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Short Communication
Making Nutrition a Development Priority in Africa
Contents lists available at


Journal homepage: https://www.najfnr.org/
newly emerging viral diseases: case of strengthening immune system against newly emerging viral diseases: case of nutrition
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Liabes
djillali

P.O. Box 89,
Department of Health Sciences, College of Health and Rehabilitation Sciences, Princess Sidi-bel-Abbes
Abdulrahman University, P.O. Box 84428, Riyadh 11671, Kingdom of Saudi Arabia

Bint

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March 2020

Published

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Tel. Leelawadee UI Semilight
Access this article online
Quick Response Code

The immune system is involved in the protection of host against environmental agents such as pathogenic micro-organisms (bacteria, fungi, and viruses) and chemicals.
be continuously provided, adequate nutritional status should be maintained with appropriate intakes of calories, vitamins, minerals and water that should thereby preserving the integrity of the body.

To preserve organism defense by a healthy diet mechanisms, adequate nutritional status should be maintained with appropriate intakes of calories, vitamins, minerals and water that should be continuously provided by a healthy diet. To preserve organism defense, adequate nutritional status should be maintained with appropriate intakes of calories, vitamins, minerals and water that should be continuously provided by a healthy diet. To preserve organism defense, adequate nutritional status should be maintained with appropriate intakes of calories, vitamins, minerals and water that should be continuously provided by a healthy diet.
The emergence of new infectious diseases with new pathogenic properties constitutes a serious health issue worldwide.

Severe acute respiratory syndrome (SARS) represents one of the most recent emerging infectious diseases.
identified by a novel coronavirus called SARS-CoV-2.

SARS-CoV-2 member identified.
World Health Organization (Wuhan, Hubei, China in December 2019) recognized as pandemic by the World Health Organization (WHO).
The nutritional status of each COVID-19-infected patient should be assessed prior undertaking treatments.

Nutritional support
should be the basis of management of infected individual.

However, prevention measures remain the first priority and strategy to
Keywords: Nutrition, Immune system, Viral diseases, SARS-CoV-2
It is well established that \( \text{constitutes a critical determinant of immune} \)
the most common cause of immunodeficiency worldwide
Figure 1

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Deficiency of single nutrients are all associated with protein-energy malnutrition.
could result in altered immune responses.
vitamins A, C, E, and B-6; and folic acid influence manganese, magnesium, iron, copper, iron, and manganese.
Historically speaking, the immune and the digestive systems have been

ROLE OF MACRO- AND MICRONUTRIENTS

Historically speaking, the immune and the digestive systems have been
Semilight" time considered as separate entities, while, both systems are sharing important functions in terms of nutrients acquisition and host defense as our gut microbiota. The role of specific macro- and micronutrients in immune function has been extensively discussed in the literature. Immune cells may be particularly sensitive compared to other types of cells to the status of certain nutrients and food components.
Nutritional status, as a modifiable factor, is a key element in the functioning and maintaining of our immune system integrity and remains closely associated with immunity and host resistance to any infecting agent. To function correctly, the immune system
on adequate amounts of nutrients (carbohydrates fats and proteins, as well as water and micronutrients such as vitamins and minerals).
can optimize immune defense to properly maintain the immune system function. Concerning certain nutrients, increased intake above nutritional recommendation is required correction to properly maintain the immune system function. Concerning certain nutrients, increased intake above nutritional recommendation can optimize immune defense to properly maintain the immune system function. Concerning certain nutrients, increased intake above nutritional recommendation can optimize immune defense to properly maintain the immune system function. Concerning certain nutrients, increased intake above nutritional recommendation can optimize immune defense to properly maintain the immune system function. Concerning certain nutrients, increased intake above nutritional recommendation can optimize immune defense to properly maintain the immune system function. 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Figure 1:
World Health Organization,

Worldwide burden of malnutrition (WHO)
Figure
Novel Coronavirus (COVID-19) Situation in the World (World Health Organization, Esri | WHO)
ROLE OF MACRONUTRIENTS

IN IMMUNE FUNCTION

(Carbohydrates, Fats and Proteins)
Carbohydrates should be considered as the main source of calories.
some amino acids such as arginine, glutamine, taurine and sulfur-containing amino acids

Immunomodulatory properties have been attributed to

-protein intake and particularly to

some amino acids such as arginine, glutamine, taurine and sulfur-containing amino acids

[REFERENCES]
Declines in both specific and non-specific immunity have been reported in association with under-nutrition and protein deficiency.
Furthermore, some polyunsaturated fatty acids (PUFA), as well as their metabolic derivates, contribute to regulating cell functions, especially omega-3 fatty acids (EPA and DHA) that influence immune cell functions.

[REFERENCES]
ROLE OF MICRONUTRIENTS (Vitamins and minerals)

Deficiencies of trace elements such as iron, selenium, copper, and zinc, and vitamins A, B6, B12, folic acid, C, D and E are associated with immune dysfunction. A healthy balanced diet has the opportunity to furnish most of the essential micronutrients with immune modulatory effects on immune function.
to immune cells and functions sustainment and modulation

including zinc, iron, magnesium, manganese, selenium and copper

that contribute
Several epidemiologic and clinical studies suggest
besides the risk of infection is favored by nutritional deficiencies.
 sanitation or contaminated food and water.

References
have not authorized any privilege for any food or any nutrient to be labelled as protecting against infection.
months, a novel coronavirus has emerged from the Chinese city of Wuhan and spread around the world.

What is a novel coronavirus?
may cause illness in animals or humans. In humans, several coronaviruses are recognized that may cause illness in animals or humans. In humans, several coronaviruses are recognized that may cause illness in animals or humans. The WHO defines coronaviruses as a large family of viruses.
induce respiratory infections ranging from the common cold to more severe diseases such as Middle East Respiratory Syndrome (MERS) and Severe Acute Respiratory Syndrome (SARS). The most recently discovered coronavirus causes coronavirus disease COVID-19.
This new virus and disease were unknown before the outbreak began in Wuhan, China, in December 2019.
According to the Centers for Disease Control and Prevention (CDC), “A novel coronavirus is a new coronavirus that has not been previously identified. The virus causing coronavirus disease 2019, called COVID-19, is not the same as the coronaviruses that commonly circulate among humans and cause mild illness, like the common cold. COVID-19, is not the same as the coronaviruses that commonly circulate among humans and cause mild illness, like the common cold. A diagnosis with coronavirus 229E, NL63, OC43, or HKU1 is not the same as a COVID-19 diagnosis. Patients with COVID-19 will...
be evaluated and cared for differently than patients with common coronavirus diagnosis.
Further to clinical management, support for critically affected COVID-19 patients...
Patients staying in the intensive care unit (ICU) or in the emergency department (ED) who are affected by COVID-19 require nutritional support to optimize their immune response, improve outcome, and reduce the risk of complications. Nutritional assessment and support are essential to prevent undernutrition, which can weaken the immune system and increase the risk of nosocomial infections.

At the first stage, the nutritional assessment process is focused on evaluating the patient's baseline nutritional status and identifying potential risk factors. This includes assessing the patient's recent dietary intake, medical history, and current clinical condition. The NUTRIC score, which evaluates factors such as age, serum albumin, and white blood cell count, is a useful tool in this context.

Following this initial assessment, further tools for patients can be implemented to dynamically adjust the nutritional interventions based on individual needs. This may include enteral or parenteral nutrition, specific supplements, or modified feeding regimens. Regular monitoring of the patient's nutritional status and clinical outcomes is crucial to ensure that the therapy regimens are effective and adapted as necessary.
Gastroesophageal reflux and a single load of enteral nutrition will be favored when aspiration risk is high, age > 70 years, consciousness level affected, prone position, and re units (ICU) should be early assessed for nutritional risk. Therefore, an early enteral nutritional support should commence within 24 to 48 hours.

Post-pyloric feeding will be favored when aspiration risk is high, age > 70 years, consciousness level affected, prone position, gastroesophageal reflux and a single load of enteral nutrition.

Post-pyloric feeding will be favored when aspiration risk is high, age > 70 years, consciousness level affected, prone position, gastroesophageal reflux and a single load of enteral nutrition.

...
Energy and protein
It is recommended to supply 20 ~ 30 kcal.kg
Muscle atrophy could occur in severe patients due to increased protein catabolism and supplementing protein intake can reduce mortality. Most guidelines consider that the protein requirement is suitable in the range of 1.2 to 2.0 g.kg depending on the severity of the disease.
Omega-3 and omega-6 PUFAs predominantly promote anti-inflammatory and pro-inflammatory effects. Being precursors of Omega-3 polyunsaturated fatty acids (PUFA), Omega-3 and omega-6 PUFAs predominantly promote anti-inflammatory and pro-inflammatory effects.
D1, serv mega-3 including prostaglandins/leukotrienes, respectively and prostaglandins/leukotrienes, respectively
as a novel antiviral drug, could be considered for one of the potential interventions of the novel virus COVID-19.
Micronutrients

- Vitamin A

- Vitamin C

- Iron

- Zinc

- Copper

- Selenium

- Iodine
and the prevention of lung infection more susceptible to infectious disease. Therefore, vitamin A could be a promising option for the treatment of this novel coronavirus reported that low vitamin A diets might compromise the effectiveness of inactivated bovine coronavirus vaccines and render calves
It is well documented that an impaired immune response is due to deficiency of a particular nutritional element.

reported that low vitamin A diets might compromise the effectiveness of inactivated bovine coronavirus vaccines and render calves more susceptible to infectious disease. Therefore, vitamin A could be a promising option for the treatment of this novel coronavirus and the prevention of lung infection.
COVID-19 patients should be supplemented to enhance their immune system. Therefore, B vitamins could be chosen as a basic option for the treatment of COVID-19.
It is well known that vitamin C supports immune functions and protects against infection caused by coronavirus. The COVID-19 had been reported to
lower respiratory tract, vitamin C could be one of the effective
vitamin C-supplemented patients presented, under certain conditions, lower incidence of pneumonia. However, supplying patients with controlled trials that It was reported throughout some vitamin C-supplemented patients presented, under certain conditions,
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discovery that COVID-19 in Winter of 2019 coincides with
4,16
COVID-19 affected patients with selenium could be an effective intervention for the treatment of this novel virus. COVID-19 related symptoms such as diarrhea and lower respiratory tract infection could be improved by Zinc supplementation.
Iron deficiency constitutes a risk factor for the development of recurrent acute respiratory tract infections.
COVID-19 AND PHYSICAL ACTIVITY
With the rapid coronavirus spread, the general population has been...
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such restrictions \(<w:t>\) will \(<w:t>\) regular physical activities \(<w:t>\) against \(<w:t>\) such restrictions \(<w:t>\) will \(<w:t>\) unavoidable\(<w:t>\) will affect\(<w:t>\)
increase sedentary behavior and may increase psychosocial status and well-being and may increase routine daily activities and may preserve psychosocial status and well-being and may preserve psychosocial status and may increase routine daily activities and may preserve psychosocial status and well-being and may preserve psychosocial status and may increase routine daily activities and may preserve psychosocial status and well-being and may preserve psychosocial status and increase sedentary behavior
watching television, using mobile devices<" preserve" /> such as </w:t> with lowering energy expenditure</w:t> such as </w:t> screening activities </w:t> such as </w:t> such as </w:t> watching television, using mobile devices</w:t>
Therefore, physical activity should be maintained even at home using playing games. Therefore, physical activity should be maintained even at home using playing games. Therefore, physical activity should be maintained even at home using playing games. Therefore, physical activity should be maintained even at home using playing games.
If available, some home exercises require equipment, little space, and can be practiced at any time. Considerably that will help to reduce exercises at least 30 min of moderate physical activity every day and/or at least 20 min of vigorous physical activity every other day. If available, some home exercises require equipment, little space, and can be practiced at any time. Considering that will help to reduce.
particularly during the current circumstances anxiety and depression,
CONCLUSION
the decline of immune status by maintaining immune homeostasis throughout life and reinforce immunity mechanisms especially among vulnerable individuals (elderly, pregnant, and infant groups)
Nutritional support remains the basis of treatment and n
No specific food or supplement will prevent COVID-19/Coronavirus affection. Therefore, we suggest to assess the nutritional status of COVID-19 infected patients.
Due to the increasing propagation of COVID-19, it is vital that infection control and safety precautions must be strictly adhered to minimize contamination.
Home stay is a fundamental safety step that can limit infections from spreading widely.
avoid anxiety and depression and that constitutes a strategy for healthy living during the coronavirus crisis. However, appropriate and continuous hygiene practice
and limit contact with people.
Frequently Asked Questions (FAQs) From USDA and CDC official websites.
Q: Can I become sick with coronavirus (COVID-19) from food?

A: We are not aware of any reports at this time of human illnesses that suggest COVID-19 can be transmitted by food or food packaging. However, it is always important to follow good hygiene practices (i.e., wash hands and surfaces often, separate raw meat from other foods, cook to the right temperature, and refrigerate foods promptly) when handling or preparing foods.
Q: Are meat products compromised by the Coronavirus?

A: We are not aware of any reports at this time of human illnesses that suggest COVID-19 can be transmitted by food or food packaging. However, it is always important to follow good hygiene practices.
(i.e., wash hands and surfaces often, separate raw meat from other foods, cook to the right temperature, and refrigerate foods promptly) when handling or preparing foods.

Currently, there is no evidence to support transmission of COVID-19 associated with imported goods and there are no reported cases of COVID-19 in the United States associated with imported goods.
Q: Can the coronavirus be spread through food, including refrigerated or frozen food?

A: According to the CDC, coronaviruses are generally thought to be spread from person-to-person through respiratory droplets. Currently there is no evidence to support transmission of COVID-19 associated with food.
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management:

The following updatable resources can be consulted for accurate and up-to-date information about the COVID-19 development and management:

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The following updatable resources can be consulted for accurate and up-to-date information about the COVID-19 development and management:
World Health Organization
U.S. Food and Drug Administration

U.S. Department of Agriculture

Leelawadee UI Semilight


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precautions.


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The role of nutrition in strengthening immune system against newly emerging viral diseases: case of SARS-CoV-2


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newly emerging viral diseases: case of SARS-CoV-2
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nutrition and newly emerging viral diseases: case of SARS-CoV-2

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Volume 04

Issue 07
Role of nutrition in newly emerging viral diseases: case of COVID-19

Khaled MB
Role of nutrition in newly emerging viral diseases: case of COVID-19
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2. The second reminder is scheduled for 2880 months, or 240 years.
3. The third reminder is scheduled for 3600 months, or 300 years.
4. The fourth reminder is scheduled for 4320 months, or 360 years.
5. The fifth reminder is scheduled for 5040 months, or 420 years.
6. The sixth reminder is scheduled for 5760 months, or 480 years.

These reminders are set at the following intervals:

- For the first reminder: 180 years
- For the second reminder: 240 years
- For the third reminder: 300 years
- For the fourth reminder: 360 years
- For the fifth reminder: 420 years
- For the sixth reminder: 480 years

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Meghit Boumediene Khaled

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2020-03-26 21:34:00

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