

Proteinews

(COVID Special Edition 1)

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The Vicious Cycle of COVID & Nutrition¹

Nutritional status is important for immune system functionality, necessary to face the virus infection.

Malnutrition is associated with immune dysfunction.

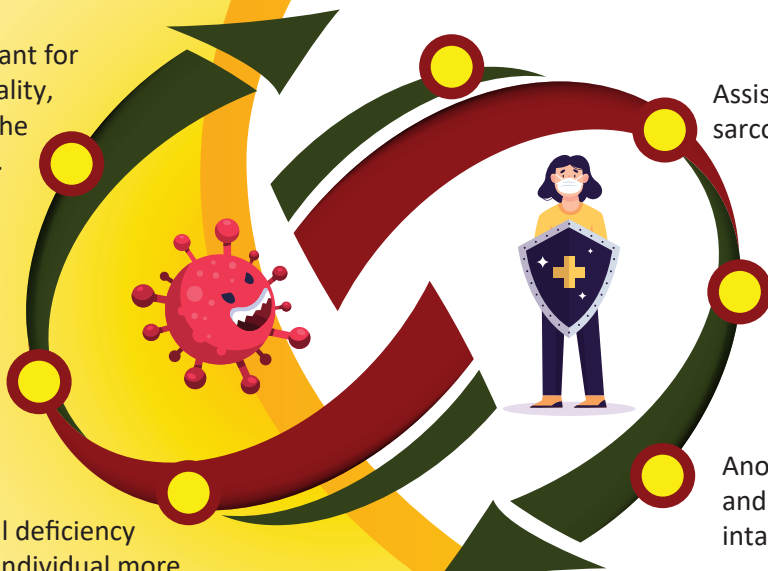
Nutritional deficiency makes an individual more vulnerable to the viral infection

Prolonged immobilization during hospital stay leads to muscle mass losses

Assisted breathing leads to sarcopenia and malnutrition

Olfactory and gustatory dysfunction leads to anorexia

Anorexia, nausea, vomiting, and diarrhea impairs food intake and absorption



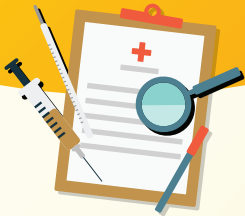
Not only quantity, but the quality of proteins is also important to its relationship with immune system.¹

Impact of Protein Deficiency

Protein deficiency is directly associated with impaired immune system function because of its negative effects on the functional immunoglobulins and gut-associated lymphoid tissue (GALT).¹

Protein malnutrition also increases the susceptibility to viral infections such as Zika and influenza by decreasing the antibody response.²

The Clinical Endorsement³



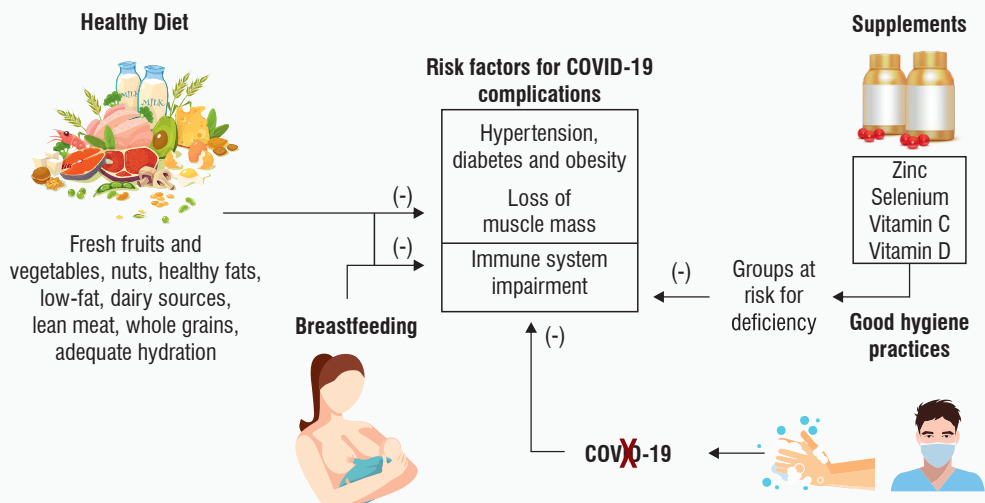
Dietary components can provide the key nutrients to support the immune system.

These include Fresh foods (fruits and vegetables), Proteins (fish, lean meat, dairy), water and other non-sugary beverages, and healthy fats.

A healthy diet can decrease the risk of, or help to control risk factors for COVID-19 complications like hypertension, diabetes, obesity, and muscle atrophy. (Fig.1)

Though there are no known supplements that can prevent COVID-19, but, in people at-risk of deficiency, such supplements can help in reducing health risks.

Figure 1 Dietary recommendation rationale during the COVID-19 pandemic. (-): inhibitory effect¹³



The ESPEN Recommends²

- ◆ Standard protein recommendation for healthy individuals is around 0.8 g/kg.
- ◆ The European Society for Clinical Nutrition and Metabolism (ESPEN) recommends the immediate initiation of oral nutrition supplements for COVID patients who are able to eat by mouth.
- ◆ These supplements should provide at least 400 calories and 30 g of protein per day, according to ESPEN guidelines.

PRO-tein-ACE: The Winning Ace during COVID-19²

Aminoacids mitigate the release of cytokines causing multi-organ dysfunction and death, thereby decreasing overall mortality



Glutamine helps to preserve lung and intestinal function and significantly reduces the amount of pro-inflammatory cytokines.



Arginine and glycine reduce the number of certain inflammatory agents in the alveoli, thus limiting damage to the lungs



Complete proteins (e.g. animal products) contain all essential amino acids and can exert an anti-inflammatory effect



The PRO-tipper

How to include dietary proteins in daily diet to withstand COVID-19⁴

Nutrition therapy which also includes protein supplementation can be used alongside routine pharmacological interventions to assist more patients get over COVID-19.²

Eat whole grains and nuts, 180 g of grains (unprocessed maize, oats, wheat, millet, brown rice or roots such as yam, potato, taro or cassava)

Use nuts like almonds, coconut, and pistachio.

Red meat can be eaten once or twice per week, and poultry 2–3 times per week. Use foods from animal sources (e.g. fish, fish, eggs, and milk) and 160 g of meat and beans.

The Right-bite



High Protein Nut Mix

10 almonds, 10 cashews, 10 peanuts, 1 Tbsp dried coconut, chopped, 1 Tbsp sunflower seeds, 1 Tbsp pumpkin seeds, 1 Tbsp raisins, Combine all ingredients in a reusable container and store sealed.



Paneer and Sprout Salad

4-5 tbsp. sprouted green moong dal, 100 grams paneer cubes, 1 tomato chopped, 1 onion chopped, 1 tbsp. lemon juice, A pinch of black pepper powder, 1 tsp. rock salt, Put all the ingredients in a bowl and mix well and drizzle lemon juice over the mix and serve.

References: 1. Fernández-Quintela A, Milton-Laskibar I, Trepiana J, et al. Key Aspects in Nutritional Management of COVID-19 Patients. J Clin Med. 2020;9(8):2589. 2. How Protein Bolsters COVID-19 Recovery. Accessed from: <https://www.ift.org/news-and-publications/food-technology-magazine/issues/2020/december/columns/nutrition-and-diet-how-protein-bolsters-covid-19-recovery> Accessed on 5 April, 2021. 3. de Faria Coelho-Ravagnani C, Corgosinho FC, Sanches FFZ, Prado CMM, Laviano A, Mota JF. Dietary recommendations during the COVID-19 pandemic. Nutr Rev. 2021;79(4):382-393. 4. Aman F, Masood S. How Nutrition can help to fight against COVID-19 Pandemic. Pak J Med Sci. 2020;36(COVID19-S4):S121-S123