PROCEDURE

COVID-19 vaccine - what you need to know

A COVID-19 vaccine is an injection that trains your immune system to reduce your risk of severe COVID-19.

PURPOSE
Reduce the risk of severe COVID-19

PROCEDURE TYPE
Therapeutic prevention; minimally invasive intramuscular injection

WHERE IT IS DONE
Outpatient clinic, pharmacy, or community vaccination site

ANAESTHESIA
None

HOW LONG IT TAKES
Seconds for injection; usually 15 minutes' observation

PREPARATION
No fasting; bring vaccination records and allergy details

RECOVERY
Same day; avoid driving only if unwell

MAIN RISKS
Injection-site pain, fever, allergic reaction, myocarditis

RESULTS
Protection builds over days; no routine test result

Overview

A COVID-19 vaccine prepares your immune system to recognize the virus that causes COVID-19. Vaccination mainly reduces severe illness, hospital admission, and death, but it cannot prevent every infection.

The vaccine is usually injected into the upper-arm muscle. Products may use messenger RNA, protein, or other technology. Messenger RNA, or mRNA, gives cells temporary instructions for making a harmless piece of viral protein. It does not alter your DNA.

COVID-19 vaccines cannot give you COVID-19 because they do not contain the complete, active virus. Recommended products and schedules may change based on your age, health, previous doses, recent infection, and local guidance.

Why the procedure is performed

Vaccination lowers your risk of becoming seriously ill from COVID-19. Protection against infection can decrease over time, while protection against severe disease generally lasts longer.

It is particularly important for people at higher risk, including older adults, pregnant people, those with weakened immune systems, and people with certain long-term conditions.

You may be offered another dose because immunity has decreased or the vaccine has been updated for newer virus strains. This does not mean an earlier vaccine failed.

Who should and should not have it

COVID-19 vaccination is available to many children and adults. The suitable product, number of doses, and timing depend on local guidance and individual circumstances.

Vaccination may be avoided, delayed, or changed if:

Myocarditis is inflammation of the heart muscle; pericarditis affects the lining around the heart. If either occurred after vaccination, another dose requires individual review.

A mild illness does not always require a delay. Pregnancy, breastfeeding, and a weakened immune system are not automatically reasons to avoid vaccination, although they may affect the schedule. If you are allergic to an ingredient, another vaccine type or specialist allergy assessment may be appropriate.

- You had a severe allergic reaction to a previous dose or an ingredient
- You are moderately or severely unwell
- You currently have COVID-19 and could expose others at the vaccination site
- You developed myocarditis or pericarditis after an earlier dose
- A previous vaccine caused another serious reaction requiring assessment

How to prepare

Follow the treating facility's instructions, as these take priority over general information.

You can usually eat, drink, and take regular medicines normally. Do not stop a blood thinner like warfarin or apixaban unless the healthcare professional managing it tells you to. Tell the vaccinator about blood-thinning medicine or a bleeding disorder, as you may need longer

pressure over the injection site.

Bring your vaccination record and be ready to discuss:

Wear clothing that allows access to your upper arm. Eating and drinking beforehand may help prevent faintness. Do not take pain medicine solely to prevent side effects unless advised by your healthcare team.

- Previous COVID-19 doses and reactions
- Serious allergies, especially to medicines or vaccines
- Recent COVID-19 infection or current illness
- Pregnancy or a weakened immune system
- Previous fainting during injections

What happens during the procedure

The vaccinator will confirm your identity, review health and allergy information, and explain which vaccine you are receiving. You can ask questions before agreeing to the injection.

While you are seated, a small needle is placed into your upper-arm muscle. The injection takes seconds, and a dressing may be applied.

You will usually remain nearby for a short observation period so staff can treat fainting or an immediate allergic reaction. People with certain allergy histories may need longer observation.

Recovery and what to expect afterward

Your arm may feel sore, tender, or heavy. A cool compress and gentle movement may help. Tiredness, headache, muscle aches, chills, fever, or swollen glands can also occur and usually improve within a few days.

Eat and drink normally, and rest if you feel tired or feverish. Light activity is usually fine, but avoid strenuous exercise until you feel well enough.

You can usually drive and return to work or school. Do not drive if you feel faint, very tired, or otherwise unwell.

Risks and possible complications

Temporary pain, redness, or swelling at the injection site is common. Fever, headache,

tiredness, and muscle aches can also occur.

Fainting can happen after any injection. Sitting or lying down reduces the risk of injury.

Anaphylaxis, a severe allergic reaction, is uncommon and usually starts soon after vaccination. Vaccination sites should have trained staff and medicines available to treat it.

Myocarditis and pericarditis have occurred after some COVID-19 vaccines, particularly mRNA vaccines. Reports have been more common among adolescent and young adult males, but these conditions can affect anyone and require prompt assessment.

Some vaccine technologies have product-specific risks, including unusual blood clots or certain nerve problems. Read the information for the vaccine you are offered.

Results and follow up

There is no immediate test result. Protection develops over the following days and may continue building after later recommended doses. No vaccine provides instant or complete protection.

You should receive a paper or electronic record showing the product, date, and dose. Keep it for future healthcare or travel needs.

Routine medical follow-up is not usually required, but follow the local schedule for additional doses. People with weakened immune systems may need a different schedule. Routine antibody testing is not generally recommended because it does not fully measure protection.

Alternatives

No other procedure provides the same protection as vaccination.

You can delay or decline vaccination, but you will not receive the added protection the dose may provide. Previous infection can produce immunity, but it is less predictable and requires becoming infected.

If one vaccine is unsuitable because of an allergy or previous reaction, another technology may be available. Products differ in availability, risks, and schedules.

Masks, ventilation, avoiding crowded indoor spaces, testing, and staying home when infectious can reduce spread but do not replace vaccination. Antiviral medicines may reduce severe illness in eligible people after infection; they are treatments, not preventive substitutes.

When to call your healthcare team

Mild arm pain, tiredness, headache, or fever during the first few days can usually be managed at home. Contact your healthcare team if symptoms are not improving, interfere with daily activities, or if redness or tenderness worsens after the first day.

Seek urgent medical care for chest pain, shortness of breath, a fast or pounding heartbeat, or unexplained fainting. These symptoms require assessment even if they are unrelated to vaccination.

Call emergency services immediately for difficulty breathing, swelling of the face or throat, collapse, confusion, or a rapidly spreading rash accompanied by breathing or circulation symptoms.

For non-urgent questions about your record or another dose, contact the vaccination service or your usual healthcare team.

Common questions

Will I be asleep?

No. Anaesthesia and sedation are not needed. You remain awake and can leave after observation.

Can I drive home?

Usually, yes. Do not drive if you feel faint, unusually tired, or unwell. Arrange other transport if injections commonly make you faint.

How painful is it?

Most people feel a brief pinch or sting. Your arm may be sore when lifted for a day or two.

When will I know if it worked?

There is no immediate result or routine test. Protection develops over days, and some schedules require more than one dose.

Can the vaccine give me COVID-19?

No. COVID-19 vaccines do not contain the complete, active virus. You can still catch COVID-19 before or after vaccination.

Can I have it while pregnant?

Many national programs recommend COVID-19 vaccination during pregnancy. Ask which product and schedule are recommended where you live, especially after a previous vaccine reaction.

Sources

- Centers for Disease Control and Prevention. Interim Clinical Considerations for Use of COVID-19 Vaccines in the United States
- Centers for Disease Control and Prevention. Safety Considerations for COVID-19 Vaccines
- World Health Organization. COVID-19 vaccines advice
- US Food and Drug Administration. COMIRNATY prescribing information
- US Food and Drug Administration. SPIKEVAX prescribing information
- Oster ME, Shay DK, Su JR, et al. Myocarditis Cases Reported After mRNA-Based COVID-19 Vaccination in the US From December 2020 to August 2021. JAMA. 2022;327:331-340