

Basic Facts of COVID-19

(Signs, symptoms, and complications)

Ramaiah International Centre for Public Health Innovations (RICPHI)
Bengaluru, Karnataka



Covid 19: Signs, Symptoms, Complications and Diagnosis



Most common symptoms

- Fever
- Dry cough
- Fatigue



Other common symptoms

- Loss of taste or smell,
- Nasal congestion,
- Conjunctivitis (also known as red eyes)
- Sore throat,
- Headache,
- Muscle or joint pain,
- Different types of skin rash,
- Nausea or vomiting,
- Diarrhea,
- Chills or dizziness.



Severe symptoms

- Shortness of breath,
- Loss of appetite,
- Confusion,
- Persistent pain or pressure in the chest,
- High temperature (above 38 °C).



Other less common symptoms are:

- Irritability,
- Confusion,
- Reduced consciousness (sometimes associated with seizures),
- Anxiety,
- Depression,
- Sleep disorders,
- More severe and rare neurological complications such as strokes, brain inflammation, delirium and nerve damage.

People of all ages who experience fever and/or cough associated with difficulty breathing or shortness of breath, chest pain or pressure, or loss of speech or movement should seek medical care immediately. If possible, call your healthcare provider, hotline, or health facility first, so you can be directed to the right clinic.



RAMAIAH

International Centre for
Public Health Innovations

Three common clusters of symptoms have been identified:



Respiratory symptom cluster with cough, sputum, shortness of breath, and fever;



Musculoskeletal symptom cluster with muscle and joint pain, headache, and fatigue;



Cluster of digestive symptoms with abdominal pain, vomiting, and diarrhea.



In people without prior ear, nose, and throat disorders, loss of taste combined with loss of smell is associated with COVID-19.

People with the same infection may have different symptoms, and their symptoms may change over time.

- Among those who develop symptoms, most (about 80%) recover from the disease without needing hospital treatment.
- About 15% become seriously ill and require oxygen.
- Around 5% become critically ill and need intensive care.



Bifurcation of the disease: Mild, moderate, and severe symptoms

Category	Mild	Moderate	Severe/Critical
Usual Duration of Symptoms	1-7 Days	8-12 Days	>12 Days
Clinical Features	<ul style="list-style-type: none"> Fever, cough, sore throat Change in taste or smell No Dyspnoea RR <20/min 	<ul style="list-style-type: none"> Persisting symptoms RR:20-30/min; Saturation 95-98% Clinical or Radiological Evidence of Lung Involvement 	<ul style="list-style-type: none"> RR>30/min Saturation<94% Critical: Respiratory Failure, Shock, MODS
Red Flag Features			
Inflammation			
Viral Replication			
Discriminatory Investigations		<ul style="list-style-type: none"> CXR: Early interstitial lung infiltrates + CRP: 5-50 ng/ml 	<ul style="list-style-type: none"> CXR: Lung Involvement >50% CRP: >50 ng/ml
Level of Care	Home	Ward (Requires close clinical monitoring)	Severe: Ward/HDU Window Critical: ICU Settings to activate



Vulnerable population



Advanced age (above 60 years of age)



Presence of a chronic condition such as diabetes, COPD, heart failure or chronic kidney disease



Immunocompromised (cancer patients, transplant patients, patients on high dose steroids.)



Pregnant women



Lactating women

Anyone can get sick with COVID-19 and become seriously ill or die at any age.

Incubation period:

The time from exposure to COVID-19 to the moment when symptoms begin is, on average, 5-6 days and can range from 1-14 days. Therefore, people who have been exposed to the virus are advised to remain at home and stay away from others, for 14 days, in order to prevent the spread of the virus.



RAMAIAH

International Centre for
Public Health Innovations

Complications

**Pneumonia and troubled
breathing**

**End organ damage
involving the heart,
lungs, kidney and brain**

Heart problems

**Acute respiratory
distress syndrome**

Blood clots

Acute kidney injury

**Additional viral and
bacterial infections**



Testing

Who should get tested?

Anyone with symptoms should be tested, wherever possible (suspect cases). People who do not have symptoms but have had close contact with someone who is, or may be, infected (primary contacts) must also consider testing. While a person is waiting for test results, they should remain isolated from others.



RT-PCR

- Reverse Transcription Polymerase Chain Reaction test is currently the gold standard test for both screening and diagnosis of COVID-19.



Rapid antigen tests

- Sometimes known as a rapid diagnostic test – RDT, detects viral proteins (known as antigens). These tests are cheaper than PCR and will offer results more quickly, although they are generally less accurate. These tests perform best when there is more virus circulating in the community and when sampled from an individual during the time they are most infectious.



Antibody tests

- Can tell us whether someone has had an infection in the past, even if they have not had symptoms. Also known as serological tests and usually done on a blood sample, these tests detect antibodies produced in response to an infection. In most people, antibodies start to develop after days to weeks and can indicate if a person has had past infection. Antibody tests cannot be used to diagnose COVID-19 in the early stages of infection or disease but can indicate whether or not someone has had the disease in the past.

There is currently no evidence which suggests that newer variants are missed by these tests.



RAMAIAH

International Centre for
Public Health Innovations

Other tests of diagnostic and prognostic value

a. Temperature (between 97F to 99F) and Oxygen saturation (Above 94%) to monitor general wellbeing and lung function.

b. Due to the potential ability of the virus to severely impair several vital organs such as the heart, liver, and kidneys

-values of Complete Blood Count, Coagulation studies, Inflammatory mediators indicate prognosis of the disease

- Coagulation studies, AST, ALT levels indicate liver function

- Creatine Kinase indicates Kidney Function

- Chest X-Ray is used for diagnosis of Pneumonia



RAMAIAH
International Centre for
Public Health Innovations

References

- <https://www.cdc.gov/coronavirus/2019-ncov/symptoms-testing/symptoms.html>
- https://www.who.int/health-topics/coronavirus#tab=tab_1
- <https://covid19.karnataka.gov.in/storage/pdf-files/Public%20Information/COVID-19%20-%20Guidelines%20for%20Home%20Isolation-English.pdf>
- <https://www.who.int/emergencies/diseases/novel-coronavirus-2019/question-and-answers-hub/q-a-detail/coronavirus-disease-covid-19>
- <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7426219/>
- Covid 19 clinical management from department of infectious disease, CMC, Vellore.

Disclaimer:

All efforts have been made to present authentic information in this document using evidence-based resources for public use. These documents are solely owned by Ramaiah International Centre for Public Health Innovations (RICPHI), Bengaluru. Any attempt to replicate or reproduce this content for commercial purposes is strictly prohibited. RICPHI does not guarantee that the information uploaded is up to date because medical knowledge is constantly changing. However, this content may be downloaded and used widely for the benefit of capacity building of health providers and masses with due permission from RICPHI by writing to ricphi.admin@ramaiahgroup.org.

For more information contact:

Director

Ramaiah International Centre for Public Health Innovations
MSR Nagar, MSRIT Post, Bengaluru, Karnataka- 560054