaccine after a dose of an mRNA COVID-19 vaccine under such exceptional circumstances should be considered to have received valid, single-dose vaccination with Janssen COVID-19 vaccine (not a mixed vaccination series) and is considered fully vaccinated against COVID-19 if at least 2 weeks have elapsed since the single dose of Janssen COVID-19 vaccine.

All vaccine administration errors and deviations from the currently recommended dosage and vaccination schedule should be reported to the Vaccine Adverse Event Reporting System (VAERS). (See EUA Requirements for Postvaccination Monitoring and Mandatory Vaccine Adverse Event Reporting under Cautions.) Information on how to prevent and report COVID-19 vaccine administration errors and recommendations for specific actions to take if an administration error or deviation from the recommended vaccination schedule occurs are available at the CDC website at https://www.cdc.gov/vaccines/covid-19/info-by-product/cellular-considerations.html.

Adult Dosage
The FDA EUA that permits use of COVID-19 vaccine (Janssen) for the prevention of COVID-19 (see Emergency Use Authorization under Uses) states that adults 18 years of age or older should receive a single 0.5-mL dose of the vaccine.

Cautions

■ Contraindications
- Known history of severe allergic reaction (e.g., anaphylaxis) to any component of the vaccine, including polysorbate. (See Description.)

■ Warnings/Precautions

Sensitivity Reactions

Hypersensitivity Reactions.

At the time that FDA’s safety analysis of data from the ongoing randomized, double-blind, placebo-controlled, phase 3 trial evaluating COVID-19 vaccine (Janssen) was performed for the EUA, urticaria (nonserous) occurring within 7 days following vaccination had been reported in 5 individuals who received the vaccine and 1 individual who received placebo.

A serious adverse hypersensitivity event (not classified as anaphylaxis) was reported in one vaccinated individual; the reaction consisted of urticaria beginning 2 days following vaccination and angioedema of the lips beginning 4 days following vaccination without respiratory distress. This event was considered likely related to the vaccine.

Severe allergic reactions, including one case of anaphylaxis, have been reported in an ongoing open-label study in South Africa.

If a hypersensitivity reaction, including anaphylaxis, occurs following COVID-19 vaccination, the case should be reported to VAERS. (See EUA Requirements for Postvaccination Monitoring and Mandatory Vaccine Adverse Event Reporting under Cautions.)

Because anaphylactic reactions have been reported rarely following administration of COVID-19 vaccines, ACIP has issued interim guidance with contraindications and precautions for use of COVID-19 vaccines pending further investigation.

For the purposes of this interim guidance, ACIP states that an immediate allergic reaction to a vaccine or medication is defined as any hypersensitivity-related signs or symptoms such as urticaria, angioedema, respiratory distress (e.g., wheezing, stridor), or anaphylaxis occurring within 4 hours following vaccination. Vaccination providers should attempt to determine whether reactions reported following COVID-19 vaccination are consistent with immediate allergic reactions or are reactions commonly observed following vaccination, such as vasovagal reactions or postvaccination adverse events.

History of polysorbate allergy: This a contraindication to vaccination with COVID-19 vaccine (Janssen). ACIP states that use of an mRNA COVID-19 vaccine (Moderna COVID-19 vaccine or Pfizer-BioNTech COVID-19 vaccine) can be considered in such individuals. However, polysorbates are structurally related to polyethylene glycol (PEG), an ingredient in mRNA COVID-19 vaccines, and there is potential for cross-reactive hypersensitivity with PEG. Consultation with an allergist-immunologist should be considered to help determine if the individual with polysorbate allergy can safely receive an mRNA COVID-19 vaccine. Healthcare providers and health departments can also request a clinical consultation from the Clinical Immunization Safety Assessment COVIDVax project (https://www.cdc.gov/vaccinesafety/ensuring-safety/monitoring/cisa/index.html) when making such decisions.

Known contraindication to vaccination with mRNA COVID-19 vaccines (including known PEG allergy): ACIP considers this a precaution to vaccination with COVID-19 vaccine (Janssen) and states that consideration can be given to using the Janssen COVID-19 vaccine in such individuals. However, because of
Thrombotic Events

Healthcare providers and health departments can request a clinical consultation from the Clinical Immunization Safety Assessment COVIDvax project (https://www.cdc.gov/vaccinesafety/ensuringsafety/monitoring/cisa/index.html) when making such decisions. If a decision is made to administer the Janssen COVID-19 vaccine to individuals with a contraindication to mRNA COVID-19 vaccines, the vaccine should be administered only in an appropriate setting under the supervision of a healthcare provider experienced in the management of severe allergic reactions. Although safety and efficacy of administering COVID-19 vaccine (Janssen) after an mRNA COVID-19 vaccine (e.g., due to a contraindication), a single dose of the Janssen COVID-19 vaccine may be considered at a minimum interval of 28 days after the mRNA COVID-19 vaccine dose. (See Dosage under Dosage and Administration.)

History of any immediate allergic reaction to any other vaccine or injectable therapy (i.e., IM, IV, or subcutaneous vaccines or therapies): ACIP considers this a precaution, but not a contraindication, to COVID-19 vaccination. ACIP states that a history of allergic reaction to subcutaneous immunotherapy for allergies (i.e., allergy shots) is not a precaution or contraindication to vaccination.

History of immediate allergic reaction to a vaccine or injectable therapy that contains multiple components (one of which is a vaccine component), but it is not the component which elicited the reaction: ACIP considers this a precaution, but not a contraindication, to COVID-19 vaccination.

History of allergic reactions (including severe allergic reactions) not related to COVID-19 vaccines or other vaccines or injectable therapies: ACIP states that allergic reactions related to food, pets, insects, venom, or environmental allergies and allergic reactions to oral medications (including the oral equivalents of injectable medications) are not a contraindication or precaution to COVID-19 vaccination. Latex allergy is not a contraindication or precaution since vial stoppers of COVID-19 vaccines are not made with natural rubber latex. In addition, allergies to eggs or gelatin are not a contraindication or precaution since COVID-19 vaccines do not contain eggs or gelatin.

If a precaution for COVID-19 vaccination is identified, ACIP recommends that a risk assessment be performed to help decide whether the individual should be vaccinated. The risk assessment should consider the risk of exposure to SARS-CoV-2 (e.g., because of residence in a congregate setting such as a long-term care facility, occupation), risk of severe disease or death due to COVID-19 (e.g., because of age or underlying medical conditions), the unknown risk of anaphylaxis (including fatal anaphylaxis) following COVID-19 vaccination in individuals with a history of immediate allergic reactions to other vaccines or injectable therapies, and ability to be vaccinated in a setting where appropriate medical care is immediately available to treat anaphylaxis if it occurs.

When a COVID-19 vaccine, including the Janssen COVID-19 vaccine, is administered to individuals without a contraindication to such vaccines, ACIP states that those with a history of an immediate allergic reaction of any severity to any other vaccine or injectable therapy and those with a history of anaphylaxis due to any cause not considered a contraindication should be observed for 30 minutes after the vaccine dose, and that all other individuals should be observed for 15 minutes. Vaccine recipients should be instructed to seek immediate medical care if they develop signs or symptoms of an allergic reaction after their observation period ends and they have left the vaccination site.

Appropriate medications and supplies to assess and manage immediate allergic reactions (e.g., sufficient quantities of epinephrine in prefilled syringes or autoinjectors) must be immediately available in the event that an acute anaphylactic reaction occurs following administration of a COVID-19 vaccine. Early recognition of the clinical signs and symptoms of anaphylaxis is important since such reactions require immediate treatment. Individuals with suspected anaphylaxis should be immediately treated with IM epinephrine.

ACIP interim guidance regarding early recognition of clinical signs and symptoms of anaphylaxis and guidance regarding preparation for and management of anaphylaxis at COVID-19 vaccination sites, including recommendations for medications and supplies to have immediately available and specific recommendations regarding therapeutic management of anaphylaxis, are available at the CDC website at https://www.cdc.gov/vaccines/covid-19/clinical-considerations/managing-anaphylaxis.html and https://www.cdc.gov/vaccines/covid-19/info-by-product/clinical-considerations.html.

When confronted with a complex COVID-19 vaccine safety question concerning an individual patient that is not readily addressed by ACIP guidance, US healthcare personnel and health departments can request a clinical consultation from the Clinical Immunization Safety Assessment COVIDvax project (https://www.cdc.gov/vaccinesafety/ensuringsafety/monitoring/cisa/index.html).

Thrombotic Events

At the time that FDA’s safety analysis of the phase 3 trial of the Janssen COVID-19 vaccine was performed for the EUA, there had been 6 reports of deep-vein thrombosis in individuals who received the vaccine (2 serious events; 5 events within 28 days of vaccination) and 2 such events in placebo recipients (1 serious; 2 within 28 days of vaccination). In addition, there were 4 reports of pulmonary embolism (3 serious; 2 within 28 days of vaccination) in vaccine recipients versus 1 report in placebo recipients (1 report of transverse sinus thrombosis; serious; within 28 days of vaccination) in vaccine recipients versus none in placebo recipients. A causal relationship between these thromboembolic events and the vaccine could not be established based on the phase 3 trial data. However, following issuance of the FDA EUA for the Janssen COVID-19 vaccine, there were rare reports of thrombosis involving large blood vessels occurring with thrombocytopenia, and evaluation of these cases suggest that a causal relationship between the vaccine and thrombosis with thrombocytopenia is plausible.

Thrombosis with Thrombocytopenia.

Thrombosis involving large blood vessels (e.g., the cerebral venous sinuses, portal vein, lower extremity veins, pulmonary artery) occurring with thrombocytopenia (also known as thrombosis with thrombocytopenia syndrome [TTS]) and with onset of symptoms approximately 1–2 weeks after vaccination has been reported rarely in recipients of the Janssen COVID-19 vaccine during post-authorization surveillance.

In response to reports of cerebral venous sinus thrombosis (CVST) with thrombocytopenia in a few recipients of the Janssen COVID-19 vaccine, FDA and CDC initiated a temporary pause in use of the vaccine in the US out of an abundance of caution to allow time for investigation of these cases, inform vaccine recipients and healthcare providers of possible symptoms, and inform healthcare providers about the need to withhold Janssen COVID-19 vaccine (both population- and individual-level risks and benefits), FDA and CDC determined that the known and potential benefits of the vaccine outweigh its known and potential risks in adults 18 years of age or older. At the time of CDC’s safety data analysis (April 21, 2021), a total of 15 cases of TTS had been reported and confirmed, including 3 fatalities. These post-authorization cases all occurred in females 18–59 years of age (median age 37 years; 13 of the 15 reported cases occurred in women 18–49 years of age), symptom onset was 6–15 days after vaccination (median 8 days), and the clinical course shared features with autoimmune heparin-induced thrombocytopenia. Some of these women had underlying medical conditions or risk factors for hypercoagulability (e.g., obesity, oral contraceptive use, hypothyroidism, hypertension); none of these women had a documented history of previous thrombotic events, known diagnosis of an underlying clotting disorder, or a family or personal history of clotting disorders. A single case of CVST with thrombocytopenia was reported during the phase 3 clinical trial of the Janssen COVID-19 vaccine (a male in the 18–49 years of age group).

Data for the initial 12 cases of TTS reported to VAERS that occurred in recipients of the Janssen COVID-19 vaccine have been published; data that include the 15 TTS cases evaluated as part of CDC’s safety analysis are provided in meeting materials from the April 23, 2021 ACIP meeting available at https://www.cdc.gov/vaccines/acip/meetings/index.html. At the time of CDC’s safety analysis, the reporting rate to VAERS was 7 cases of TTS per million doses of the Janssen COVID-19 vaccine administered to women 18–49 years and 0.9 cases per million doses administered to women 50 years of age or older.

Data accumulated as of May 7, 2021 indicated that more than 8.7 million doses of the Janssen COVID-19 vaccine had been administered in the US and a total of 28 cases of TTS had been reported to VAERS and confirmed (22 cases in females and 6 cases in males). Analyses of all 28 cases of TTS indicated that the median age was 40 years (range: 18–59 years of age), median time from vaccination to symptom onset was 9 days (range 4–15 days), a total of 3 deaths had occurred, CVST occurred in 19 of the 28 cases, nadir platelet counts were less than 50,000/mm³ in 18 of the 28 cases, and results of enzyme-linked immunosorbant assay (ELISA) for platelet-activating antibodies against platelet factor 4 (PF4) were positive in 24 of the 26 patients tested.

FDA and CDC are continuing to closely monitor reports of TTS in recipients of the Janssen COVID-19 vaccine. Based on currently available evidence, FDA states that a causal relationship between TTS and the vaccine is plausible. Specific risk factors for TTS following vaccination with the Janssen COVID-19 vaccine and the level of potential excess risk due to vaccination are still under investigation.

ACIP states that women younger than 50 years of age can receive any FDA-authorized COVID-19 vaccine; however, they should be informed about the rare risk of TTS after receipt of the Janssen COVID-19 vaccine and the availability of other FDA-authorized COVID-19 vaccines (Moderna COVID-19 vaccine, Pfizer-BioNTech COVID-19 vaccine). In addition, until more information becomes available about the etiology of TTS associated with the Janssen COVID-19 vaccine, some experts advise that an mRNA COVID-19 vaccine (Moderna COVID-19 vaccine or Pfizer-BioNTech COVID-19 vaccine) should be offered to individuals who have a history of
an immune-mediated syndrome characterized by thrombosis and thrombocytopenia (see Individuals with a History of Thrombosis or Risk Factors for Thrombosis under Cautions).

Healthcare providers should be alerted to and maintain a high index of suspicion for signs and symptoms of TTS (e.g., severe headache, backache, new neurologic symptoms, severe abdominal pain, shortness of breath, leg swelling, petechiae, new or easy bruising) occurring approximately 1–2 weeks after vaccination in individuals who have received the Janssen COVID-19 vaccine. Based on data regarding the US patients who developed TTS after receiving the Janssen COVID-19 vaccine and data regarding patients in Europe who developed immune thrombocytopenia after receiving a different adenoviral-vectored COVID-19 vaccine not available in the US (i.e., AstraZeneca COVID-19 vaccine), the clinical course shares features with autoimmune heparin-induced thrombocytopenia and may be associated with platelet-activating antibodies against PF4.

When managing thrombotic events and thrombocytopenia that occur following vaccination with the Janssen COVID-19 vaccine, use of heparin and its derivatives should be avoided (may be harmful); use of other anticoagulants and high-dose immune globulin IV (IGIV) should be considered. Consultation with hematology specialists is strongly recommended. Information regarding diagnosis and management of suspected cases of TTS in recipients of the Janssen COVID-19 vaccine is provided in the CDC Health Alert Network (HAN) notification at https://emergency.cdc.gov/han/2021/han00442.asp and is available from the American Society of Hematology (ASH) at https://www.hematology.org/covid-19/vaccine-induced-immune-thrombotic-thrombocytopenia.

Vaccinees should be instructed to seek immediate medical attention if they develop shortness of breath, chest pain, leg swelling, persistent abdominal pain, neurologic symptoms (including severe or persistent headaches or blurred vision), easy bruising, or a diffuse rash consisting of petechiae (pinpoint-like spots) beyond the vaccination site within a few weeks after receiving the Janssen COVID-19 vaccine. These symptoms are distinct from the commonly reported adverse effects that may be experienced in the first few days following vaccination (e.g., headache, fatigue, muscle aches, nausea) that usually are mild to moderate in severity and last 1–2 days.

If TTS occurs following vaccination, the case should be reported to VAERS. (See EUA Requirements for Postvaccination Monitoring and Mandatory Vaccine Adverse Event Reporting under Cautions.)

Other Adverse Events

Other adverse effects with a numerical imbalance between vaccine recipients and placebo recipients at the time that FDA’s safety analysis of the phase 3 trial of the Janssen COVID-19 vaccine was performed for the EUA included 4 reports of seizures in vaccine recipients (1 serious; 4 within 28 days of vaccination) versus 1 seizure event in placebo recipients and 6 reports of tinnitus in vaccine recipients (not serious; all 6 within 28 days of vaccination, including 3 within 2 days of vaccination) versus none in placebo recipients. A causal relationship between these events and the vaccine could not be established.

Concomitant Illness

A decision to administer or delay vaccination in an individual with a current or recent febrile illness depends on the severity of symptoms and etiology of the illness. ACIP states that a moderate or severe acute illness is a precaution for administration of vaccines and that a risk assessment should be performed with potential deferral of vaccination. Deferring vaccination until an individual has recovered avoids superimposing adverse effects of the vaccine on the underlying illness or mistakenly concluding that a manifestation of the underlying illness resulted from vaccination.

Individuals with Current SARS-CoV-2 Infection.

ACIP recommends that COVID-19 vaccination be deferred in individuals with known current SARS-CoV-2 infection until they have recovered from the acute illness (if symptomatic) and until criteria for discontinuation of isolation have been met. While there is no recommended minimum interval between SARS-CoV-2 infection and COVID-19 vaccination, current evidence suggests that the risk of reinfection is low in the months after initial infection, but may increase with time due to waning immunity.

ACIP states that viral testing to assess for acute SARS-CoV-2 infection or serologic testing to assess for prior infection solely for the purpose of COVID-19 vaccination decision-making is not recommended. (See Interpretation of SARS-CoV-2 Testing in Vaccinated Individuals under Cautions.)

Individuals with Recent Exposure to SARS-CoV-2 Infection.

ACIP states that COVID-19 vaccines are not currently recommended for outbreak management or for postexposure prophylaxis in individuals with a specific known exposure to SARS-CoV-2; postexposure vaccination is unlikely to be effective in preventing disease following such exposures. (See Limitations of Vaccine Effectiveness under Cautions.)

Individuals in the community or outpatient setting with a known COVID-19 exposure: ACIP states that such individuals should not seek COVID-19 vaccination until their quarantine period has ended to avoid potentially exposing healthcare personnel and other individuals to SARS-CoV-2 during the vaccination visit.

Individuals residing in congregate healthcare settings (e.g., long-term care facilities) or congregate non-healthcare settings (e.g., correctional and detention facilities, homeless shelters) with a known COVID-19 exposure: ACIP states that such individuals may receive COVID-19 vaccination since exposure to and transmission of SARS-CoV-2 can occur repeatedly for long periods of time in these settings and healthcare personnel and other staff are already in close contact with residents in these settings. Individuals providing vaccination services should employ appropriate infection prevention and control procedures.

Residents in congregate settings (healthcare and non-healthcare) with a known COVID-19 exposure waiting for results of SARS-CoV-2 testing: ACIP states that such individuals may receive COVID-19 vaccination if they do not have symptoms consistent with COVID-19. Individuals providing vaccination services should employ appropriate infection prevention and control procedures. Viral testing to assess for acute SARS-CoV-2 infection solely for the purpose of COVID-19 vaccination decision-making is not recommended. (See Interpretation of SARS-CoV-2 Testing in Vaccinated Individuals under Cautions.)

Individuals with Prior SARS-CoV-2 Infection.

Available data suggest that COVID-19 vaccination can be given safely to individuals with evidence of prior SARS-CoV-2 infection. ACIP states that COVID-19 vaccination should be offered to individuals regardless of history of prior symptomatic or asymptomatic SARS-CoV-2 infection, including those with prolonged post-COVID-19 symptoms.

Data are not available to date regarding the safety and efficacy of administering COVID-19 vaccines to individuals who have received passive antibody therapy with investigational SARS-CoV-2-specific monoclonal antibodies or investigational COVID-19 convalescent plasma as part of treatment of COVID-19. (See SARS-CoV-2 Antibody Therapies under Drug Interactions.)

Individuals with History of Multisystem Inflammatory Syndrome.

Data are not available to date regarding the safety and efficacy of COVID-19 vaccines in adults or children with a history of multisystem inflammatory syndrome (MIS-A or MIS-C, respectively). The mechanisms of MIS-A and MIS-C are not well understood, but include a dysregulated immune response to SARS-CoV-2 infection. It is unclear whether those with a history of MIS-A or MIS-C are at risk for recurrence of the same dysregulated immune response following reinfection with SARS-CoV-2 or in response to COVID-19 vaccination. ACIP Recommends weighing these theoretical concerns against the known risks of COVID-19 following reinfection and the benefits of protection following COVID-19 vaccination. Although children with MIS-C have high antibody titers to SARS-CoV-2, it is unclear whether this correlates with protection against reinfection and the duration of protective antibody levels in such children is not known.

ACIP states that individuals with a history of MIS-A or MIS-C may choose to be vaccinated. Although a conversation between the patient, their guardian(s), and their clinical team or a specialist may assist with decisions regarding COVID-19 vaccination in such individuals, a conversation with a healthcare provider is not required before vaccination. When making decisions regarding COVID-19 vaccination in those with a history of MIS-A or MIS-C, considerations include clinical recovery from MIS-A or MIS-C (including return to normal cardiac function), personal risk of severe acute COVID-19 (e.g., age, underlying conditions), level of COVID-19 transmission in the community and personal risk of reinfection, lack of safety data regarding administration of COVID-19 vaccines following MIS-A or MIS-C, and timing of any immunomodulatory therapies.

Current evidence suggests that the risk of reinfection with SARS-CoV-2 is low in the months after initial infection, but may increase with time due to waning immunity. ACIP states that individuals with a history of MIS-A or MIS-C should consider deferring COVID-19 vaccination until they have recovered from their illness and for 90 days after the date MIS-A or MIS-C was diagnosed, recognizing that the risk of reinfection and, therefore, the benefit from vaccination might increase with time following the initial infection.

If MIS-A or MIS-C associated with a confirmed SARS-CoV-2 infection develops after receipt of a COVID-19 vaccine, referral to a specialist in infectious diseases, rheumatology, or cardiology should be considered. Healthcare providers and health departments can also request a clinical consultation from the Clinical Immunization Safety Assessment COVIDvax project (https://www.cdc.gov/vaccinesafety/ensuring-safety/monitoring/cisa/index.html).

If MIS-A or MIS-C occurs following COVID-19 vaccination, the case should be reported to VAERS. (See EUA Requirements for Postvaccination Monitoring and Mandatory Vaccine Adverse Event Reporting under Cautions.)
Individuals with Altered Immune Competence.

Individuals with altered immune competence, including those receiving immunosuppressive therapy (see Immunosuppressive Agents under Drug Interactions), may have diminished immune responses to vaccines, including the Janssen COVID-19 vaccine. Although some individuals with altered immune competence (e.g., HIV infection) have been included in the ongoing randomized, double-blind, placebo-controlled, phase 3 trial evaluating the Janssen COVID-19 vaccine, the number of such individuals has been insufficient to evaluate safety of the vaccine in such populations. ACIP states that individuals with HIV infection or other immunocompromising conditions and individuals receiving immunosuppressive therapies may be at increased risk for severe COVID-19 and, although data are not currently available to establish safety and efficacy in such individuals, they may receive any authorized COVID-19 vaccine if they have no contraindications to the vaccine. However, such individuals should be counseled about the unknown safety profile and effectiveness of COVID-19 vaccines in immunocompromised populations and the potential for reduced immune responses and the need to continue following all current guidelines to protect themselves from COVID-19.

Antibody testing to assess for immunity to SARS-CoV-2 following COVID-19 vaccination in individuals with altered immune competence is not recommended. (See Interpretation of SARS-CoV-2 Testing in Vaccinated Individuals under Cautions.)

Individuals with Autoimmune Conditions.

ACIP states that individuals with autoimmune conditions may receive any authorized COVID-19 vaccine unless they have a contraindication to the vaccine. Individuals with autoimmune conditions were not excluded from clinical trials evaluating the mRNA COVID-19 vaccines and these trials showed no imbalances in the occurrence of symptoms consistent with autoimmune conditions or inflammatory disorders in trial participants who received COVID-19 vaccine compared with those who received placebo.

Individuals with a History of Thrombosis or Risk Factors for Thrombosis.

TTS has been reported rarely in recipients of the Janssen COVID-19 vaccine (see Thrombosis with Thrombocytopenia under Cautions). Although the etiology of TTS associated with the Janssen COVID-19 vaccine is unclear, it appears to be similar to heparin-induced thrombocytopenia. Until more information becomes available, some experts advise that an mRNA COVID-19 vaccine (Moderna COVID-19 vaccine or Pfizer-BioNTech COVID-19 vaccine) should be offered to individuals who have had an episode of an immune-mediated syndrome characterized by thrombosis and thrombocytopenia (e.g., heparin-induced thrombocytopenia) that resolved within the past 90 days.

Clinicians should consider that venous thromboembolism (VTE; defined as deep-vein thrombosis and/or pulmonary embolism) is common and that the biologic mechanisms for VTE (as well as arterial thrombi) differ from the underlying immune-mediated mechanism for heparin-induced thrombocytopenia. Based on current knowledge, experts believe that individuals with risk factors for VTE (e.g., inherited or acquired thrombophilia including factor V Leiden; prothrombin gene 20210A mutation; antiphospholipid syndrome; protein C, protein S, or antithrombin deficiency) or a history of other types of thrombosis (including CVST) not associated with thrombocytopenia are unlikely to be at increased risk for TTS. In addition, although the risk of thrombosis is increased during pregnancy and the postpartum period and with certain hormonal contraceptives (e.g., estrogen-progestin oral contraceptive, transdermal system, or vaginal ring), experts believe that these factors do not make individuals more susceptible to TTS after receipt of the Janssen COVID-19 vaccine. ACIP states that such individuals can receive any FDA-authorized COVID-19 vaccine, including the Janssen COVID-19 vaccine.

ACIP states that premedication with anticoagulants or aspirin prior to vaccination with the Janssen COVID-19 vaccine is not recommended. (See Anticoagulants and Aspirin under Drug Interactions.)

Individuals with Liver Disease.

The American Association for the Study of Liver Diseases (AASLD) has released a consensus statement regarding use of COVID-19 vaccines in individuals who have chronic liver disease or are liver transplant recipients. Although safety and efficacy data regarding use of COVID-19 vaccines in individuals with chronic liver disease or autoimmune hepatitis and additional studies are needed, safety and efficacy of the vaccines in such individuals are expected to be similar to the general population. AASLD states that individuals with chronic liver disease who are receiving antiviral treatment for hepatitis B virus (HBV) or hepatitis C virus (HCV) infection and those receiving medical therapy for primary biliary cholangitis or autoimmune hepatitis should not discontinue such therapy when receiving COVID-19 vaccination. In addition, patients with hepatocellular carcinoma undergoing locoregional or systemic therapy should be considered for COVID-19 vaccination without interruption of treatment.

AASLD states that liver transplant candidates should receive COVID-19 vaccination prior to transplantation, whenever possible, to help ensure an adequate immune response. The best time for COVID-19 vaccination in previously unvaccinated liver transplant recipients is likely to be at least 3 months after transplant; however, vaccination may be given as early as 6 weeks after transplant if indicated based on ongoing community spread of SARS-CoV-2, especially in those at highest risk with other comorbid factors associated with severe COVID-19.

The AASLD consensus statement should be consulted for additional guidance on use of COVID-19 vaccines in individuals with chronic liver disease.

Individuals with a History of Guillain-Barré Syndrome.

Data from the ongoing randomized, double-blind, placebo-controlled, phase 3 trial evaluating the Janssen COVID-19 vaccine identified a single case of Guillain-Barré syndrome (GBS) that occurred in a vaccine recipient 16 days after the vaccine dose and a single case in a placebo recipient that occurred 10 days after the dose. FDA stated that, although the case of GBS was unlikely to be related to the vaccine, a causal relationship cannot be definitively excluded.

ACIP states that individuals with a history of GBS may receive COVID-19 vaccination, unless they have a contraindication to the vaccine. A history of GBS is not usually considered a contraindication or precaution to vaccination with most vaccines. In the event of GBS following COVID-19 vaccination, the case should be reported to VAERS. (See EUA Requirements for Postvaccination Monitoring and Mandatory Vaccine Adverse Event Reporting under Cautions.)

Individuals with a History of Bell's Palsy.

Data from the ongoing randomized, double-blind, placebo-controlled, phase 3 trial evaluating the Janssen COVID-19 vaccine identified 2 cases of Bell’s palsy (facial paralysis) in the vaccine group and 2 cases in the placebo group. FDA stated that, although the cases of Bell's palsy were unlikely to be related to the vaccine, a causal relationship cannot be definitively excluded.

ACIP states that in the event of a causal relationship between COVID-19 vaccines and Bell's palsy, individuals with a history of Bell’s palsy may receive COVID-19 vaccination, unless they have a contraindication to the vaccine. In the event of Bell’s palsy occurring following COVID-19 vaccination, the case should be reported to VAERS. (See EUA Requirements for Postvaccination Monitoring and Mandatory Vaccine Adverse Event Reporting under Cautions.)

Individuals with Increased Bleeding Risk.

Individuals who have bleeding disorders or are receiving anticoagulant therapy and/or their caregiver should be advised about the risk of hematomata from IM injections.

ACIP states that IM vaccines may be given to individuals who have bleeding disorders if a clinician familiar with the patient’s bleeding risk determines that the preparation can be administered IM with reasonable safety. In these cases, a fine needle (23 gauge or smaller) should be used to administer the vaccine and firm pressure applied to the injection site (without rubbing) for at least 2 minutes. In individuals receiving therapy for hemophilia, IM vaccines can be scheduled for administration shortly after a dose of such therapy.

Individuals receiving anticoagulation therapy presumably have the same bleeding risk as patients with clotting factor disorders and should follow the same guidelines for IM administration. If possible, IM vaccines could be scheduled prior to use of an anticoagulant so that the patient's risk of bleeding is not increased by the drug's therapeutic action.

Individuals Vaccinated Outside the US.

Some individuals in the US may have previously received vaccination against COVID-19 in another country using a vaccine that is not authorized by the FDA and/or is not listed for emergency use by the World Health Organization (WHO). For the purposes of public health guidance, ACIP states that only individuals who have received all recommended doses of a COVID-19 vaccine authorized by FDA or listed by WHO for emergency use are considered fully vaccinated.

Data are not available regarding the safety and efficacy of administering an FDA-authorized COVID-19 vaccine to individuals who previously received a COVID-19 vaccine that is not authorized in the US. However, ACIP states that such individuals may be offered revaccination with an FDA-authorized COVID-19 vaccine in certain circumstances. If an FDA-authorized COVID-19 vaccine is administered to an individual who previously received a vaccine not authorized by FDA, the minimum interval between the last dose of a non-FDA-authorized COVID-19 vaccine and an FDA-authorized COVID-19 vaccine is 28 days.

Fully or Partially Vaccinated with an FDA-authorized COVID-19 Vaccine.

Individuals who were vaccinated outside the US with an FDA-authorized COVID-19 vaccine do not need to receive any additional doses in the US if they previously received all the recommended doses of the vaccine.

If an individual in the US received the first dose of an FDA-authorized COVID-19 vaccine outside the US and a 2-dose regimen is required, ACIP states that the vaccination series does not need to be restarted, but the second dose of the vaccine should be administered as close to the recommended interval as possible.

Previously Received a COVID-19 Vaccine not Authorized by FDA but Listed for Emergency Use by WHO.

Individuals who completed a COVID-19 vaccination series outside the US with a vaccine listed for emergency use by WHO do not need any additional doses using an FDA-authorized COVID-19 vaccine.
ACIP states that vaccination with an FDA-authorized COVID-19 vaccine may be offered to individuals who partially completed a COVID-19 vaccination series outside the US with a vaccine listed for emergency use by WHO.

Previously Received a COVID-19 Vaccine not Authorized by FDA or Listed for Emergency Use by WHO.

ACIP states that vaccination with an FDA-authorized COVID-19 vaccine may be offered to individuals who completed or partially completed a COVID-19 vaccination series outside the US with a vaccine that is not authorized by FDA or listed for emergency use by WHO.

Limitations of Vaccine Effectiveness

COVID-19 vaccine (Janssen) may not protect all vaccine recipients against COVID-19.

Use of COVID-19 vaccines for outbreak management or for postexposure prophylaxis to prevent SARS-CoV-2 infection in individuals with a specific known exposure to the virus is unlikely to be effective and is not currently recommended. ACIP states that, because the median incubation period of SARS-CoV-2 infection is 4–5 days, it is unlikely that a dose of a COVID-19 vaccine would provide an adequate immune response within the incubation period for effective postexposure prophylaxis.

FDA states that data are too limited to date to assess the effect of the Janssen COVID-19 vaccine for prevention of asymptomatic SARS-CoV-2 infection; additional evaluations are needed, including data from clinical trials and from use of the vaccine after issuance of the EUA.

FDA states that data are too limited to date to assess the effect of the Janssen COVID-19 vaccine against transmission of SARS-CoV-2 from individuals who become infected despite vaccination. Demonstrated high efficacy against symptomatic COVID-19 may translate to overall prevention of transmission in populations with high enough vaccine uptake; however, it is possible that if efficacy against asymptomatic infection were lower than efficacy against symptomatic infection, asymptomatic cases in combination with reduced mask-wearing and social distancing could result in significant continued transmission of the virus. Additional evaluations are needed, including data from clinical trials and from use of the vaccine after issuance of the EUA, to assess the effect of the vaccine in preventing virus shedding and transmission, particularly in individuals with asymptomatic infection.

Based on the unknown duration of vaccine-induced protection and unknown efficacy against emerging SARS-CoV-2 variants, individuals who receive COVID-19 vaccination and are considered fully vaccinated should be counseled to follow current guidance for fully vaccinated individuals to protect themselves and others. This may include wearing a mask and physically distancing in certain situations and venues if required by federal, state, local, tribal, or territorial laws, rules, and regulations and following CDC travel guidance and any applicable workplace or school guidance. CDC has issued interim public health recommendations for individuals who are fully vaccinated against COVID-19 (defined as at least 2 weeks after a single dose of the Janssen COVID-19 vaccine or at least 2 weeks after completion of a 2-dose vaccination series of the Moderna COVID-19 vaccine or Pfizer-BioNTech COVID-19 vaccine); these recommendations (available at the CDC website at https://www.cdc.gov/coronavirus/2019-ncov/vaccines/fully-vaccinated-guidance.html) should be consulted for information on precautionary measures that fully vaccinated individuals should take in certain social situations and/or following exposure to someone with suspected or confirmed COVID-19.

Withholding COVID-19 vaccination due to concerns about efficacy against current or future SARS-CoV-2 viral variants is not recommended.

If COVID-19 vaccine breakthrough infection occurs in an individual who is fully vaccinated against COVID-19 (i.e., RNA or antigen detected in a respiratory specimen collected at least 14 days after an individual completed all recommended doses of an FDA-authorized COVID-19 vaccine), healthcare providers, local health departments, and clinical laboratories are encouraged to request that the respiratory specimen be held for further testing and that the case be reported to the state health department for further investigation and reporting to the national system. If COVID-19 vaccine breakthrough infection results in hospitalization or death, the case should be reported to VAERS. (See EUA Requirements for Postvaccination Monitoring and Mandatory Vaccine Adverse Event Reporting under Cautions.)

Duration of Immunity

The duration of protection against SARS-CoV-2 infection following vaccination with a single dose of COVID-19 vaccine (Janssen) has not been fully evaluated.

Because available trial data have a limited length of follow-up to date, it is not possible at this time to assess sustained efficacy over a period longer than 2 months. ACIP states that the need for and timing of booster doses of COVID-19 vaccines have not been established. Additional vaccine doses beyond those recommended for a complete, valid vaccination series (see Dosage under Dosage and Administration) are not recommended at this time. Recommendations on revaccination or additional doses of COVID-19 vaccines may be updated when additional information is available.

Improve Storage and Handling

Improper storage or handling of vaccines may reduce or destroy vaccine potency resulting in inadequate or no immune response in vaccinees. All vaccines should be inspected on delivery and monitored during storage to ensure that the recommended storage temperatures are maintained.

COVID-19 vaccine (Janssen) must be shipped, stored, and handled under specific conditions at all times, according to specifications in the EUA fact sheet for healthcare providers and guidance from the manufacturer and CDC. Vaccine that has been mishandled or has not been stored at the recommended temperatures should not be administered. (See Stability.)

If there are concerns about mishandling or defective or damaged vaccine, the manufacturer should be contacted at 800-565-4008 or 908-455-9922 for guidance.

EUA Requirements for Postvaccination Monitoring and Mandatory Vaccine Adverse Event Reporting

Safety and efficacy of COVID-19 vaccine (Janssen) have not been established. The FDA issued an EUA that permits use of the vaccine for the prevention of COVID-19† in individuals 18 years of age or older when administered according to the single-dose regimen specified in the EUA. (See Emergency Use Authorization under Uses.)

Some data are available regarding adverse events associated with use of the Janssen COVID-19 vaccine. (See Common Adverse Effects under Cautions.)

Additional adverse events, some of which may be serious, may become apparent with more widespread use of the vaccine.

All vaccine recipients should be monitored for immediate adverse reactions according to CDC (ACIP) guidelines. (See General under Dosage and Administration.)

Vaccine recipients or their caregivers should be provided with information on, and encouraged to participate in, CDC’s voluntary smartphone-based tool (v-safe) that uses text messaging and web surveys to check in with individuals who have received a COVID-19 vaccine to identify potential adverse effects. Reports to v-safe that indicate a medically important health impact are followed up by the CDC v-safe call center to collect additional information to complete a VAERS report. Information on v-safe is available at https://www.cdc.gov/vsafe.

It is mandatory that vaccination providers administering COVID-19 vaccine (Janssen) report all vaccine administration errors (even if not associated with an adverse event) and serious adverse events (irrespective of attribution to vaccination) that occur following vaccination and also report all cases of multisystem inflammatory syndrome (MIS) and COVID-19 that result in hospitalization or death in vaccine recipients to VAERS. VAERS reports can be completed and submitted online at https://vaers.hhs.gov/reportevent.html or faxed to 877-721-0366; the words “Janssen COVID-19 Vaccine EUA” should be included in the description section of the report. Information on submitting a VAERS report can be obtained by calling 800-822-7976 or emailing info@vaers.org. To the extent feasible, a copy of the VAERS form should also be provided to the manufacturer (Janssen) at JNJvaccineAE@its.jnj.com (email), 215-293-9955 (fax), or 800-565-4008 (phone).

The FDA fact sheet for healthcare providers for the Janssen COVID-19 vaccine available at the FDA website and at http://www.janssencovid19vaccine.com should be consulted for requirements and instructions regarding reporting of adverse reactions and vaccine errors.

Interpretation of SARS-CoV-2 Testing in Vaccinated Individuals

ACIP states that results of SARS-CoV-2 viral tests (nucleic acid amplification or antigen tests) are not affected by prior COVID-19 vaccination. Currently available antibody tests for SARS-CoV-2 assess IgM and/or IgG to one of two viral proteins (spike or nucleocapsid). Because COVID-19 vaccines, including the Janssen COVID-19 vaccine, encode the spike protein of the virus, a positive test for spike protein IgM/IgG could indicate either prior infection or vaccination. To ensure accuracy for evidence of prior infection in an individual with a history of COVID-19 vaccination, a test that specifically evaluates IgM/IgG to the nucleocapsid protein should be used.

Antibody testing is not currently recommended to assess for immunity to COVID-19 following COVID-19 vaccination because the clinical utility of post-vaccination testing has not been established. Antibody tests currently authorized for use under EUAs have variable sensitivity and specificity, as well as positive and negative predictive values, and are not authorized for assessment of immune response in individuals who have received COVID-19 vaccination. In addition, the serologic correlates of protection against SARS-CoV-2 have not been established, and antibody testing does not evaluate the cellular immune response, which may also play a role in vaccine-mediated protection. If antibody testing is performed following COVID-19 vaccination, additional doses of the same or different COVID-19 vaccine beyond the recommended vaccination series should not be administered based on results of antibody testing.

Interpretation of Tuberculosis Tests in Vaccinated Individuals

ACIP states that COVID-19 vaccination should not be delayed in situations when an immune-based method of tuberculosis testing (i.e., intradermal tuberculin skin test [TST] or serum interferon gamma release assay [IGRA]) is required or indicated.

If TST or IGRA is required according to administrative policies (e.g., healthcare employment, admission to long-term care facilities), such testing can be performed before or during the same visit when a COVID-19 vaccine is administered. If such tuberculosis testing cannot be done prior to or at the same time as vaccination with a COVID-19 vaccine, ACIP recommends that it be delayed until at least 4 weeks after vaccination.
COVID-19 vaccination is completed. If a tuberculosis testing requirement or policy cannot be modified to accept a delay in TST or IGRA testing during the COVID-19 pandemic, it should be understood that a false-negative TST or IGRA cannot be excluded and consideration should be given to repeating a negative TST or IGRA test at least 4 weeks after completion of COVID-19 vaccination. In addition, if the TST was performed as the initial test, consideration should be given to the possibility that boosting could be a factor if results of a repeat TST are positive.

ACIP states that individuals who have active tuberculosis disease or an illness that is being evaluated as active tuberculosis disease can receive COVID-19 vaccination; however, a moderate or severe acute illness usually is a precaution for vaccination (see Concomitant Illness Under Cautions). If TST or IGRA is being considered for medical diagnosis of latent tuberculosis infection (e.g., during a contact investigation after exposure to contagious tuberculosis disease), a decision to delay such testing until at least 4 weeks after completion of COVID-19 vaccination is at the discretion of the responsible medical provider and local tuberculosis program overseeing the contact investigation. If a decision is made to not delay TST or IGRA testing (e.g., in individuals at high risk for progression to tuberculosis disease) and test results are negative, ACIP states that consideration should be given to retesting at least 4 weeks after COVID-19 vaccination is completed.

Specific Populations

Pregnancy

Data are insufficient to date regarding use of COVID-19 vaccine (Janssen) in pregnant women to inform vaccine-associated risks during pregnancy. In a reproductive developmental toxicity study in female rabbits, there was no evidence of vaccine-related adverse effects on female fertility, embryofetal development, or postnatal development up to postnatal day 28 when 1 mL of the Janssen COVID-19 vaccine was given by IM injection 7 days prior to mating and on gestation days 6 and 20 (i.e., during early and late gestation, respectively).

Observational data suggest that, while the absolute risk is low, pregnant women with COVID-19 are at increased risk of severe illness, including illness resulting in admission to an intensive care unit, mechanical ventilation, ECMO, or death. Additionally, such women are at increased risk of preterm birth and may be at increased risk of adverse pregnancy complications and outcomes, such as preeclampsia, coagulopathy, and stillbirth.

Although data are limited regarding the safety of the Janssen COVID-19 vaccine during pregnancy, a different adenovirus-vectored vaccine (i.e., Ebola virus vaccine not available in the US) has been used in a large-scale vaccination trial that included pregnant women who were vaccinated and had live births and no adverse pregnancy-related outcomes, including infant outcomes, that were identified that were determined to be related to the vaccine. The Janssen COVID-19 vaccine contains a replication-incompetent adenovirus viral vector and cannot cause SARS-CoV-2 infection in the pregnant woman or her fetus.

FDA data that pregnancy is not a contraindication for use of the Janssen COVID-19 vaccine, and pregnant women should discuss their options with their healthcare providers.

ACIP states that pregnant women are eligible for and can receive COVID-19 vaccination and does not state a preference for any specific COVID-19 vaccine in pregnant women. Based on current knowledge, COVID-19 vaccines are unlikely to pose a risk to pregnant women or the fetus. Although the potential risks of COVID-19 vaccines administered during pregnancy are unknown, clinical trials to evaluate the safety and efficacy of the vaccines in pregnant women are underway or planned.

The American College of Obstetricians and Gynecologists (ACOG) recommends that COVID-19 vaccines should not be withheld from pregnant women. In the interest of patient autonomy, these experts recommend that pregnant women be free to make their own decision regarding COVID-19 vaccination.

ACIP and ACOG state that pregnant and postpartum women younger than 50 years of age should be informed about the rare risk of TTS after receipt of the Janssen COVID-19 vaccine (see Thrombosis with Thrombocytopenia under Cautions) and the availability of other FDA-authorized COVID-19 vaccines (Moderna COVID-19 vaccine, Pfizer-BioNTech COVID-19 vaccine). ACOG states that women who choose not to receive the Janssen COVID-19 vaccine should be strongly encouraged to receive a different FDA-authorized COVID-19 vaccine.

ACIP and ACOG state that a conversation between the pregnant woman and her clinical team may assist with decisions regarding use of COVID-19 vaccines available under an EUA; however, such a conversation is not required and written permission is not needed prior to vaccination. When making a decision, these experts recommend that the pregnant woman and her healthcare provider consider the level of COVID-19 transmission in the community, the individual’s personal risk of contracting COVID-19, the increased risk of severe COVID-19 in the pregnant woman and potential risks to the fetus, the known and potential benefits of vaccination, efficacy of the vaccine, adverse effects of the vaccine, and the limited but growing data about use of the vaccine during pregnancy.

Adverse effects similar to those reported in non-pregnant individuals can occur following COVID-19 vaccination in pregnant women. Pregnant women who experience fever following COVID-19 vaccination should be counseled to take acetaminophen; acetaminophen also may be offered as an option for pregnant women experiencing other postvaccination symptoms.

Administration of other vaccines (e.g., diphtheria and tetanus toxoids and acellular pertussis vaccine adsorbed [DTaP], influenza vaccine) in pregnant women should be deferred for 14 days after COVID-19 vaccination. (See Vaccines Under Drug Interactions.) ACOG states that Rh(D) immune globulin should not be withheld when indicated in an individual who is planning to receive or recently received a COVID-19 vaccine. (See Immune Globulins and Antibody Therapies under Drug Interactions.)

A pregnancy exposure registry to monitor pregnancy outcomes in women exposed to the Janssen COVID-19 vaccine during pregnancy has been established. Women who are vaccinated with the Janssen COVID-19 vaccine during pregnancy are encouraged to enroll in the registry at https://c-viper.pregistry.com.

Individuals who receive a COVID-19 vaccine during pregnancy and those who become pregnant within 30 days after receiving a COVID-19 vaccine should be encouraged to participate in CDC's v-safe program. (See EUA Requirements for Postvaccination Monitoring and Mandatory Vaccine Adverse Event Reporting under Cautions.)

Females and Males of Reproductive Capacity

Routine pregnancy testing is not recommended before receiving a COVID-19 vaccine.

ACIP states that women trying to become pregnant do not need to avoid pregnancy after COVID-19 vaccination.

ACOG recommends COVID-19 vaccination for all eligible individuals, including those who may consider future pregnancy.

Unfounded claims linking COVID-19 vaccines to infertility have been scientifically disproven. Because the Janssen COVID-19 vaccine contains a replication-incompetent adenoviral vector that cannot cause infection or alter the DNA of vaccine recipients, it cannot cause infertility.

Lactation

Data are not available to assess whether COVID-19 vaccine (Janssen) administered to a woman who is breast-feeding has any effects on the breast-fed infant or milk production.

FDA states that breast-feeding is not a contraindication to use of the Janssen COVID-19 vaccine, and women who are breast-feeding should discuss their options with their healthcare providers.

ACIP states that FDA-authorized COVID-19 vaccines administered to breast-feeding women cannot cause SARS-CoV-2 infection in the woman or their infants; therefore, breast-feeding women can receive COVID-19 vaccination. ACIP states that lactating women younger than 50 years of age should be informed about the rare risk of TTS after receipt of the Janssen COVID-19 vaccine (see Thrombosis with Thrombocytopenia under Cautions) and the availability of other FDA-authorized COVID-19 vaccines (Moderna COVID-19 vaccine, Pfizer-BioNTech COVID-19 vaccine).

ACOG states that COVID-19 vaccines should be offered to lactating women, similar to other individuals. ACOG also states that theoretical concerns regarding the safety of vaccinating lactating women do not outweigh the potential benefits of receiving the vaccine and there is no need to avoid initiating breast-feeding or to discontinue breast-feeding in those who receive a COVID-19 vaccine.

Pediatric Use

Safety and efficacy of COVID-19 vaccine (Janssen) have not been assessed in individuals younger than 18 years of age.

The FDA EUA permits use of the Janssen COVID-19 vaccine only in individuals 18 years of age or older.

Geriatric Use

Individuals 65 years of age or older have been included in clinical trials evaluating COVID-19 vaccine (Janssen), and data from such individuals contribute to the overall assessment of safety and efficacy of the vaccine.

At the time that FDA's safety analysis of data from the ongoing randomized, double-blind, placebo-controlled, phase 3 trial was performed for the EUA, 19.5% of participants were 65 years of age and older and 3.7% were 75 years of age and older. No overall differences in safety or efficacy were observed between adults 65 years of age and older and younger individuals.

Common Adverse Effects

Data regarding the safety of COVID-19 vaccine (Janssen) are available from several clinical trials, including the ongoing randomized, double-blind, placebo-controlled, phase 3 trial (NCT04505722; ENSEMBLE; study COV3001) evaluating a single dose of the vaccine. At the time that FDA's safety analysis of the phase 3 trial was performed for the EUA, a total of 43,783 study participants 18 years of age or older had been followed for 2 months (21,895 in the vaccine group). A subset of 6736 participants (3356 in the vaccine group and 3380 in the placebo group) were followed for solicited local and systemic adverse effects within 7 days following vaccination and unsolicited adverse effects within 28 days following vaccination.

Solicited local adverse effects reported in vaccine recipients included injection site pain (48.6%), erythema (7.3%), and swelling (5.3%). Onset of local adverse effects generally occurred within the first 1–2 days after vaccination, and the median duration
of symptoms was 2 days. However, pain was reported to last longer than 7 days in 2.3% of vaccine recipients and erythema and swelling lasted longer than 7 days in 0.5–0.8% of vaccinees.

Solicited systemic adverse effects reported in vaccine recipients included headache (38.9%), fatigue (38.2%), myalgia (33.2%), nausea (14.2%), and fever (9%). Onset of systemic adverse effects generally occurred within the first 1–2 days after vaccination, and the median duration of symptoms was 1–2 days.

Use of antipyretics/analgesics within 7 days following vaccination was reported in 19.9% of vaccine recipients versus 5.7% of placebo recipients.

Solicited adverse local and systemic reactions generally were reported more frequently in vaccinees 18–59 years of age than in vaccinees 60 years of age or older.

At the time that FDA’s safety analysis of the ongoing phase 3 trial was performed for the EUA, serious adverse events (excluding those related to confirmed COVID-19) had been reported in 0.4% of vaccine recipients and 0.4% of placebo recipients.

Severe allergic reactions, including anaphylaxis, have been reported rarely. (See Hypersensitivity Reactions under Cautions.)

### Drug Interactions

#### Anticoagulants and Aspirin

Premedication with an anticoagulant or aspirin is not recommended prior to receipt of the Janssen COVID-19 vaccine or any other FDA-authorized COVID-19 vaccine.

Individuals taking anticoagulants or aspirin as part of their routine medications do not need to discontinue or alter dosage of these drugs prior to vaccination with the Janssen COVID-19 vaccine.

#### Antiviral Agents

Use of antiviral agents at any interval before or after COVID-19 vaccination is unlikely to impair development of vaccine-induced protective antibody responses.

#### Hormonal Contraceptives

Although certain hormonal contraceptives (e.g., estrogen-progestin oral contraceptive, transdermal system, or vaginal ring) may increase the overall general risk of thrombosis, experts believe that such contraceptives do not make individuals more susceptible to TTS after receipt of the Janssen COVID-19 vaccine.

ACOG states that there is no recommendation to discontinue or change hormonal contraceptive methods in women who have received or plan to receive the Janssen COVID-19 vaccine.

#### Immune Globulins and Antibody Therapies

Individuals receiving immune globulin (e.g., immune globulin IV [IGIV], Rh(D) immunoglobulin) and antibody therapies not specific for SARS-CoV-2 may receive a COVID-19 vaccine, either concurrently with or at any interval before or after the immune globulin or antibody therapy since such products are unlikely to substantially impair immune responses to the COVID-19 vaccine.

ACIP states that there is no recommended minimum interval between receipt of antibody therapies not specific for SARS-CoV-2 and COVID-19 vaccination.

### SARS-CoV-2 Antibody Therapies

Data are not available regarding the safety and efficacy of administering COVID-19 vaccines to individuals who have received passive antibody therapy with investigational SARS-CoV-2-specific monoclonal antibodies (e.g., bamlanivimab and etesevimab, casirivimab and imdevimab) or investigational COVID-19 convalescent plasma as part of COVID-19 treatment.

Based on the estimated half-life of SARS-CoV-2 antibody therapies as well as evidence suggesting that reinfection is uncommon in the 90 days after initial infection, ACIP recommends that COVID-19 vaccination should be deferred for at least 90 days after such therapies as a precautionary measure until additional information becomes available since this avoids potential interference of the antibody therapy with immune responses to the COVID-19 vaccine.

COVID-19 vaccination is not contraindicated in individuals who have received passive antibody therapy within the past 90 days, and COVID-19 vaccine doses received within 90 days after receipt of passive antibody therapy do not need to be repeated.

If an individual who has received one or more doses of COVID-19 vaccine subsequently develops COVID-19, ACIP states that prior receipt of a COVID-19 vaccine should not affect treatment decisions, including the use of corticosteroids, or the timing of such treatment.

#### Vaccines

Data are not available to date to assess concomitant administration of COVID-19 vaccines, including the Janssen COVID-19 vaccine, with other vaccines.

Although ACIP previously recommended that COVID-19 vaccines should be administered alone, with a minimum interval of 14 days before or after administration of any other vaccines, these experts currently state that COVID-19 vaccines and other vaccines may be administered without regard to timing, including on the same day or within 14 days of each other.

Extensive experience with non-COVID-19 vaccines has demonstrated that immunogenicity and adverse event profiles are generally similar whether vaccines are administered concomitantly or alone. However, it is not known whether reactogenicity of COVID-19 vaccines is increased when administered concomitantly with other vaccines, including those known to be more reactogenic (e.g., adjuvanted vaccines, live vaccines). Decisions to administer a COVID-19 vaccine concomitantly with other vaccine(s) should be based on whether routine immunizations with the other vaccines have been delayed or missed, the individual's risk of vaccine-preventable disease (e.g., during an outbreak or occupational exposures), and the reactogenicity profiles of the vaccines.

If a COVID-19 vaccine is administered concomitantly with other vaccines, each parenteral vaccine should be given at a different injection site and, if possible, the injection sites should be separated by at least 1 inch. ACIP states that, although the deltoid muscle can be used for more than one IM injection in adolescents and adults, COVID-19 vaccines and vaccines that are likely to cause a local reaction (e.g., tetanus toxoid-containing vaccines, adjuvanted vaccines) should be administered in different limbs, if possible.

### Description

COVID-19 vaccine (Janssen) is a viral vector vaccine composed of a recombinant, replication-incompetent, human adenovirus type 26 (Ad26) vector encoding the SARS-CoV-2 spike (S) protein in a stabilized conformation. The Ad26 vector expressing the SARS-CoV-2 S protein is grown in PER.C6 TetR cells, in media containing amino acids and no animal-derived proteins.

Following IM injection of the Janssen COVID-19 vaccine, the Ad26 vector enters human cells and expresses the S antigen of SARS-CoV-2 without virus propagation. An immune response to the S antigen is then elicited to protect against SARS-CoV-2 infection.

Data from an ongoing phase 1/phase 2 clinical trial in healthy adults 18 years of age or older indicate that a single dose of Janssen COVID-19 vaccine containing 5 × 10^10 virus particles (i.e., recombinant Ad26) elicited SARS-CoV-2 neutralizing antibody when tested against wild-type virus and a SARS-CoV-2 S-binding antibody response that was detected by day 15 after the dose and was increased when evaluated at day 57. The vaccine dose elicited cellular responses in study participants that were consistent with a Th-1 phenotype. A second dose of the vaccine given 56 days after the first dose resulted in increased neutralizing antibody titers.

COVID-19 vaccine (Janssen) available for use under the FDA EUA is provided as a suspension in multiple-dose vials. Each 0.5-mL dose of COVID-19 vaccine (Janssen) contains 5 × 10^10 virus particles (i.e., recombinant Ad26). Each dose of the vaccine also contains citric acid monohydrate, trisodium citrate dihydrate, ethanol, 2-hydroxypropyl-β-cyclodextrin (HBCD), polysorbate 80, and sodium chloride. Each dose may also contain residual amounts of host cell proteins and/or host cell DNA.

The Janssen COVID-19 vaccine does not contain preservatives; vial stoppers are not made with natural rubber latex.
Advice to Patients

Prior to administration of COVID-19 vaccine (Janssen), the vaccine recipient or their caregiver must be provided with information consistent with the Fact Sheet for Recipients and Caregivers: Emergency Use Authorization (EUA) of the Janssen COVID-19 Vaccine to Prevent Coronavirus Disease 2019 (COVID-19) in Individuals 18 Years of Age or Older and given a copy of the fact sheet or directed to the manufacturer's website at http://www.janssencovid19vaccine.com to obtain the fact sheet.

Give the vaccine recipient or their caregiver a vaccination card that provides the name of the vaccine (Janssen COVID-19 vaccine) and the date the vaccine was administered.

Provide the vaccine recipient or their caregiver with information on, and encourage participation in, CDC's voluntary smartphone-based tool (v-safe) that uses text messaging and web surveys to check in with individuals who have received a COVID-19 vaccine to identify potential adverse effects; live telephone follow-up is provided if a medically important health impact is reported. Information on v-safe is available at https://www.cdc.gov/vsafe.

Inform vaccine recipients or their caregivers that FDA authorized the emergency use of the Janssen COVID-19 vaccine, which is an investigational vaccine that has not received FDA approval, for use in individuals 18 years of age or older. Advise them that an ongoing clinical trial has shown that a single dose of the vaccine can prevent COVID-19; however, the duration of protection following vaccination is unknown and the vaccine may not protect everyone who receives it.

Inform vaccine recipients or their caregivers that the vaccination provider cannot charge them for the vaccine dose, any out-of-pocket vaccine administration fees, or any other fees for COVID-19 vaccination. However, vaccination providers may seek appropriate reimbursement from a program or plan that covers COVID-19 vaccine administration fees for the vaccine recipient (e.g., private insurance, Medicare, Medicaid, US Health Resources & Services Administration [HRSA] COVID-19 uninsured program for non-insured recipients). Individuals who become aware of any potential violations of these requirements are encouraged to report them to the Office of the Inspector General, US Department of Health and Human Services by phone (800-HHS-TIPS) or online (https://tips.oig.hhs.gov).

Inform vaccine recipients or their caregivers that they have the option to accept or refuse the vaccine.

Provide vaccine recipients or their caregivers with information on available alternative vaccines and the risks and benefits of those alternatives.

Inform vaccine recipients or their caregivers about the significant known and potential risks and benefits of the Janssen COVID-19 vaccine, and the extent to which such risks and benefits are unknown. Inform them that local adverse effects (injection site pain, swelling, redness) and systemic adverse effects (headache, fatigue, muscle aches, nausea, fever) have been reported in recipients of the Janssen COVID-19 vaccine.

Importance of vaccine recipient informing the vaccination provider of any allergies or fever. Advise vaccine recipients or their caregivers that there is a remote chance that the vaccine could cause a severe allergic reaction and such reactions would usually occur within a few minutes to 1 hour after receiving the vaccine dose and may include difficulty breathing, swelling of the face and throat, fast heartbeat, bad rash all over the body, and dizziness and weakness.

Inform vaccine recipients or their caregivers that blood clots involving blood vessels in the brain, abdomen, and legs along with low platelet counts have occurred rarely in individuals who received the Janssen COVID-19 vaccine and that symptoms began approximately 1–2 weeks following vaccination. Although the chance of this occurring is remote, most individuals who developed these blood clots and low platelet counts were females 18–49 years of age. Advise vaccine recipients or their caregivers to immediately seek medical attention if shortness of breath, chest pain, leg swelling, persistent abdominal pain, severe or persistent headaches or blurred vision, easy bruising, or tiny blood spots under the skin at sites beyond the vaccine injection site occur following vaccination with the Janssen COVID-19 vaccine.

Importance of vaccine recipient informing the vaccination provider if they have previously received any other COVID-19 vaccine, have any medical conditions (e.g., bleeding disorders, immunocompromising diseases), or are receiving anticoagulants or immunosuppressive therapy.

Importance of women informing clinicians if they are or plan to become pregnant or plan to breast-feed.

Overview* (see Users Guide). It is essential that the Emergency Use Authorization (EUA) prescribing information contained in the Fact Sheet for Healthcare Providers that is available at the FDA website and at http://www.janssencovid19vaccine.com be consulted for more detailed information on dosage and administration, cautions, precautions, and contraindications, and for complete information on the conditions for use of the vaccine for the prevention of coronavirus disease 2019 (COVID-19) under the EUA, including mandated record keeping and reporting requirements.

Preparations

Excipients in commercially available drug preparations may have clinically important effects in some individuals; consult specific product labeling for details.

COVID-19 vaccine (Janssen) is not commercially available. FDA issued an emergency use authorization (EUA) for the Janssen COVID-19 vaccine that permits use of the vaccine for the prevention of COVID-19 in individuals 18 years of age or older. Allocation of the vaccine for use under the EUA is being directed by the US government. The vaccine will be supplied directly from the manufacturer or authorized US distributor(s) and distributed to emergency response stakeholders as directed by the US government, including the CDC and/or other designee.

COVID-19 Vaccine, Viral Vector (Janssen)

Parenteral Suspension, for IM use

| 5 × 10^10 virus particles (recombinant Adenovirus type 26) per 0.5-mL dose |
| Janssen COVID-19 Vaccine, Janssen |

* Use is not currently included in the labeling approved by the US Food and Drug Administration.