

NUTRI-ESSENCE

**Perspectives of Public Health with respect to
COVID-19 Second Wave**

E- wall Magazine 2021



Department of Food and Nutrition

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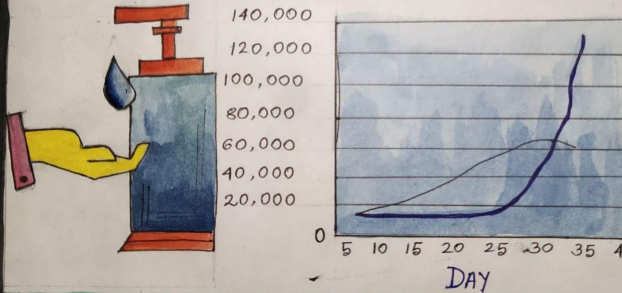
Perspective of Public health with respect to Covid-19 Second wave

SECOND WAVE: A phenomenon of infections that can develop during a pandemic. The disease infects one group of people first. Infections appear to decrease. And then, infections increase in a different part of the population, resulting in a second wave of infections.



CASES HAVE RISEN FASTER IN THE SECOND WAVE

— First wave — Second wave



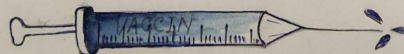
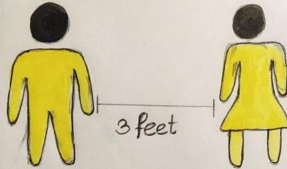
WHAT IS DOUBLE MUTANT COVID: The Indian double mutant variant coronavirus - B.1.617 - that has been termed as a variant of concern by the World Health Organization is moderately resistant to antibodies and is highly transmissible but has low severity among those who are vaccinated, a molecular study has said.

What are foods to avoid during the COVID-19 pandemic?
Reduce foods such as red and fatty meats, butter and full-fat dairy products, palm oil, coconut oil, solid shortening and lard. Avoid trans fats as much as possible. Read nutrition labels to ensure that partially hydrogenated oils are not listed in the ingredient.



STAY HOME STAY SAFE

After over come Covid-19 first wave those people who not take proper protection the following who are attached the following reason :-



- i) Without mask
- ii) Not maintaining physical distance
- iii) Not wash hand with soap and do not use sanitizer.
- iv) Do not wash clothes.
- v) Gathering with huge people.
- vi) At the beginning stage of this disease not take advice with Doctor.

Symptoms of Covid -19 second wave

COVID SYMPTOMS ARE DIFFERENT DURING THE FIRST WAVE AND THE SECOND WAVE :

- The 2nd wave of infections is more infectious than first one.
- Early-stage severity
- Hospitalization risk for even the young and healthy.

SYMPTOMS: (mostly seen in 1st wave) Most common symptoms:

- Fever
- Dry cough
- Tiredness

Less common symptoms :

- Aches and pains Headache
- Sore throat
- Diarrhoea
- Conjunctivitis
- Loss of taste or smell
- A rash on skin, or discoloration of fingers or toes

Serious symptoms:

- Difficulty breathing/shortness of breath
- Chest pain or pressure
- Loss of speech or movement

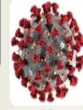
NAME - Nishat Mullick, Sornali Paul, Nandini Raha (SEM-4, Food & Nutrition)

PERSON-TO-PERSON TRANSMISSION

- Droplets or aerosols which is the most common transmission.
- Particles from coughing and sneezing of infectious person

Social Cause-

- Social and religious gatherings.
- Re-opening of most public places.
- Crowded election rallies.
- Mutation of the virus.



COVID-19 Symptoms in Children :

- Asymptomatic or mildly symptomatic in nature.
- Fever, cough, cold and abdominal issues. Some are even complaining of body pain, headache, diarrhea and vomiting.
- Second Strain of Corona virus is Far Different From It's First Strain More kids are now being affected with high fever up to 103-104 degrees Celsius, which is persistent for 5-6 days.

Symptoms of Corona virus 2nd wave

- High fever more than 5 days
- A drop in oxygen levels
- COVID tongue
- Sore throat
- Thrombosis pain
- Muscle cramp & pain
- Loss of Appetite, Fatigue and Nausea
- Loss of smell and taste is uncommonly seen right now
- Skin lesions, redness
- Eye pain
- Chest pain
- Difficulty in breathing
- Heart pain
- Diarrhoea
- Headache



SYMPTOMS OF MUCORMYCOSIS (BLACK FUNGUS)

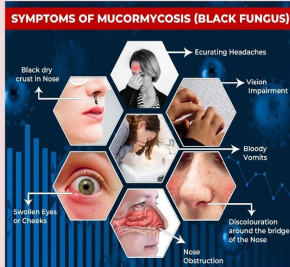
Sirin Sultana

Semester IV Honours

The normal name of black fungus disease is mucormycosis. It is an infection of the mucorales fungal family. Those fungi belonging to the Mucorales family and fungi of this order are found almost everywhere in soil, in the environment, in the decaying fruits and vegetables, in normal fruits and vegetables.

The symptoms of mucormycosis depend on where in the body the fungus is growing. Contact your healthcare provider if you have symptoms that you think are related to mucormycosis.

- One-sided facial swelling
- Headache
- Nasal or sinus congestion
- Black lesions on nasal bridge or upper inside of mouth that quickly become more severe
- Fever
- Cough
- Chest pain
- Shortness of breath
- Abdominal pain
- Nausea and vomiting
- Gastrointestinal bleeding.



Anwsha Das

SEMESTER IV HONOURS

INTRODUCTION

Currently Covid-19 Second Wave pandemic is a leading challenge across the globe and it affected the public health. It is mandatory to attain and maintain good nutritional status

METHOD

The antiviral activities of two polyphenols derived from tea, **epigallocatechin-3-gallate (EGCG)** from green tea and **theaflavins (TF)** from black tea. Both green tea and black tea polyphenols have been reported to exhibit antiviral activities against various viruses, especially positive-sense single-stranded RNA viruses.

Active binding sites for SARS-CoV-2

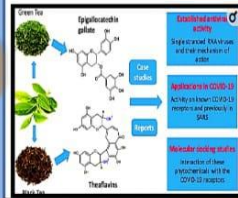
- ❖ Chymotrypsin-like protease
- ❖ RNA dependent RNA polymerase
- ❖ Papain like protease



ANTIVIRAL PROPERTIES

Antiviral activity of EGCG

- ✓ EGCG prevents infection by inhibiting the entry of Hepatitis C virus into hepatoma cell lines.



- ✓ EGCG interferes with the interaction of host cell receptors and virus envelope and inhibits the entry of the virus into target cells.
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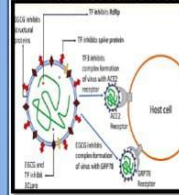
Antiviral properties of TFs

- TFs extract inhibited the viral infection by 99% at a concentration of 14.6mM.
- TFs interfered with the viral replication cycle by attachment to TMV-RNA complex.



Application in COVID-19

- Inhibition of structural proteins.
- Inhibition of glucose



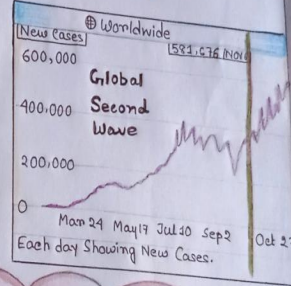
RECOMMENDATION

- ❖ Since we can see that Polyphenols present in tea is used as a potential treatment for Covid 19. So we can recommend that the person should consumed tea particularly green tea on daily basis.
- ❖ And black tea also contain polyphenols but less than green tea these include Theaflavins, Catechins.

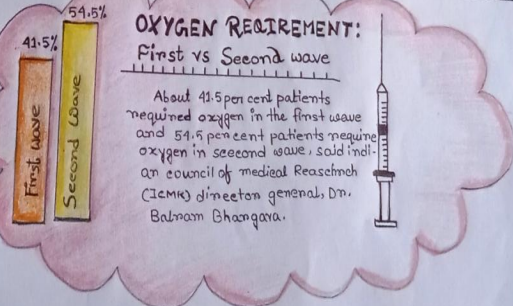
REFERENCES

Susmit Mhatre, Tishya Srivastava, Shivraj Naik, and Vandana Patravale Article (NCB)

2nd Wave



Economic Impact of Second Covid Wave
1-2% of GDP
₹ 1.38-2.96 lakh Cr
DISPROPORTIONATE
ADDITIONAL LOSSES

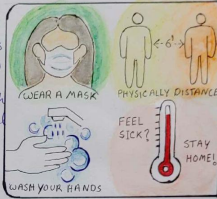


Hrishika Nandi sem II Hons

WHAT TO DO BEFORE, DURING & AFTER GETTING VACCINATED FOR COVID-19

Before Vaccination

- ◆ Learn about how vaccinations are being rolled out in your area and make sure vaccine comes from a trustworthy source, like - UNICEF, WHO
- ◆ Wear a mask properly, use sanitizer, wash your hands frequently and maintain physical distance (6 feet).
- ◆ Cancel your vaccination appointment if you have COVID-19 or the symptoms.



During Vaccination



- ◆ Keep your mask on during your appointment and turn your face away from the face of the vaccinator - to help keep you both safe.
- ◆ If you are feeling nervous or anxious:
 - Remember that it is just a small prick that could save your life.
 - Take slow deep breaths.
 - Lock away from the needle.

After Vaccination

- ◆ After being vaccinated you'll need to stay at the vaccination center for observation period area for 15-30 minutes and make sure you don't experience any severe side effects like - Itching, Fainting, Vomiting, severe allergic reactions, difficulties in breathing.
- ◆ Expect minor side effects like - aches or mild fever, some pain, swelling and redness on the arm where you received the vaccine, Tiredness, Headaches, etc.
- ◆ Prepare for your second vaccination appointment.



VACCINATION



Let's avoid another wave
Let's get vaccinated.



Not just second, there would be a

third wave too if a majority of the population is not vaccinated and people continue to ignore Covid norms, warned experts. The more the virus is in circulation, the higher its capacity to mutate.

WE HAVE TO CONTAIN THE SPREAD AS SOON AS POSSIBLE.

IF YOU IGNORE VACCINE, COVID NORMS, THERE WILL BE MANY MORE WAVES.

Presented by ~ Archita Sasmal, 2nd semester, Roll no. 636

Causes of Covid-19 Second Wave

The second wave began in March 2021 was much larger than the first. By late April, 2021 India led the world in new and active cases. Health experts believe that India's figures have been underreported due to several factors.

Let's See the Causes of The Covid-19 Second Wave Quickly :-

- People wandered here and there without mask and gathered unnecessarily.
- Shortages of Vaccine, Hospital beds, Oxygen cylinders & medicines.
- Lack of consciousness because of no knowledge about Primary Health Education.
- People don't strictly follow the rules & regulations of Lock Down due to their daily needs.



Symptoms of the Second Wave of Covid-19 :-

- #1. GI Tract Infections
- #2. Extreme lethargy and weakness
- #3. Hearing loss
- #4. Dry mouth
- #5. Pinkeye or Conjunctivitis
- #6. Headache
- #7. Skin rashes
- #8. Diarrhoea
- #9. Unexpected fatigue.

Can Expect A Covid Free India ???

Do's	Don'ts	Our Need
✓ Keep your house clean & disinfected.	✗ Avoid greeting through physical contact.	• Vaccine for everyone.
✓ Cover mouth and nose when stepping out.	✗ Do not shake hands with anyone.	• Adequate hospital beds, oxygen cylinders & medicines.
✓ Avoid touching face, nose, ears & mouth.	✗ Do not spit in public	• Sufficient supply of foods for everyone at affordable price.
✓ Wash hands with soap again & again.	✗ Don't talk to anyone face to face without mask.	• Financial help for the people who are BPL.
✓ Consult a doctor if you feel unwell.	✗ Do not eat raw fruits & vegetables	• Start proper sanitization system
✓ Avoid public transport if possible.		
✓ Throw used tissues into closed bins immediately after use.		
✓ Follow the rules of Physical Distance &		



Presented by:

Swagatika Sen, Sayan Seth, Samipa Saha, Loknath Malik & Suptik Singha

Semester II Honours



GUIDELINES FOR MANAGEMENT OF ADULT COVID-19 PATIENTS

COVID-19 PATIENTS

Mild disease

Moderate disease

Severe disease

Upper respiratory tract symptoms (&/or fever) WITHOUT shortness of breath or hypoxia

Any one of:
1. Respiratory rate > 24/min, breathlessness
2. SpO₂: 90% to < 93% on room air

Any one of:
1. Respiratory rate > 30/min, breathlessness
2. SpO₂ < 90% on room air

Home Isolation & Care

MUST DOs

- Physical distancing, indoor mask use, strict hand hygiene.
- Symptomatic management (hydration, anti-pyretics, antitussive, multivitamins).
- Stay in contact with treating physician.
- Monitor temperature and oxygen saturation (by applying a SpO₂ probe to fingers).

ADMIT IN WARD

Oxygen Support:

- Target SpO₂: 92-96% (88-92% in patients with COPD).
- Preferred devices for oxygenation: non-rebreathing face mask.
- Awake prone encouraged in all patients requiring supplemental oxygen therapy (sequential position changes every 2 hours).
- Anti-inflammatory or immunomodulatory therapy
- Inj. Methylprednisolone 0.5 to 1 mg/kg in 2 divided doses (or an equivalent dose of dexamethasone) usually for a duration of 5 to 10 days.
- Patients may be initiated or switched to oral route if stable and/or improving.
- Anticoagulation
- Conventional dose prophylactic unfractionated heparin or Low Molecular Weight Heparin (weight based e.g., enoxaparin 0.5mg/kg per day SC). There should be no contraindication or high risk of bleeding.

ADMIT IN ICU

Respiratory support

- Consider use of NIV (Helmet or face mask interface depending on availability) in patients with increasing oxygen requirement, if work of breathing is LOW.
- Consider use of HFNC in patients with increasing oxygen requirement.
- Intubation should be prioritized in patients with high work of breathing /if NIV is not tolerated.
- Use conventional ARDSnet protocol for ventilatory management.
- Anti-inflammatory or immunomodulatory therapy
- Inj. Methylprednisolone 1 to 2mg/kg IV in 2 divided doses (or an equivalent dose of dexamethasone) usually for a duration 5 to 10 days.
- Anticoagulation
- Weight based intermediate dose prophylactic unfractionated heparin or Low Molecular Weight Heparin (e.g., Enoxaparin 0.5mg/kg per dose SC BD).

MAY DOs

- Therapies based on low certainty of evidence
- Tab Ivermectin (200 mcg/kg once a day for 3 days). Avoid in pregnant and lactating women.
- OR
- Tab HCQ (400 mg BD for 1 day fb 400 mg OD for 4 days) unless contraindicated.
- Inhalational Budesonide (given via Metered dose inhaler/ Dry powder inhaler) at a dose of 800 mcg BD for 5 days) to be given if symptoms (fever and/or cough) are persistent beyond 5 days of disease onset.

Monitoring

- Clinical Monitoring: Work of breathing, Hemodynamic instability, Change in oxygen requirement.
- Serial CXR; HRCT chest to be done ONLY if there is worsening.
- Lab monitoring: CRP and D-dimer 48 to 72 hly; CBC, KFT, LFT 24 to 48 hly; IL-6 levels to be done if deteriorating (subject to availability).

Supportive measures

- Maintain euvolemia (if available, use dynamic measures for assessing fluid responsiveness).
- If sepsis/septic shock: manage as per existing protocol and local antibiogram.
- Monitoring
- Serial CXR; HRCT chest to be done ONLY if there is worsening.
- Lab monitoring: CRP and D-dimer 24-48 hourly; CBC, KFT, LFT daily; IL-6 to be done if deteriorating (subject to availability).

After clinical improvement, discharge as per revised discharge criteria

Reference

<https://covid.aiims.edu/clinical-guidance-for-management-of-adult-covid-19-patients/>



Edited and compiled by
Tanima Paul Das, HOD
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Impact of COVID-19 Pandemic Crisis on Economic System in India

Susweta Mondal & Supriya Chatterjee
4th Semester Honours

-) The COVID-19 pandemic has badly impacted on India in an enormous way, especially on the economic activities. In this terrible situation, the informal economic system of India has now suffered due to the socioeconomic inequalities which divide the country.
-) Nowadays, numbers of people dying from hunger and death toll poor health infrastructures are extremely increasing day by day.

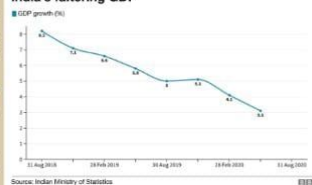
Pandemic Crisis and Indian Economy:

-) The economic condition of India (a developing market) has already been gone through a crisis phase from the last year 2019 (reduced to 4.9%).
-) According to economist, the crucial reason behind this economic downfall was the demonetization effect in November 2016 which created 86% of total money of the economy unusable overnight.
-) Tourism of India is also one of the most powerful sectors which ranked 34th among 140 countries, also experienced downward condition.
-) So, the overall lockdown effect was cruelled to small, medium and large enterprises of the country, leading to jobless and economic downward situation

Pandemic Crisis Affect GDP Growth:

-) The growth of an economy of any country is generally measured by GDP growth in percentage.
-) India's GDP was showing alarming negative value of 23.9% which is all time lowest in the past 40 years.

India's faltering GDP



Impact of Pandemic Crisis on E-Comers:

-) This pandemic has significantly increased the e-commerce industry. The B2B services have been developed a new platform in the area of healthcare by delivering goods ranging from essential medical care and also ventilators.
-) These companies are engaged to produce items related to healthcare facilities as some people are regularly monitoring their health and fitness of their families.
-) Finally, the COVID-19 outbreak has dramatically changed people's shopping habits because of the fear of shopping outdoors.

Daily Wage Crisis Due To Pandemic:

-) Due to lockdown there is a great decrease in the payroll budget in maximum private companies.
-) In new normal there is no sufficient transport for the daily wage earners and they have to rush to the offices at time by any cost.
-) In lieu of travelling in buses, trains they have to travel more than 200km/week in an average by cycle, bike without an exception in all age groups as The other option is to stay home without earning, which is worse

Migrant Workers During This Pandemic Crisis:

-) Millions of migrant workers face an uncertain future for the sudden announcement of lockdown on 24th March 2020.
-) Report says that about 50 million people mostly migrated to Maharashtra and Delhi to live their better life from West Bengal, Assam, Bihar, Odisha, Rajasthan, Punjab, Madhya Pradesh and Uttar Pradesh
-) Due to the unavailability of transport during lockdown period and lack of money and wages leads to the death of the many migrant workers along with their family.
-) These is also the reason of the many suicidal attempt in the lower economical family in the slums village and towns.

