

SLMNA

NEWSLETTER

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Issue 1

Nutrition in a pandemic....

Message from the editors...

Dear Members,

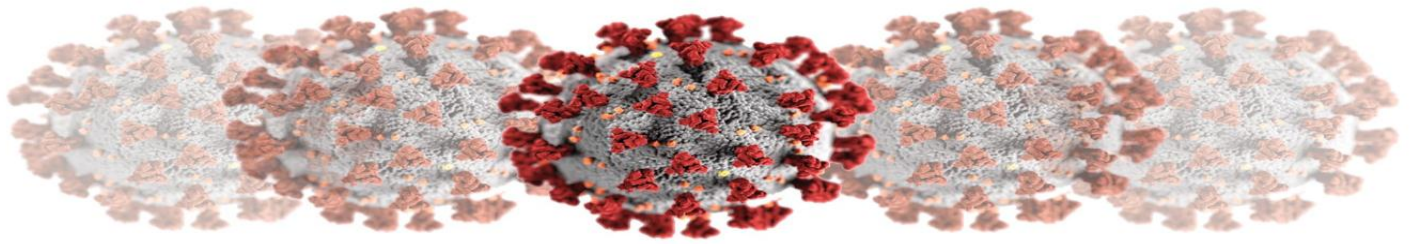
We as a world are facing a pandemic that is crippling our sense of well-being. In the form of COVID-19, this pandemic has already claimed thousands of lives all over the world. This crisis will not only affect global health and economy; it will also take a toll on our food supply and may inevitably lead to an already worsening situation of global hunger in the near future.

This issue of our newsletter mainly focuses on the COVID-19 pandemic and how we as clinicians specializing in nutrition should support our country to face challenges pertaining to nutrition at present and in near future.

We would be encouraged by your feedback and suggestions to improve the quality of this newsletter. Your articles related to clinical nutrition and case reports are warmly welcomed. Please feel free to forward them to slmna2015@gmail.com

We wish you and your families strength and courage to face these difficult time. Be safe.

Co-editors
Thilini & Chameera



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Capture of the month

Self-discipline is key to success in an emergency

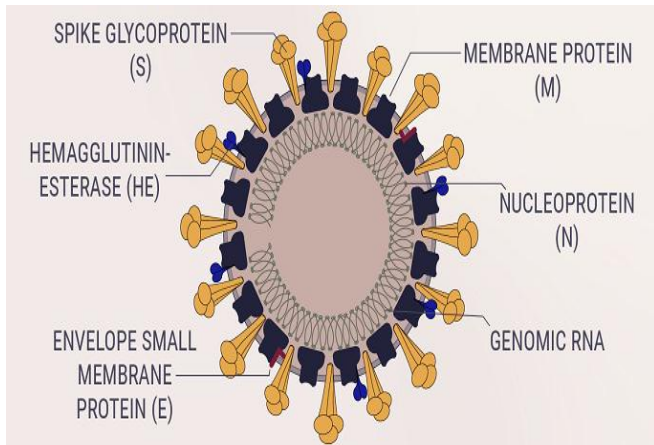


Let's practice

- ✓ Social distancing
- ✓ Hand washing
- ✓ Using tissue to minimize droplet transmission during cough and sneeze

01. COVID 19- what is it? Know thy enemy...

COVID-19, previously known as 2019-nCoV, that is caused by a novel Coronavirus (SARS-CoV-2) originated from Wuhan, China and it causes an acute respiratory disease. The World Health Organization (WHO) officially declared the outbreak of COVID-19 a Public Health Emergency of International Concern (PHEIC) on the 30th of January and then as a pandemic on the 11th of March 2020.



SARS-CoV-2 is a β -coronavirus, which is an enveloped, RNA virus (subgenus *sarbecovirus*, *Orthocoronavirinae* subfamily). But the amino acid sequence of COVID-19 differs from other coronaviruses in the regions of lab polyprotein and surface glycoprotein (S). Although several animals have been speculated to be a reservoir for COVID-19, an animal reservoir has not been confirmed.

COVID-19 is similar to Severe Acute Respiratory Syndrome coronavirus (SARS-CoV) virus in its pathogenicity, clinical spectrum, and epidemiology.

	SARS	COVID-19
First occurrence	Nov. 16th, 2002 in Foshan, Guangdong	Dec. 07th, 2019 in Wuhan, Hubei
Pathogen	SARS-CoV	SARS-CoV-2
Intermediate host	<i>Paguma larvata</i>	Pangolin, Mink (Possible)
Definitive host	<i>Rhinolophus sinicus</i>	<i>Rhinolophus affinis</i> (Possible)
Virus type	RNA virus	RNA virus
Species pathogen	β -coronavirus	β -coronavirus
Total DNA sequence length of pathogen	29,751	29,903
Latency	1–4 days on average	3–7 days on average
Susceptible people	Young adults	People who have not been exposed to SARS-CoV-2
Male–female patient ratio	1:1.25	2.70:1
Mortality	9.60%	2.10%
Clinical symptoms	Fever, cough, myalgia, dyspnea, and diarrhea	Fever, fatigue, and dry cough
Propagation mode	Droplets or close contacts	Droplets or close contacts

Source: Xu, J., Zhao, S., Teng, T., Abdalla, A. E., Zhu, W., Xie, L., Wang, Y., & Guo, X. (2020). Systematic Comparison of Two Animal-to-Human Transmitted Human Coronaviruses: SARS-CoV-2 and SARS-CoV. *Viruses*, 12(2), 244. <https://doi.org/10.3390/v12020244>

Epidemiology and pathogenesis

All ages can be infected. It is transmitted through large droplets generated during coughing and sneezing by symptomatic patients. It can also occur via asymptomatic people before onset of symptoms. Patients can be infectious for as long as the symptoms last and even on clinical recovery. These infected droplets can spread 1–2 m and deposit on surfaces. The virus can remain viable on surfaces for days in favorable atmospheric conditions but are destroyed in less than a minute by common disinfectants like sodium hypochlorite, hydrogen peroxide etc. Infection is acquired either by inhalation or touching contaminated surfaces and then touching the nose, mouth and eyes. As per Chen et al. (2020) transplacental transmission from pregnant women to their fetus has not been described. However, neonatal disease due to post-natal transmission is described.



The incubation period ranges from 2 to 14 d (median 5d). Studies by Cheng and Shan (2020) have identified angiotensin receptor 2 (ACE₂) as the receptor through which the virus enters the respiratory mucosa.

Clinical features

The common clinical features include

- fever (not in all)
- cough
- sore throat
- headache
- fatigue
- headache
- myalgia
- breathlessness

Less common symptoms include sputum production and conjunctivitis.

It is of vital importance to remember that it is indistinguishable from other respiratory infections. According to Chen et al. (2020), the disease is mild in most people, but in a subset of patients, by the end of the first week the disease can progress to pneumonia, respiratory failure and death.

The case fatality rate is estimated to range from 2 to 3%.

Diagnosis

A suspect case is defined as one with fever, sore throat and cough who has history of travel to country with confirmed cases of Corona or other areas of persistent local transmission or contact with patients with similar travel history or those with confirmed COVID-19 infection. However cases may be asymptomatic or even without fever. A confirmed case is a suspect case with a positive molecular test.



Specific diagnosis is by specific molecular tests on respiratory samples (throat swab/ nasopharyngeal swab/ sputum/ endotracheal aspirates and bronchoalveolar lavage). Virus may also be detected in the stool and in severe cases, the blood.

Common laboratory findings include normal/ low white cell counts with elevated C-reactive protein (CRP). The computerized tomographic chest scan is usually abnormal even in those with no symptoms or mild disease.

Treatment

Prevention and treatment take a vital role in the management of this disease. Prevention entails home isolation of suspected cases and those with mild illnesses and strict infection control measures at hospitals that include contact and droplet precautions.

Treatment is essentially supportive; role of antiviral agents is yet to be established. The usual principles are maintaining hydration, nutrition, controlling fever and cough.



The global impact of this new pandemic is yet to be determined as most experts believe that the peak of the pandemic has not been reached up to date.

Please note that this article was compiled with research findings that were published up to 31/03/2020 and new information may have surfaced regarding this disease afterwards.

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02. Challenge of the month- Nutrition during Emergencies

At present whole world is facing an emergency situation of COVID 19 with millions of people getting affected and with thousands of deaths per day. We Sri Lankans as developing country also facing the difficult situation and currently in a lock down status.

Any emergency situation disrupts the social infra-structure and results in nutrition problems in short term and long term. The extent of the nutritional problems depends on

1. Degree of civil security
2. Availability and accessibility to food
3. Access to health services
4. Adequacy of assistance delivered



All above aspects are affected in current lock down of the country, curfew and quarantine process. But there are mechanisms currently in progress to improve food security in the country.



Basic principals in handling nutrition in emergency

1. Coordinated approach
Coordinating with relevant stake holders- United Nation Agencies, Government, NGOs, donors and community especially the women.
2. Context specific assistance
The assistance should be suitable for the current situation. Cause for current nutrition problem and potential risks of the specific community should be considered.
3. Timely distribution of adequate basic food ration
From the onset of emergency should try to provide basic food ration to prevent vulnerable group moving in to malnourished status. The acute severe malnutrition results in need for aggressive costly therapeutic feeding which is more challenging in emergency situation.
4. Providing standard food ration.
This is done as blanket method to all who are affected with the emergency and high risk vulnerable groups are offered food or supplements in addition.
5. Monitoring ,adjusting and targeting
Monitoring mechanism should be established to monitor adequacy of food supply and adjust according to the changing situation. Community coping mechanisms should be evaluated and supported reach self-reliance soon.



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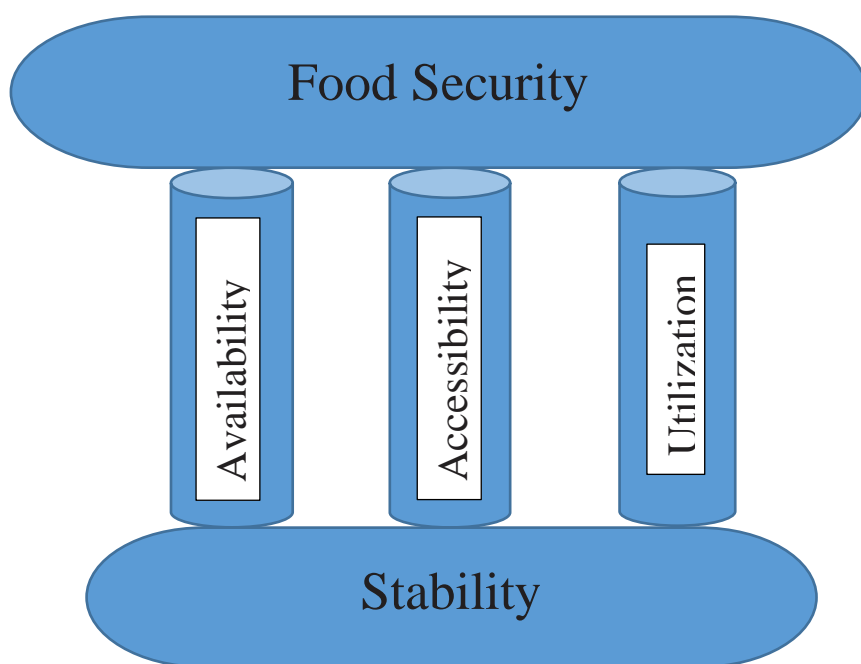
03. Food Security during pandemic

1. What is food security?

According to Food and Agriculture Organization,

“Food security exists when all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food which meets their dietary needs and food preferences for an active and healthy life.”

Major pillars of food security



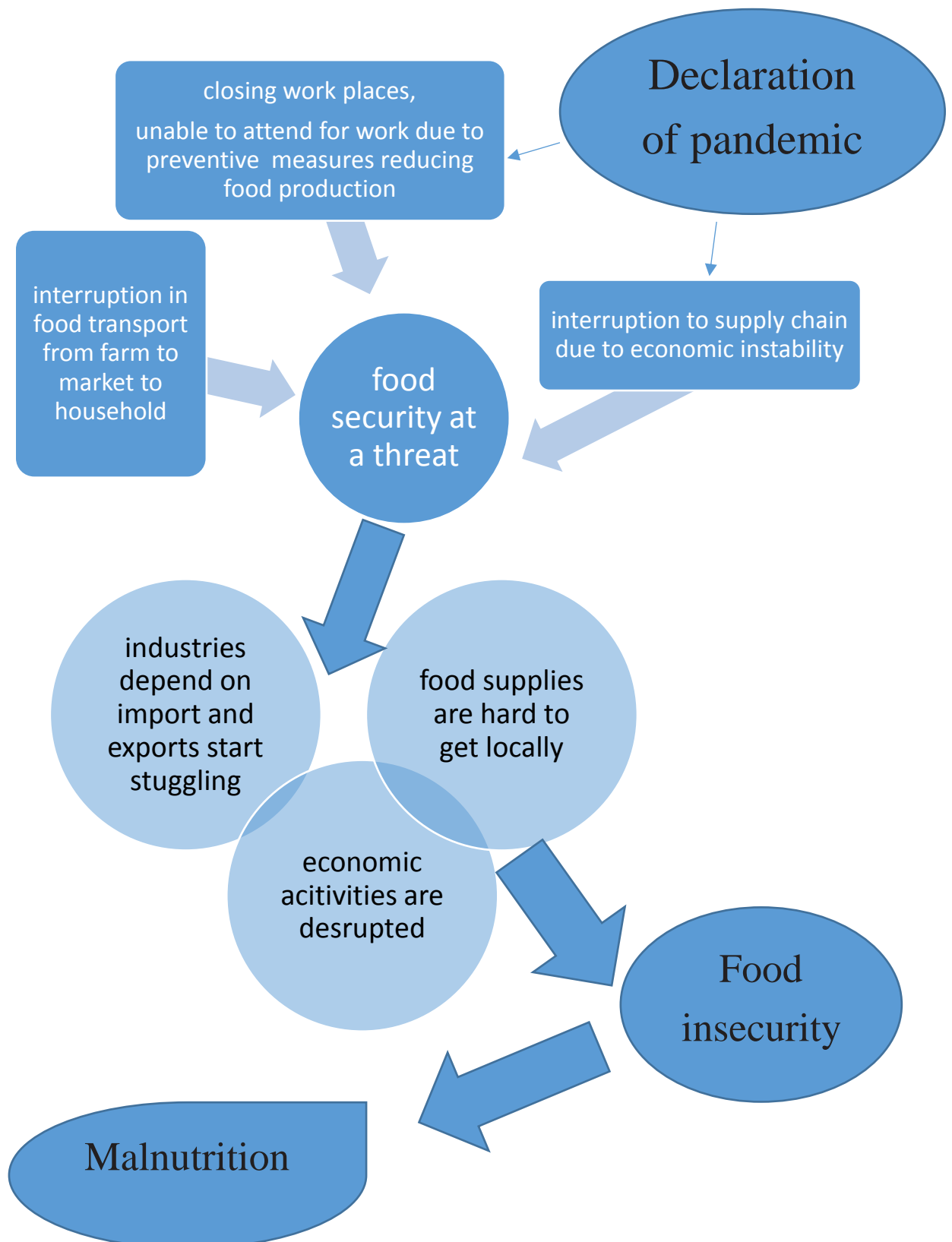
Availability: of food means either food is produced at farms or gardens, available at markets and shops or received as food aid.

Accessibility: is ability for an individual to get food. Any household that is able to buy food from any place or receive as a gift or food aid is said to have accessibility for the food.

Utilization: means the body is able to utilize the nutrition in the food. This also depend on food storage, food safety, safe drinking water and sanitation facilities.

Stability: is the uninterrupted availability accessibility and utilization of food that leads to prevention of malnutrition due to ongoing emergency or disrupted social activities.

5. How food security get affected during pandemic



3. How we can tackle food insecurity

This should address all 3 pillars of food security

1. Availability

a. Increase production

- i. Provide agriculture industries to function with limitations to prevent disease spread
- ii. Improve home gardening system
- iii. Provide special rations or support for at risk groups

b. Introduce novel methods of agriculture

- i. Short term crops
- ii. Energy dense food production
- iii. Easy fortification methods to increase quality.
- iv. Educate on food safety measures
- v. Introduce food preservation methods



2. Accessibility

- a. Improve food transport from farm to market
- b. Safe delivery system to households
- c. Introduce food exchange methods
- d. Provide access to money
- e. Provide daily paid people a food aid
- f. Cut down other expenses (loans) to improve buying capacity

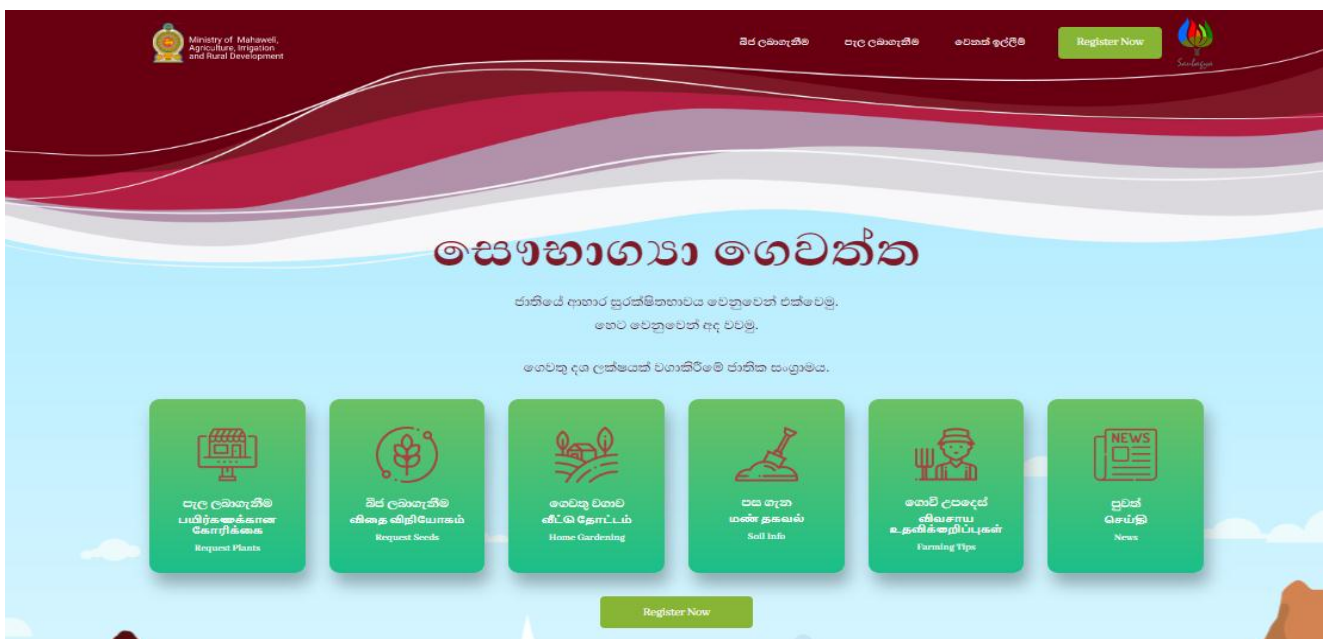
3. Utilization

- a. Provide uninterrupted cooking fuel and utensils
- b. Provide medication for ill people to improve nutrient utilization in the body
- c. Improve mental well-being to improve food intake

Country specific interventions at an individual level...

Aimed at initiating 1 million home gardens, for national food security, the Ministry of Mahaweli, Agriculture, Irrigation and Rural Development has launched the concept of ‘සෞභාග්‍යා ගෙවත්ත’. Willing participants are provided plants and/or seeds at a nominal fee according to their location island wide. You can register today by logging in at the following link and registering your name and address <http://saubagya.lk/>

This site also provides farming tips, news, details on soil and home gardening in addition to the above.



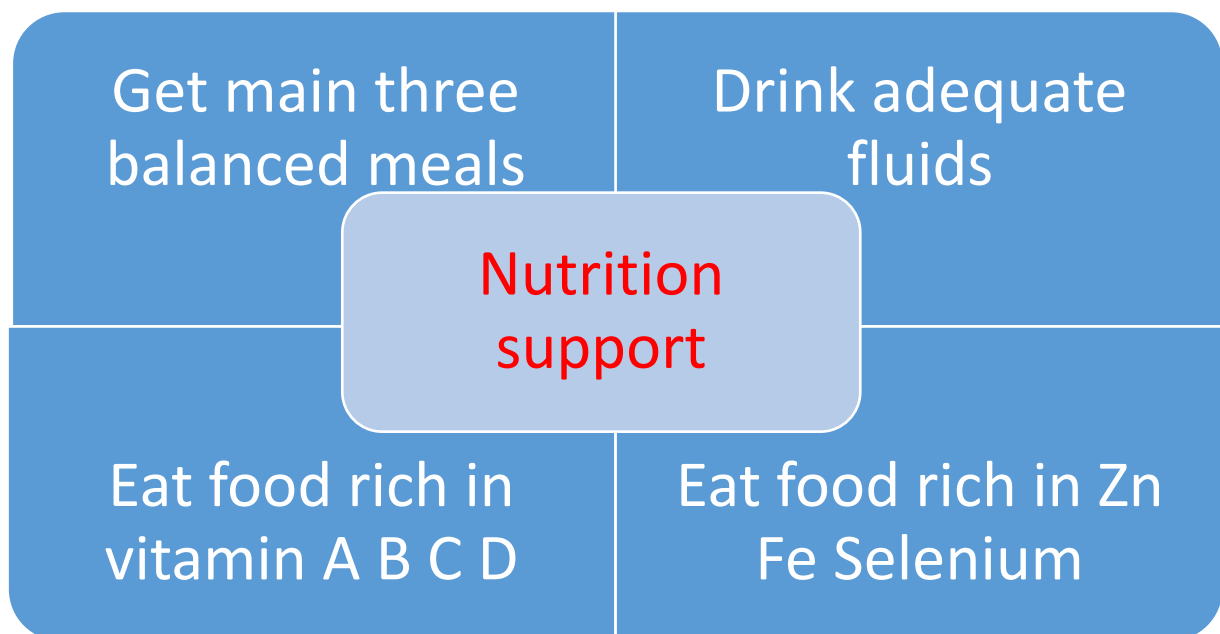
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3. <https://health.usnews.com/conditions/articles/coronavirus-and-food-safety>

4. Public Health Nutrition – key messages

Are you at risk of getting affected?

- Older adults above 65 years of age
- Patient with diabetes, hypertension, kidney disease, respiratory disease or any other chronic diseases
- Patients who are currently ill due to any other illness.
- Smokers
- Malnourished or obese people



What we should eat?



vitamin A Rich food

Carrot
Pumpkin
Yellow seewt potatos
Green leafy vegetables
Papaya
Passion fruit
Dates



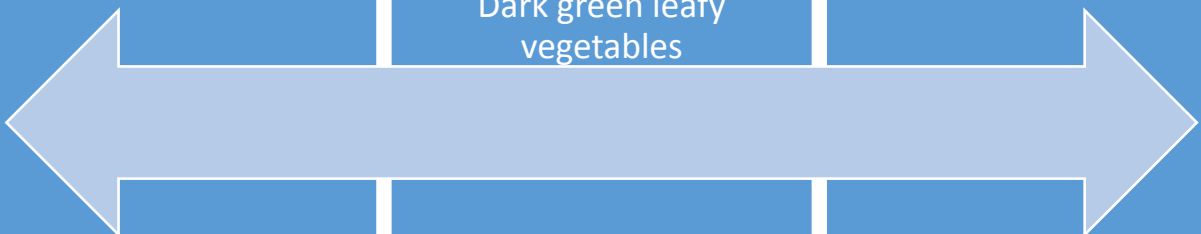
Vitamin B rich food

Parboiled rice
Barley ,rulang
Dhal,cow pea
Green gram
Yeast extract
1 tsp/d
Sesame,peanuts
Dark green leafy vegetables



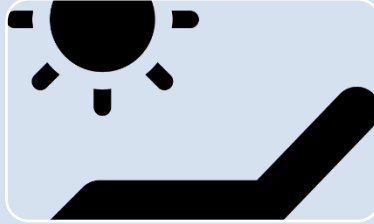
Vitamin C rich food

Guava
Nelli
Jambola
Papaya
Orange





fluid therapy
drink 6 to 8 glasses of
water per day
have 3 plinteas
without sugar
drink corriander
water



vitamin D
expose yourself for at
least 10 mins to
sunlight during 11 am
to 2 pm



Zn Fe Se rich food
fish meat sesame
koonissa
pulses
egg yolk



DOs

1. daily physical activity at least 30 mins (walking, running, gardening or following exercise videos)
2. adequate sleep of 6-8 hours a day
3. 20sec hand washing with soap and water before preparing food, before eating food or touching common places
4. use home cooked food



DON'Ts

1. drink sugar sweetened beverages
2. drink alcohol
3. eat fast foods and deep fried snacks
4. waste food
5. eat food without adequate cleaning

05. Disease specific Nutrition - COVID-19

Nutrition therapy

Nutrition management of inward patients with COVID-19

Patients that are highly suspected or positive for COVID-19 and require admission for COVID-19 related complications are eligible for COVID-19 nutrition therapy.

- Provide adequate amount of calories and proteins
 - 25 – 30 kcal/kg/day is recommended
 - 20% of calories to be provided as protein requirement

If 60% of the above requirement cannot be achieved, combine a polymeric oral nutrition supplement.

It is advisable to start enteral nutrition as a continuous feed to minimize staff exposure.

- Fluid requirement 35ml/kg/day (Water and unsweetened beverages such as king coconut water, coriander water, light plain tea, etc.)
- Include following micronutrients for adult patients;
 - * Vitamin D 300,000 IU single dose orally
 - * Vitamin C 500 mg bd orally
 - * Thiamin 200 mg bd orally
 - * Zinc 20 mg bd orally

Critically ill patients should be managed according to the routine critical care nutrition guidelines.

06. Past events since last publication



Colombo Medical Congress 2020



Annual Academic Sessions 2019



Eat Well Festival 2020



Eat Well Festival 2020



Eat Well Festival 2020



Model Health Corner – WHO



Model Health Corner – WHO



Model Health Corner – WHO



Cooking demonstration, Janasaraniya



Annual Health Screening Programme, Royal College

Stay connected with **SLMNA**

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