

COVID-19 Vaccination Guideline

●What are the COVID-19 vaccines available at the moment?

▶ As of February, 2021, there are two vaccines available for COVID-19 in Korea.

<Vaccination Age and Period per Vaccine Type>

Classification	Vaccine Type	Injections	Injection Period
AstraZeneca	Carrier Vaccine (Virus Vector)	2	8-12 weeks
Pfizer	Nucleic Acid Vaccine (mRNA)	2	21 days

*The carrier vaccine injects COVID-19 surface antigen gene into another viral mold, and the nucleic acid vaccine (mRNA) injects COVID-19 surface antigen gene into the patient's body in RNA form to induce immune reaction by creating surface antigen within the patient's body. Since neither vaccines use live formulations, they do not cause COVID-19 infection.

▶ Additional injections other than the allowed injections are not recommended considering the lack of information regarding the duration of preventive effect after vaccination.

●What are the cautions to be taken prior to receiving COVID-19 vaccination?

▶ **It is critical to receive vaccination when the patient's physical condition is good**, and the patient must receive **medical examination from a doctor prior to vaccination**.

▶ **The patient must not receive vaccination in any of the following cases:**

- If the patient has **severe allergic reaction, such as anaphylaxis, induced by the components of COVID-19 vaccine**
- If the patient experiences **severe allergic reaction, such as anaphylaxis, after receiving the first dose of COVID-19 vaccination**

※ Anaphylaxis: It is a severe allergic reaction that manifests symptoms of shock, difficulty in breathing, loss of consciousness, edema on lips/in mouth, severe rashes throughout the body, etc.

※ If the patient has allergic reaction to medications (bowel cleanser, etc.), cosmetics, food, other vaccines, etc., make sure to record the information in the medical examination sheet in detail.

▶ **Vaccination is not recommended for pregnant women and minors under 18**, until sufficient clinical data confirming the safety and validity after vaccination is produced (may vary depending on the authorization of vaccines in Korea).

▶ **Vaccination shall be delayed in the following cases:**

- If COVID-19 infection is suspected, immediately visit a screening facility for testing and delay vaccination until the test results are confirmed.

- Individuals in quarantine due to COVID-19 and contact-traced individuals must delay vaccination until the quarantine ends.
- Individuals with acute symptoms, such as fever (37.5°C or higher) must delay vaccination until the symptoms subside.

● **What are the cautions to be adopted after receiving COVID-19 vaccination?**

- ▶ **Observe occurrence of any abnormal reaction by remaining at the vaccination facility for 15-30 minutes** after vaccination.
- ▶ **Observe occurrence of any abnormal reaction for at least 3 hours** after returning home.
- ▶ **Pay attention to any symptoms for at least 3 days** after vaccination, and immediately seek medical attention if fever or other abnormal symptoms occur.
- ▶ Always **keep the injection area clean**.
- ▶ In case of seniors, make sure that a partner or caregiver is present nearby to help respond to any symptoms.

● **Is it possible to get infected with COVID-19 after taking the COVID-19 vaccination?**

- ▶ Vaccines used in Korea are not live vaccines, so the vaccination will not induce COVID-19 infection. Symptoms such as coughing and loss of smell or taste do not occur as an effect of the vaccination.
- ▶ If any of the symptoms occur, it is possible that the patient was infected with COVID-19 prior to receiving vaccination. In the case, immediately visit a screening facility and undergo COVID-19 testing.

● **What are the possible abnormal reactions after receiving COVID-19 vaccination?**

- ▶ Possible reactions after receiving COVID-19 vaccination include regional reactions such as pain, swelling and rubefaction in the injection area, and systemic reactions such as fever, fatigue, headache, muscle pain, nausea or vomiting. In general, such reactions after taking the vaccination subside within three days.
- ▶ In rare cases, severe allergic reactions (anaphylaxis) with shock, difficulty in breathing, loss of consciousness and edema on lips/in mouth may occur.
- ▶ The patient must remain at the vaccination facility for at least 15 minutes after vaccination to observe occurrence of severe allergic reactions. If the patient experiences severe allergic reaction due to other reasons (medication, food, injection, etc.), observe for at least 30 minutes.

☞ Visit the “Self-Check after Vaccination” at the Vaccination Helper website (<https://nip.kdca.go.kr>) for information on how to respond to abnormal reactions.

● **What should I do if I experience abnormal reactions after COVID-19 vaccination?**

- ▶ If the patient experiences severe fever over 39°C or allergic reactions (rashes, swelling, etc.), or if common reactions occur at a level preventing normal daily activities, immediately seek medical attention.
- ▶ If the patient experiences severe allergic reaction (anaphylaxis, etc.), immediately contact the **Emergency Response (119)** or visit a **Local Emergency Room**.

▶ If abnormal reactions are suspected, report to a local public health center or contact via the Vaccination Helper Website (<https://nip.kdca.go.kr>).

●National Compensation for Vaccination-induced Damage

▶ If the patient experiences abnormal reactions, the patient is eligible to seek compensation according to the Infectious Disease Control and Prevention Act

▶ The application can be submitted within 5 years since the day abnormal reaction occurred. If the causal relationship is confirmed by the Damage Assessment and Vaccination Damage Compensation Committee, the patient will receive compensation for the damages that occurred.

▶ If the patient believes damage occurred due to vaccination, submit an application to the public health center in the relevant jurisdiction area.

*The applicable copayment standard is eased for COVID-19 vaccination in 2021 (300,000 KRW → No limit).

*For more information, contact the public health center in the relevant jurisdiction area or visit the Vaccination Helper website (<https://nip.kdca.gi.kr>).

• Even after receiving the COVID-19 vaccination, one must continue to observe measures for preventing COVID-19 infection.

COVID-19 Vaccination Guidelines for Medical Personnel

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- ▶ Additional injections other than the allowed injections are not recommended considering the lack of information regarding the duration of preventive effect after vaccination.

<Exceptions for COVID-19 Vaccination>

- ▶ If COVID-19 infection is suspected (Instruct the patient to undergo testing at a screening facility)
- ▶ If the patient is under quarantine due to COVID-19 infection or contact tracing (Provide vaccination after quarantine)
- ▶ If acute symptoms such as fever (37.5°C) are observed (Delay vaccination until the symptoms are controlled)
- ▶ Pregnant women and minors under 18
 - * Exclude them as no clinical safety and validity data are available on these groups at the moment.

<Individuals to Avoid COVID-19 Vaccine>

- ▶ If the patient has a history of severe allergic reaction (i.e. anaphylaxis) against the ingredients of the COVID-19 vaccine
- ▶ If the patient shows severe allergic reaction after the first dose of the COVID-19 vaccine injection
 - **(Pfizer, Moderna vaccines)** If the patient has a history of severe allergic reaction to polyethylene glycol (PEG) or related molecules, and polysorbate, include the patient in the "do not vaccinate category."
 - * Polyethylene glycol (PEG) is a commonly used ingredient in medication, endoscope preparation agents (bowel cleanser), flu syrup, cosmetics, medical products for skin care and procedures, toothpaste, lens and contact lens solution, etc.
 - * Polysorbate can cause cross-sensitive reaction with PEG. If the patient has a history of severe allergic reaction against polysorbate, prohibit the administration of Pfizer and Moderna vaccines.

· (AstraZeneca vaccine) If the patient has a history of severe allergic reaction to polysorbate, include the patient in the “do not vaccinate category.”

* While the AstraZeneca vaccine does not contain PEG, it does contain polysorbate that can cause cross-sensitive reaction with PEG. If the patient has a history of severe allergic reaction against polysorbate, caution is required when administering the AstraZeneca vaccine.

Vaccine	Cominatiju (Pfizer)	AstraZeneca Korea COVID-19 Vaccine (AstraZeneca)
Contents	2[(polyethylene glycol)-2000]-N, N-ditetradecylacetamide 1,2-distearoyl-sn-glycero-3-phosphocholine Cholesterol (4-hydroxybutyl)azanediyl)bis(hexane-6, 1- diyl) bis(2-hexyldecanoate) Potassium chloride Monobasic potassium phosphate Sodium chloride Dibasic sodium phosphate dihydrate Sucrose	L-Histidine L-Histidine hydrochloride monohydrate Magnesium chloride hexahydrate Polysorbate 80 Ethanol Sucrose Sodium chloride Disodium edetate dihydrate water for injections

●**Observation time after COVID-19 vaccination**

- ▶ Instruct personnel to observe all vaccinated patients for at least 15 minutes after administering vaccination.
- ▶ Patients with histories of severe allergic reactions (anaphylaxis, etc.) induced by other causes must be observed for at least 30 minutes.

●**Clinical Considerations during Diagnosis**

▶ **Is the patient pregnant?**

There is very little data regarding the influence of COVID-19 vaccine on infants, so vaccination of pregnant women is not recommended.

▶ **Do you feel particularly sick today?**

While minor conditions, such as flu or diarrhea, do not require delaying or prohibiting vaccination, acute diseases with moderate or severe symptoms must be controlled before vaccination. If COVID-19 infection is suspected, immediately instruct the patient to undergo testing at a screening facility.

▶ Have you received a test for COVID-19?

Virus testing and serum testing are not recommended to determine whether to administer COVID-19 vaccination to a patient. If the patient does not have any prohibition conditions, vaccination is recommended even if he/she has a history of COVID-19 infection.

There is no minimum term requirement between COVID-19 infection and vaccination. However, given that there are rare cases of re-infection of COVID-19 within the first 6 months of the initial infection, it is possible to delay vaccination up to 6 months. If more data is released regarding the duration of immunization due to natural infection, this instruction may change accordingly.

At present, there is no data verifying the safety and validity of COVID-19 vaccination on patients who received passive antibody treatment (serum treatment or single clone antibody) for COVID-19 infection. In order to avoid disruption of the immune system reaction due to COVID-19 vaccination and antibody treatment, it is recommended to delay vaccination on such patients for at least 90 days until additional data are available.

▶ Have you received any vaccination (other than COVID-19) in the past 14 days?

There are no safety and validity data regarding simultaneous administration of the COVID-19 vaccine and other vaccines. Therefore, it is not recommended to avail simultaneous vaccination. It is also recommended to have a minimum buffer period of 14 days between COVID-19 vaccination and another vaccination.

However, if COVID-19 vaccination was administered accidentally within 14 days before/after or simultaneously with another vaccination, it is recommended to not avail additional vaccination.

▶ **Have you received COVID-19 vaccination?**

There are no safety and validity data regarding cross-vaccination among different types of COVID-19 vaccine [between nucleic acid vaccines (mRNA), between carrier vaccines (virus vector), between nucleic acid vaccine (mRNA) and carrier vaccine (virus vector)]. Therefore, it is recommended to use the same vaccine product for the 1st and 2nd vaccine injections. If a different vaccine type was used, do not conduct additional vaccination.

▶ Have you received treatment for severe allergic reactions after taking COVID-19 vaccination?

If the patient showed severe allergic reaction* after the first dose of COVID-19 vaccination, do not conduct the second vaccination with the same type of vaccine.

*First-aid and hospital treatment due to anaphylaxis, etc.

▶ Have you received treatment for severe allergic reactions (Anaphylaxis) before?

Not all allergic reactions influence the COVID-19 vaccination, and allergic reactions induced by elements other than the vaccine contents are not considered as a prohibiting factor. PEG, which is a consideration for Pfizer vaccine, is used in medication, endoscope preparation agents (bowel cleanser), flu syrups, cosmetics, medical products for skin care and procedures, toothpaste, lens and contact lens solution, etc. Therefore, if the patient has a history of severe allergic reaction (anaphylaxis, etc.) to PEG, it is necessary to observe the patient for abnormal reactions after vaccination for at least 30 minutes.

► Are you suffering from a hemostatic disorder or receiving anticoagulant treatment?

Like all other vaccines, it is possible to undergo vaccination under such conditions, but use a smaller injection needle (23G or higher), do not rub the injection area, and apply pressure to the area for at least two minutes.

► **Miscellaneous**

- **(Patient with chronic diseases)** If clinical test results show similar immune response compared to patients without chronic diseases, and if the vaccine is confirmed to be effective, COVID-19 vaccination is recommended unless prohibiting factors are present.

- **(Patients with degraded immune system, including HIV patients)** There are no safety and validity data regarding COVID-19 vaccination on patients with degraded immune system, and the immune reaction and effect of the vaccine may be influenced during the vaccination. As Pfizer and AstraZeneca COVID-19 vaccines are not live vaccines, COVID-19 vaccination is recommended unless prohibiting factors are present.

- **(Breast-feeding mothers)** There are no safety and validity data regarding vaccination on breast-feeding mothers and breast-fed infants. COVID-19 vaccination is recommended for breast-feeding mothers unless prohibiting factors are present.

● **Abnormal Reactions after Vaccination**

Vaccine Type	Cominatiju (Pfizer)	AstraZeneca Korea COVID-19 Vaccine (AstraZeneca)
Abnormal Reaction	<ul style="list-style-type: none"> Commonly reported abnormal reactions are pain around the injection area (84.1%), fatigue (62.9%), headache (55.1%), muscle pain (38.3%), chills (31.9%), joint pain (23.6%) and fever (14.2%). Further, swelling of the injection area (10.5%), rubefaction of the injection area (9.5%), occasional nausea (1.1%), feebleness (0.5%) and inflammation of the lymphatic gland (0.3%) are reported. Four cases of acute facial paralysis were reported during a wide range of clinical trials, and all cases recovered within a few weeks. 	<ul style="list-style-type: none"> Most abnormal reactions were minor and subsided within a few days of vaccination. However, 4% of local reactions and 13% of systemic reactions continued for 7 days. Commonly reported abnormal reactions are oppressive pain around the injection area (60% and above), pain around the injection area, headache, fatigue (50% and above), muscle pain, feebleness (40% and above), fever, chill (30% and above), and joint pain, nausea (20% and above).