

# Corona Virus Disease (Covid-19)

Call for action, Not reaction  
Do not panic, Do not be complacent

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**Consultant Physician, Ahmedabad**

plexusmd

# Novel Corona Virus

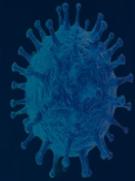
Helpline Number: **+91-11-23978046**

Helpline Email ID: **ncov2019@gmail.com**

Total number of passengers screened at airport: **11,71,061**

Total number of confirmed COVID 2019 cases across India\*: **89**  
(including foreign nationals, as on 14.03.2020)

Number of Deaths: **2**



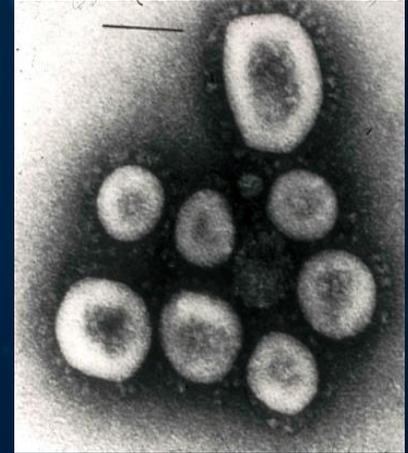
**Acknowledgements to Ministry of Health & Family Welfare, Govt. of India**  
**Visit official website for latest updates: [mohfw.gov.in](http://mohfw.gov.in)**

- What is Corona Virus?
- What is Covid-19?
- How does it spread?
- What are the clinical manifestations?
- How to diagnose?
- How to treat?
- How to prevent?

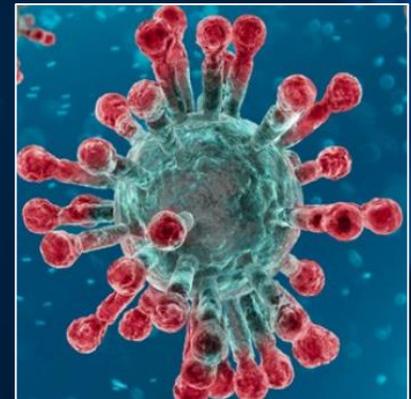


# What is Corona Virus?

- Medium-sized enveloped positive-stranded RNA viruses
- Name derives from their characteristic crown-like appearance in electron micrographs
- **Outer lipid layer derived from host which is vulnerable to detergent soap and alcohol**



Electron microscopic picture

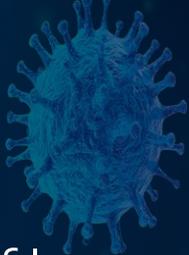


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## What is Covid-19?

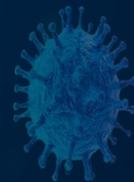
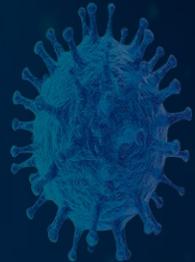
A new disease named Novel Coronavirus Disease (COVID-19) emerged in early December 2019 in China and has now spread to over 130 countries, infecting over 140,000 persons worldwide

# How does it spread?

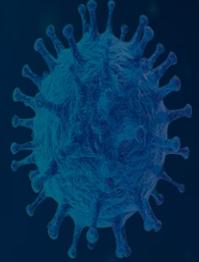
- ▶ Initially from virus-carrying animals / birds
  - ▶ Now from infected patients through:
    - ▶ Droplets while coughing / sneezing (vicinity of less than 1 meter)
    - ▶ Close personal contact (touching/shaking hands)
    - ▶ Touching an object or surface with the virus on it, then touching face
- 

# Incubation Period

- ▶ 2 to 14 days
- ▶ CDC believes that symptoms may appear in as few as 2 days or as long as 14 days after exposure



- ▶ Like most common URTI-like infections, difficult to distinguish from others
- ▶ High index of suspicion for Severe Acute Respiratory illness (SARI) cases, especially those who are likely to have been exposed to Corona virus infections\*



- ▶ **Common symptoms:**

- ▶ Fever [83%]
- ▶ Cough [82%]
- ▶ Dyspnoea [31%]
- ▶ Myalgia or Fatigue [11%]
- ▶ Headache [8%]

- ▶ **Contact of Confirmed cases**
- ▶ **Care takers of Confirmed cases**
- ▶ **Health Care Workers**
- ▶ **H/o travel to certain countries**

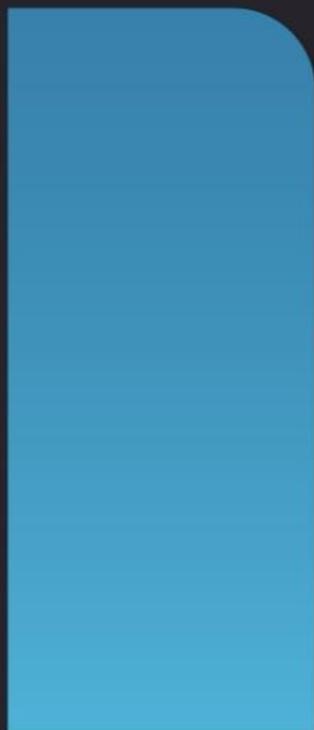
**Running nose and sneezing are not very common**

COVID-19 #CORONAVIRUS INFOGRAPHIC DATA PACK

# The Majority of Infections are Mild

Seriousness of symptoms

80.9%



**MILD**  
Like flu, stay at home

13.8%



**SEVERE**  
Hospitalization

4.7%



**CRITICAL**  
Intensive care

informationisbeautiful

study of 44,672 confirmed cases in Mainland China  
sources: China Centre for Disease Control & Prevention, Statista

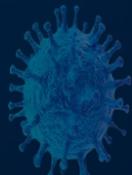


# How to diagnose?

Common symptoms	Fever Cough Sore throat Fatigue
Less common symptoms	Diarrhea Gastrointestinal symptoms
Severe cases	Shortness of breath Pneumonia Acute Respiratory Distress Syndrome (ARDS) Kidney failure Death

## Investigations



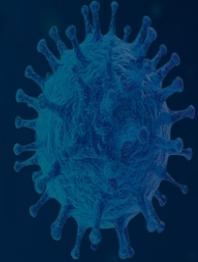
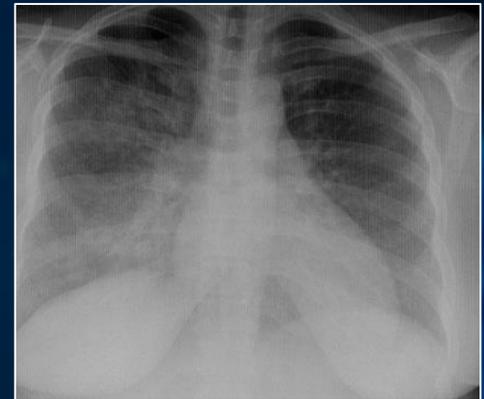
- ▶ CBC
  - ▶ ESR / CRP
  - ▶ X-ray chest
  - ▶ HRCT thorax
  - ▶ rt-PCR on samples from Nasopharynx, Oropharynx, Sputum, BAL
- 

## Common Lab findings:

- ▶ Anemia
- ▶ Leucopenia
- ▶ Lymphopenia
- ▶ AST/ALT Raised

## Common Imaging findings:

- ▶ Bilateral ground-glass opacities (GGO)
- ▶ Bilateral multiple lobular and sub segmental areas of consolidation



# rt-PCR test for Whom?



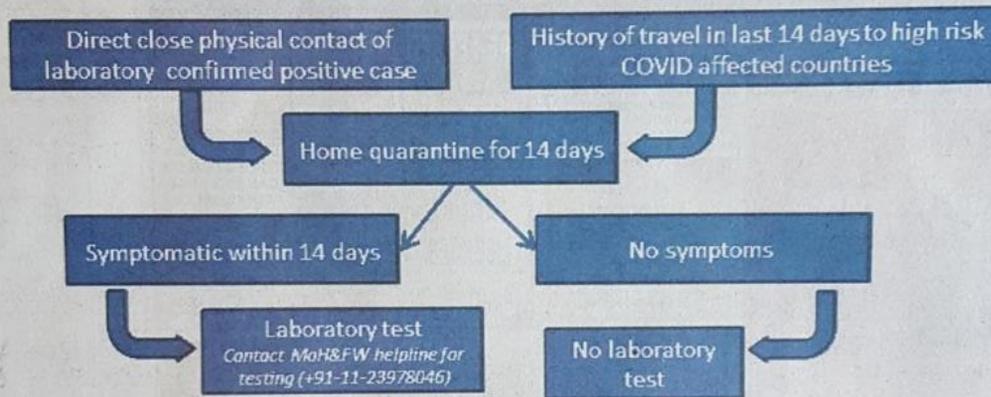
Department of Health Research  
Indian Council of Medical Research  
Ministry of Health & Family Welfare



## COVID19 Testing Strategy in India: 09/03/2020

- There is currently no community transmission of COVID19.
- Disease is primarily reported in individuals with travel history to the affected countries or close contacts of positive cases
- Therefore all individuals **need not be** tested

### WHOM TO TEST:



(Throat swab + nasal swab taken in Viral Transport Medium in one tube and transported in cold chain.)

List of testing facilities: [www.icmr.nic.in/content/covid-19](http://www.icmr.nic.in/content/covid-19)

*\*This is an evolving strategy*



<https://www.icmr.nic.in> | National Helpline Number for corona-virus : +91-11-23978046

DAVP 17301/13/0015/1920

# Management of COVID-19

## ▶ Mild cases

- ▶ Home isolation, symptomatic relief with paracetamol & antitussive agents

## ▶ For critical cases

- ▶ Combo of Lopinavir + Ritonavir + Oseltamivir and Chloroquine suggested
- ▶ Hospitalize for aggressive management (includes supplemental oxygen, Nutrition, maintaining hydration and BP, and Antibiotics in septic shock)
- ▶ Close observation
- ▶ Management of co-morbid conditions e.g. HTN, DM, COPD, HF etc
- ▶ No use of steroids routinely
- ▶ Vaccine not available at present

# How to Prevent?

- ▶ Isolation of confirmed cases till 2 consecutive rt-PCR tests negative
- ▶ Quarantine for at least 14 days
- ▶ Prevention of spread of infection in community by Mass Health Education for
  - ▶ Use of Masks
  - ▶ Cough etiquette
  - ▶ Hand Washing
- ▶ Follow Government of India websites for regular updates: [mohfw.gov.in](https://mohfw.gov.in)



# How to Prevent?

- 1. Handwashing with soap and water for 40 seconds, regularly**
  - ▶ An alcohol based hand sanitizer with 70% alcohol a must for 20 seconds
- 2. While coughing or sneezing cover nose and mouth with handkerchief, paper tissue**
  - ▶ If handkerchief or tissue paper is not available cough into flexed elbow
  - ▶ Dispose of tissue immediately after use and wash hands
- 3. Refrain from touching face, mouth, nose and eyes**
- 4. Stay at least a metre away from those coughing or sneezing**
- 5. Monitor your body temperature**

# Steps for effective Hand-washing



Rub hands palm to palm



Right palm over left backhand with interlaced fingers and vice versa



Palm to palm with finger interlaced



Backs of fingers to opposing palms with fingers interlocked



Rotational rubbing of left thumb clasped in right palm and vice versa



Rotational rubbing, backwards and forwards with clasped fingers of right hand in left palm and vice versa

# Personnel Protective Equipment (PPE)



Gloves



Aprons, gowns, suits  
or other apparels



Masks



Boots

# Use of Mask(s)

## Medical (Surgical) Mask

- ▶ 3-layered
- ▶ Does not prevent small particles



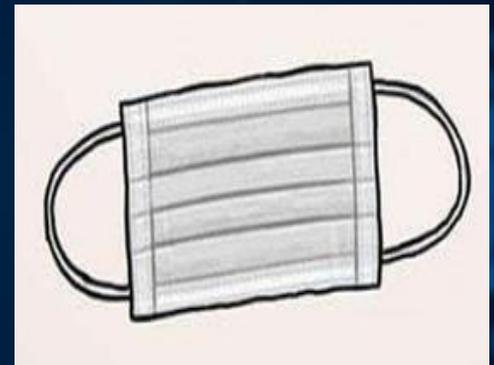
## N95 Mask

- ▶ Special Filter preventing particles upto 0.3 micron
- ▶ Difficult to breathe if worn for long time



## Paper Mask

- ▶ No filter
- ▶ Does not prevent infection



# Use of Mask(s)

1. Persons having no symptoms need not use mask
  2. When & who should use medical masks (apart from health care worker)?
    - ▶ When a person develops cough or fever
    - ▶ While visiting a healthcare facility
    - ▶ When you are caring for an ill person
    - ▶ Close family contacts of such suspect / confirmed cases undergoing home care
  3. Duration for which a medical mask will remain effective: if properly worn, will be effective for 8 hours. If it gets wet in between, it needs to be changed immediately
  4. Use of medical three layer masks when ill, will prevent your infection from spreading to others
- 

# Disposal of used masks

- ▶ Used mask should be considered as potentially infected
- ▶ Masks used by patients/care-givers/close contacts during home care should be disinfected using ordinary bleach solution (5%) or sodium hypochlorite solution (1%) and then disposed of either by burning or deep burial

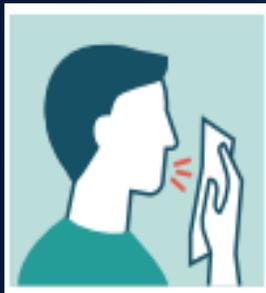




Frequent Hand  
washing



Avoid large  
gathering



Cover Your  
Nose, Mouth with  
Handkerchief/  
Tissue paper



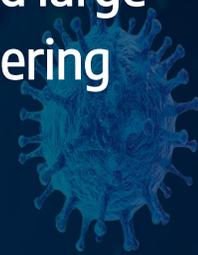
Call Helpline  
Number



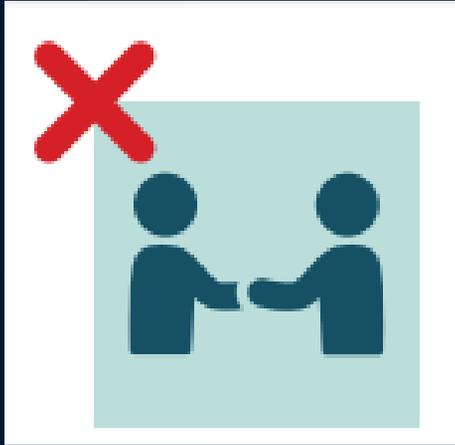
Dispose used tissue  
paper properly



Seek Medical  
Help

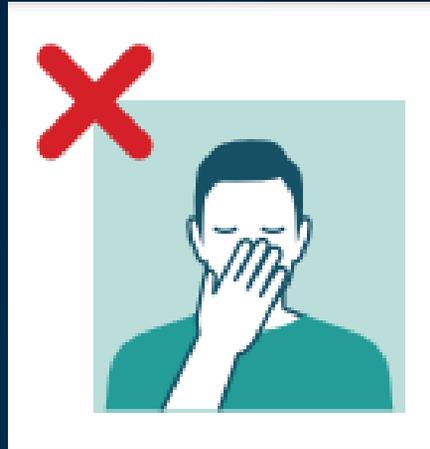


# Do Not's



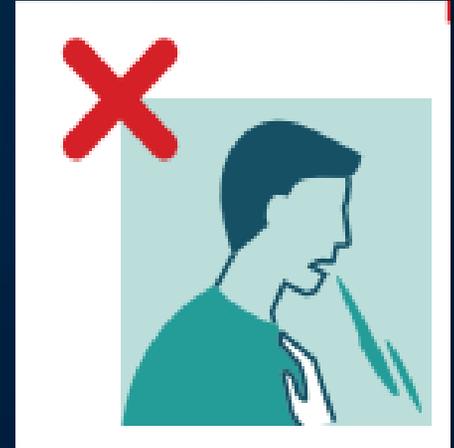
## Avoid

- ▶ Meeting people



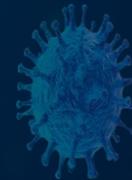
## Avoid Touching

- ▶ Eyes
- ▶ Nose
- ▶ Face
- ▶ Mouth



## Avoid

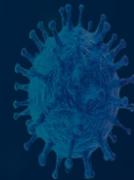
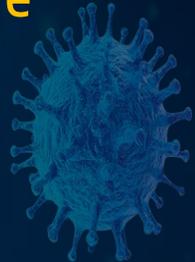
- ▶ Spitting in public



## Government of India Ministry of Health & Family Welfare Additional Travel Advisory (II) for COVID-19 for Indians intending to travel abroad

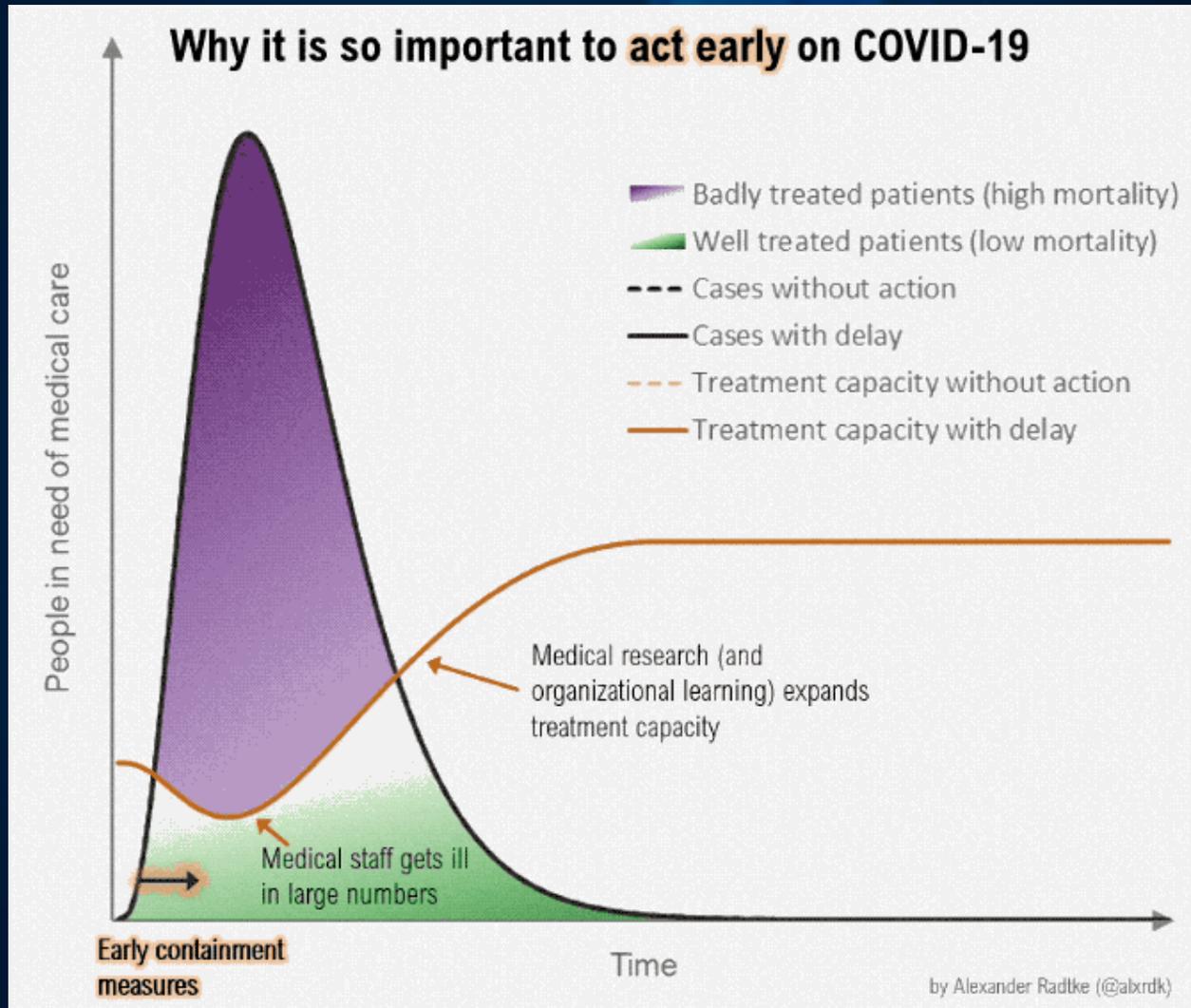
Indian citizens are advised:

- ▶ To avoid non-essential travel abroad
- ▶ They are further strongly advised to refrain from travelling to China, Italy, Iran, Republic of Korea, Japan, France, Spain and Germany



# Our Goal:

## Prevent/delay community transmission



This is a time for facts, not for fear  
This is a time for rationality, not for rumors  
This is a time for solidarity, not for stigma



# Thank You

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