CONDITION

Coronavirus (COVID-19) and pregnancy

COVID-19 during pregnancy is a viral infection that can affect the pregnant person, pregnancy, and newborn.

WHAT IT IS
Coronavirus infection during pregnancy or shortly after birth

BODY SYSTEM
Lungs and airways; sometimes the whole body

MAIN SYMPTOMS
Fever, cough, tiredness, sore throat

WHAT CAUSES IT
Infection with the SARS-CoV-2 virus

HOW IT IS DIAGNOSED
NAAT, PCR, or rapid antigen testing

MAIN TREATMENT
Supportive care and early antiviral treatment when appropriate

CAN IT BE CURED?
Sometimes - most acute infections clear completely

IS IT AN EMERGENCY?
Sometimes - trouble breathing or chest pain

LONG-TERM OUTLOOK
Most recover; pregnancy raises severe-illness risk

Overview

COVID-19 is an infection caused by the SARS-CoV-2 coronavirus. It mainly affects the lungs and airways but can also affect blood vessels, the heart, kidneys, brain, and other organs.

Most pregnant people with COVID-19 have mild or moderate symptoms and recover without hospital treatment. However, changes to the immune system, heart, and lungs during pregnancy increase the risk of severe COVID-19 compared with people of the same age who are not pregnant.

This higher risk continues for several weeks after pregnancy, including after birth, miscarriage, or ending a pregnancy.

COVID-19 can occur during any trimester. Infection does not mean that you or your baby will

develop complications. Risk depends on your general health, vaccination history, the severity and timing of infection, and the circulating virus variant.

Symptoms

Symptoms during pregnancy are generally the same as in other adults. They may include:

Some people have no symptoms. Others develop pneumonia, which is inflammation and infection in the lungs.

Pregnancy can also cause tiredness, nausea, breathlessness, and changes in smell. Testing is the best way to distinguish COVID-19 from influenza, a cold, or normal pregnancy symptoms.

Symptoms that continue or return for at least several weeks may be described as long COVID. They can include tiredness, difficulty concentrating, breathlessness, altered smell, headaches, or a fast heartbeat.

- Fever or chills
- Cough, sore throat, or a blocked or runny nose
- Tiredness, headache, or muscle aches
- Shortness of breath
- Changes in smell or taste
- Nausea, vomiting, or diarrhoea

Causes and risk factors

COVID-19 spreads mainly through droplets and airborne particles released when an infected person breathes, speaks, coughs, or sneezes. Spread is more likely during close or prolonged contact, particularly in crowded, poorly ventilated indoor spaces.

Pregnancy does not make exposure more likely, but it increases the chance of severe illness after infection. Factors associated with greater risk include:

Previous infection may provide some protection, but reinfection is possible. Protection can weaken, and new variants may partly escape earlier immunity.

- Being unvaccinated or not up to date with recommended vaccination
- Older age during pregnancy
- Obesity

- Diabetes or high blood pressure
- Heart, lung, or kidney conditions
- A weakened immune system
- Social or workplace circumstances that increase repeated exposure

Diagnosis

A current infection is diagnosed with a test that detects the virus.

A NAAT, including a PCR test, detects viral genetic material. Rapid antigen tests detect viral proteins and can provide results within minutes.

A negative rapid test does not always rule out COVID-19, especially early in the illness. Repeat testing or a NAAT may be appropriate if symptoms continue or you have had a known exposure. Antibody tests are not normally used to diagnose a current infection.

If you are unwell, assessment may include your oxygen level, breathing rate, temperature, and blood tests. Depending on the pregnancy stage and your condition, the maternity team may check the baby's heart rate or growth.

Necessary chest imaging should not be delayed only because you are pregnant. Radiation from a chest X-ray is low, and your medical team can explain the benefits and risks of any scan.

Treatment and management

Treatment depends on your symptoms, risk factors, pregnancy stage, and how long you have been unwell.

Mild illness can often be managed at home with rest, fluids, and medicines considered suitable during pregnancy for fever or pain. Ask a pharmacist, midwife, or doctor before taking a new over-the-counter medicine. Do not stop prescribed medicines without advice.

Antiviral medicines can reduce the risk of severe illness in eligible people. Options may include nirmatrelvir with ritonavir or intravenous remdesivir. They work best when started early. Pregnancy alone should not be a reason to withhold appropriate treatment, but medicine interactions and individual health factors must be checked.

Hospital treatment may include oxygen, antiviral medicine, corticosteroids like prednisone or hydrocortisone for severe COVID-19, or medicine to reduce blood-clot risk. Blood thinners like warfarin or apixaban are not routinely needed by everyone recovering at home.

Tell your maternity service if you test positive. Appointments may continue in person, be rescheduled, or use phone or video where suitable. Do not miss an urgent pregnancy assessment because you have COVID-19. Call ahead so infection-control arrangements can be made.

Complications

Most infections during pregnancy do not cause serious complications. Severe COVID-19 can cause pneumonia, low oxygen levels, blood clots, intensive care admission, or the need for breathing support.

Infection is associated with a higher risk of some pregnancy complications, particularly when illness is severe. These include preterm birth before 37 weeks and stillbirth. Individual risk depends on the infection's severity and timing and on other health factors.

COVID-19 may affect the placenta, which supplies oxygen and nutrients to the baby. Significant placental problems are uncommon, but severe infection may lead to closer pregnancy monitoring.

The virus can pass to a baby during pregnancy or around birth, but this is uncommon. Most babies born to people who had COVID-19 are well. Evidence has not shown a clear pattern of birth defects caused by COVID-19.

Long COVID can follow mild, moderate, or severe infection. Its symptoms may overlap with common changes after pregnancy, including tiredness and poor sleep.

Prevention

COVID-19 cannot always be prevented, but you can reduce the likelihood of exposure and severe illness.

Major public health and obstetric organisations recommend vaccination for people who are pregnant, planning pregnancy, breastfeeding, or recently pregnant. COVID-19 vaccines do not contain live coronavirus and cannot cause COVID-19. Evidence has not shown that vaccination causes infertility.

Vaccination during pregnancy reduces the pregnant person's risk of severe illness. Antibodies produced after vaccination can cross the placenta and may offer the baby some protection after birth.

Other steps include:

Combining measures is most useful during high community transmission or when someone in your household is infected.

- Improving indoor ventilation
- Considering a well-fitting mask in crowded or poorly ventilated spaces
- Avoiding close contact with people who are unwell
- Testing when symptoms develop or after a significant exposure
- Following local guidance about staying away from others while infectious

Living with it and what to expect

For many people, symptoms improve within several days, although cough and tiredness may last longer. Recovery may not be steady.

Continue prenatal care unless your maternity service advises a temporary change. Additional checks of the baby's growth may be considered depending on when you were infected and how unwell you were. Mild infection does not automatically mean you need extra scans, early delivery, or a caesarean birth.

COVID-19 usually does not determine how or where you give birth. Decisions about induction, caesarean birth, pain relief, or fetal monitoring depend on your health, the baby's condition, the stage of labour, and local infection-control arrangements.

After birth, close contact with your baby and breastfeeding are usually supported when you are well enough. Breast milk is not considered a common route of transmission. Handwashing and precautions against respiratory spread can reduce the chance of passing the virus during close contact.

If symptoms continue for weeks or interfere with daily life, arrange follow-up. Support may involve primary care, maternity care, physiotherapy, or a long-COVID service. Improvement can take months.

When to get medical help

Contact your maternity service, primary care clinician, or an urgent medical advice service promptly if you test positive during pregnancy. Early contact matters because antiviral treatment, when appropriate, usually must begin soon after symptoms start.

Seek prompt assessment if:

Call emergency services for severe trouble breathing, persistent chest pain or pressure, new confusion, collapse, blue or grey lips or skin, or difficulty staying awake.

Reduced or changed fetal movement also needs urgent maternity assessment. Do not wait until the next day or rely on a home heartbeat monitor.

Routine follow-up is suitable for a lingering cough, tiredness, altered smell, or concentration problems when symptoms are stable and there are no emergency warning signs.

- Fever continues or you are becoming more unwell
- Breathlessness is increasing
- You cannot keep down enough fluid
- You have concerns about your baby's movements
- You have vaginal bleeding, leaking fluid, or regular painful contractions
- You develop a severe headache, vision changes, or sudden swelling
- Symptoms continue for weeks or limit normal activities

Common questions

Can COVID-19 hurt my baby?

Most babies are not harmed. Severe infection is linked with a higher risk of preterm birth and other complications, but these will not necessarily happen. Transmission during pregnancy is possible but uncommon.

Does COVID-19 cause miscarriage?

Evidence has not shown a clear large increase in miscarriage after COVID-19. Risk may vary by virus variant, pregnancy stage, and severity of illness.

Can I take COVID-19 antiviral medicine while pregnant?

Some antivirals like acyclovir or oseltamivir can be used during pregnancy. The choice depends on when symptoms began, your risk of severe illness, other medicines, kidney or liver health, and local availability. Treatment should not be withheld only because of pregnancy.

Can I breastfeed if I have COVID-19?

Yes, in most cases. Breast milk provides nutrition and antibodies and is not considered a common source of transmission. Handwashing, cleaner air, and a well-fitting mask during close contact can reduce respiratory spread while you are infectious.

Will COVID-19 change my labour or delivery plan?

Not automatically. Mild infection is not usually a reason for early delivery or caesarean birth. Plans may change if you become seriously unwell, the baby needs closer monitoring, or another pregnancy concern develops.

Is a COVID-19 vaccine safe during pregnancy?

Large amounts of monitoring data have not identified an increased risk of miscarriage or major pregnancy problems from vaccination. Vaccination reduces the risk of severe maternal illness and can provide antibodies to the baby.

Sources

- Centers for Disease Control and Prevention. Clinical Considerations for Special Populations: Pregnancy and Recent Pregnancy . COVID-19 clinical care guidance
- Centers for Disease Control and Prevention. COVID-19 Vaccination for People Who Are Pregnant or Breastfeeding . Vaccine guidance
- American College of Obstetricians and Gynecologists. COVID-19 FAQs for Obstetrician-Gynecologists, Obstetrics . Clinical guidance
- Royal College of Obstetricians and Gynaecologists. Coronavirus (COVID-19) Infection in Pregnancy . Version 16.1
- National Institutes of Health. Special Considerations During Pregnancy and After Delivery . COVID-19 Treatment Guidelines
- MotherToBaby. COVID-19 . Fact sheet, Organization of Teratology Information Specialists
- Allotey J, Stallings E, Bonet M, et al. Clinical manifestations, risk factors, and maternal and perinatal outcomes of coronavirus disease 2019 in pregnancy: living systematic review and meta-analysis . BMJ. 2020;370:m3320