HEALTH BASICS

COVID-19 vaccines for children ages 6 months and older

COVID-19 vaccines train a child's immune system to lower severe illness risk.

WHAT IT IS
Vaccination that trains a child's immune system against COVID-19

WHERE IT COMES UP
Routine care, pharmacies, school planning, and seasonal vaccine decisions

WHY IT MATTERS
Lowers the chance of severe COVID-19 and hospitalization

WHAT IT IS NOT
Not a disease or a COVID-19 test

WHO TO ASK
Pediatrician, family clinician, pharmacist, or vaccination service

HOW IT IS CHECKED
Vaccination record showing product, dose, and date

Overview

COVID-19 vaccines prepare a child's immune system to recognize the virus that causes COVID-19. This can lower the chance of severe illness, hospitalization, and complications.

This topic is not a disease or diagnosis. It is about vaccination options for children from age 6 months through adolescence.

The exact vaccine and number of doses are not the same for every child. They are based on:

COVID-19 vaccine formulas and schedules can change as the virus changes. For this reason, an older schedule found online may no longer apply. The current schedule should be checked before each dose.

Vaccination decisions may also consider a child's risk of exposure and severe illness, previous COVID-19 infections, and the health of household members. A previous infection can provide some immunity, but that protection is not complete or predictable.

- The child's age on the day of vaccination
- Which COVID-19 vaccine was used before

- How many previous doses the child received
- Whether the child has a weakened immune system
- Current vaccine recommendations and available products

How it works

The immune system protects the body from infections. COVID-19 vaccines show it a harmless piece of information associated with the virus. The immune system then learns to respond without the child having to develop COVID-19 first.

Some COVID-19 vaccines use messenger RNA, or mRNA. This gives cells temporary instructions for making a harmless piece of the virus's spike protein. The immune system recognizes that protein and builds a response. The mRNA breaks down afterward. It does not enter the cell's nucleus, where DNA is stored, and it does not change DNA.

Protein-based vaccines contain a manufactured piece of the spike protein along with an ingredient that helps the immune system respond. Product options and approved ages may differ, so not every vaccine is available for every child.

After vaccination, the body develops antibodies and immune memory. Antibodies are proteins that recognize the virus. Immune memory helps the body respond more quickly if exposure happens later.

Protection is not immediate, and no vaccine prevents every infection. Protection may also decrease over time, while new virus variants can reduce how well older immunity recognizes the virus. Updated vaccine formulas are intended to improve the match with circulating variants.

Why it matters for your health

Children are generally less likely than older adults to become seriously ill from COVID-19, but severe illness can still happen. Some children need hospital care, including children without a known medical condition.

Risk can be higher in children with certain health conditions. Examples include some heart or lung conditions, obesity, diabetes, neurologic conditions, and weakened immunity. A child's clinician can help explain whether a particular condition changes the vaccination decision.

Vaccination can reduce the risk of severe COVID-19. It may also provide broader and more predictable immune protection than infection alone. A child can still develop COVID-19 after

vaccination, but vaccination prepares the immune system to respond.

Vaccinating a child may also be important when someone in the household has a higher chance of severe illness. However, vaccination does not guarantee that the child cannot become infected or spread the virus. Testing, staying home when ill, ventilation, and other precautions may still matter during periods of increased transmission.

There is no routine blood test that can show whether a child is fully protected. Commercial antibody test results should not be used by themselves to decide whether a vaccine dose is needed.

What can go wrong

Most vaccine reactions are mild and short-lived. Pain, redness, or swelling may occur where the injection was given. A child may also have fatigue, headache, muscle aches, chills, fever, reduced appetite, sleepiness, or irritability. These reactions usually improve within a few days.

Fainting can happen around injections, particularly in adolescents. It may be related to the injection process rather than the vaccine ingredients. Receiving the vaccine while seated or lying down and remaining at the vaccination site afterward can reduce the chance of injury from a fall.

A severe allergic reaction called anaphylaxis is uncommon. It can cause trouble breathing, swelling of the face or throat, widespread hives, dizziness, or collapse. Vaccination services keep medicines and equipment available to treat this reaction.

Myocarditis means inflammation of the heart muscle. Pericarditis means inflammation of the lining around the heart. These conditions have occurred rarely after COVID-19 vaccination, most often in adolescent and young adult males after an mRNA vaccine. They can also occur after COVID-19 infection.

Chest pain, shortness of breath, or a fast, pounding, or fluttering heartbeat after vaccination needs prompt medical assessment. In younger children, warning signs may be less specific, such as unusual tiredness, persistent vomiting, poor feeding, or rapid breathing.

Vaccination errors can also occur. Examples include using the wrong age formulation, giving the wrong amount, or giving a dose too early. Such an error does not automatically mean that harm occurred, but it should be documented and reviewed to determine whether another dose is needed.

What you can do

Bring the child's vaccination record to each appointment. The record should include the product name, dose date, and where it was given. If records are missing, ask the previous clinic, pharmacy, or local immunization registry for a copy.

Before vaccination, tell the vaccination service about:

Ask which current schedule applies to the child. In particular, ask whether age changes the formulation and whether an earlier infection affects the timing. Some families may choose to delay a dose for a period after infection, but the decision should account for exposure risk and the child's health.

COVID-19 vaccines can generally be given during the same visit as routine vaccines. Ask whether there is a reason to separate them in the child's particular situation.

Expected arm soreness, tiredness, or a mild fever can usually be watched at home. Ask before giving medicine if you are unsure which product or amount is suitable for the child. Do not give aspirin to a child or teenager for a viral illness unless a clinician has specifically advised it.

Seek urgent medical assessment for chest pain, shortness of breath, a pounding or irregular heartbeat, rapid breathing, persistent vomiting, or unusual weakness after vaccination.

Call emergency services for trouble breathing, facial or throat swelling, collapse, severe confusion, or signs of a severe allergic reaction .

Questions about future doses, missing records, or mild reactions that have resolved are usually suitable for routine follow-up rather than urgent care.

- Previous COVID-19 vaccine products and dates
- A severe allergic reaction to a vaccine or injectable medicine
- Myocarditis or pericarditis after a previous dose
- A condition or treatment that weakens the immune system
- A recent COVID-19 infection
- Current illness or fever

Common questions

Can a COVID-19 vaccine give a child COVID-19?

No. COVID-19 vaccines do not contain the live virus that causes COVID-19. They cannot cause the infection.

How many doses does a child need?

There is no single answer for every child. The schedule uses the child's current age, vaccination history, immune status, and the vaccine products currently available. Check the current schedule rather than relying on an older appointment plan.

What if the child already had COVID-19?

Previous infection does not necessarily remove the option of vaccination. Infection and vaccination expose the immune system in different ways. The timing of a dose may sometimes be adjusted after infection.

Can the child be vaccinated while mildly unwell?

A minor illness without significant fever often does not prevent vaccination. A moderate or severe illness may be a reason to wait until the child improves. The vaccination service can assess the immediate situation.

Does vaccination affect fertility or puberty?

Available safety monitoring has not shown that COVID-19 vaccines cause infertility or disrupt puberty. Temporary menstrual changes have been reported after vaccination and infection, but these are not evidence of infertility.

How is vaccine safety monitored?

Clinicians, families, manufacturers, and health agencies can report possible reactions. Public-health systems then compare reports and health records to look for unexpected patterns. A report made after vaccination does not by itself prove that the vaccine caused the event.

Sources

- Centers for Disease Control and Prevention: COVID-19 Vaccination Guidance for People 6 Months and Older
- Centers for Disease Control and Prevention: Interim Clinical Considerations for Use of COVID-19 Vaccines
- Centers for Disease Control and Prevention: Safety Considerations for COVID-19 Vaccines
- Centers for Disease Control and Prevention: Clinical Considerations for Myocarditis and Pericarditis After COVID-19 Vaccination
- US Food and Drug Administration: COVID-19 Vaccines
- American Academy of Pediatrics: COVID-19 Vaccine Recommendations