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Research Article

IMMUNITY BOOSTING HOME REMEDIES FOR SCHOOL CHILDREN

Saheefa Shaheen and Saba Khan

Department of Home Science, AMU Aligarh

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ABSTRACT

Immunity plays a crucial role in promoting health among school children. The immune system needs to be properly nourished on a regular basis to prevent and treat illness, as well as to promote overall health. Home remedies play an essential role in boosting the immune response. The objective of this study is to create awareness among the target group about immunity-enhancing home remedies. Utilizing secondary sources of information, the present paper provides us with interesting information regarding home remedies that facilitate in enhancing immunity among school children. Mothers utilise household resources to boost their children's immunity, such as spices like turmeric, clove, ginger, nuts, etc., This study identifies the importance of awareness for the target group about the home remedies. Apart from diet and home remedies other factors, e.g., sound sleep, exercise, etc., which play significant roles in strengthening the immune system were also emphasised.

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INTRODUCTION

Immunity is an organism's ability to resist pathogen infections or to defend itself against foreign chemicals or organisms. After the pandemic, when schools reopen in offline mode, parents are concerned and conscious of their children's health. The primary line of defence against infectious diseases is to strengthen children's immune system. Immunity protects life by utilising cellular responses and the immune system. The body promotes systematic immune processes by regulating the formation of T lymphocytes, antibodies, and cytokines (De, L. C., 2020). Preventing and treating illness and promoting health with the use of readily available ingredients at home is known as "home remedies". Home remedies for disease prevention and promotion, such as eating foods rich in different nutrients and making small changes to one's lifestyle, play an important role in disease prevention and disease fighting capacity in children. Dietary habits and lifestyle have changed considerably from earlier times, which not only contributes to the onset of physical health problems in children but also reduces their ability to resist illness. It is important to raise awareness among mothers and caretakers about the importance of increasing children's immunity through diet. A wise mother can use simple kitchen ingredients to boost immunity and promote health in her children. It is crucial that parents and other adults who take responsibility for their children should be informed about the factors that affect immunity as well as the strategies for boosting it. According to Venter, C., *et al.* (2020), the immune system is impacted by a person's overall nutrition status, state of nourishment, and pattern of food intake

(composed of foods, nutrients, and non-nutritive bioactive compounds), and this impact can be felt at the level of physical barriers (such as skin and intestinal mucous membranes), the microbiome, the innate immune system (such as macrophage function and polarisation), and the adaptive immune system (e.g., T- and B-cell function).

Need and Importance of Immunity Enhancement

Recently, the main cause of public health disaster has been a severe pandemic. Except for a few recently licenced vaccines, there are no proven effective anti-COVID-19 preventative or therapeutic medications available. Consultants all over the world are very interested in vitamin and mineral supplements to aid in the prevention or treatment of COVID-19. Vitamin D, vitamin C, and zinc dietary supplements in particular offer beneficial preventative and therapeutic support to the current therapy protocols (Al-Kuraishy *et al.*, 2022). In the present study, we concentrated on home remedies with potential immunity boosters. According to research by Khalid *et al.* (2022), plant-based nutrients include useful components that increase immunity against both acute and chronic diseases. Some frequently used kitchen ingredients as well as fresh herbs can be used to enhance immunity. Both the primary and secondary data on the various home remedies, their utilization, knowledge, and awareness are all analysed and discussed in the present paper.

*Corresponding author: Saheefa Shaheen
Department of Home Science, AMU Aligarh

MATERIALS AND METHODS

The study was carried out using primary and secondary data. Secondary data on home remedies was collected, through Google scholar, Pub Med, web of science etc. and the information was tabulated and shared with the target group. The primary data was collected by group discussion as tool collecting and disseminating information on the sample of 50 mothers of school going children in 5 groups of 10 each in a colony of MIG families in the civil line area of Aligarh, Uttar Pradesh. Charts were used for sharing information during group discussion as teaching aids.

RESULTS AND DISCUSSION

Based on the primary data from the field, participants present multiple points of view, respond to the ideas of others and reflect on their own ideas in an effort to build their knowledge, understanding or interpretation of the matter at hand. The finding of the primary information and the secondary data shows use of some food ingredients can play significant role in enhancement of immunity among school going children.

Secondary data collected, studied, analysed and tabulated (Table No.1,2,3,4) to intimate the information in the target group by the use of teaching aid explaining immunity enhancing foods through group discussion. The discussion was started through general questions about the awareness regarding immunity and home remedies and their response were collected & analysed (Fig. 1 and Fig. 2).

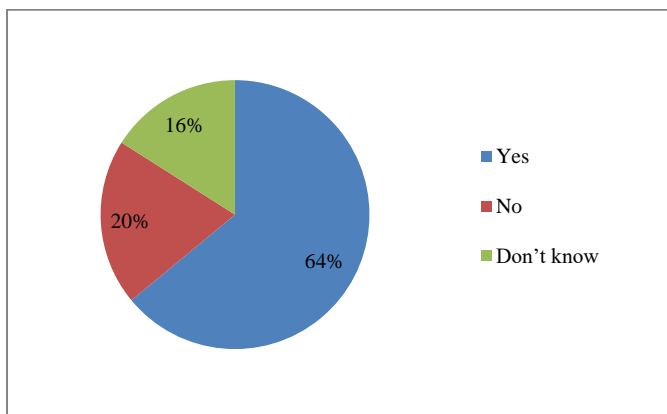


Figure 1 Awareness regarding role of diet for immunity

The pie chart in figure 1 depicts the awareness of women regarding role of diet in increasing immunity among children. In total 64 percent of respondents agreed on the role of diet in enhancing immunity among children. Their source of information was parents/ grandparents but among them 16 believe that there was no connection between two i.e. diet and immunity. So the information based on the scientific studies that a person's diet influences their immune system (Venter, C. et al., 2020) was shared to aware them about the use of immunity enhancing foods in their diet (Table-1,2,3,4).

The percentage of different foods used by mothers to enhance immunity among children is represented in figure 2. It was found that majority of respondent were using turmeric (20%) as natural immunity enhancer in their diet, followed by use of commercial food such as Bounvita/Horlicks (16%). They use such food because their own mothers used to belief and practice the same. Whereas a large majority of them were not aware about natural source of immunity enhancer food

ingredient that is why 22% respondent don't use any specific food for immunity enhancement.

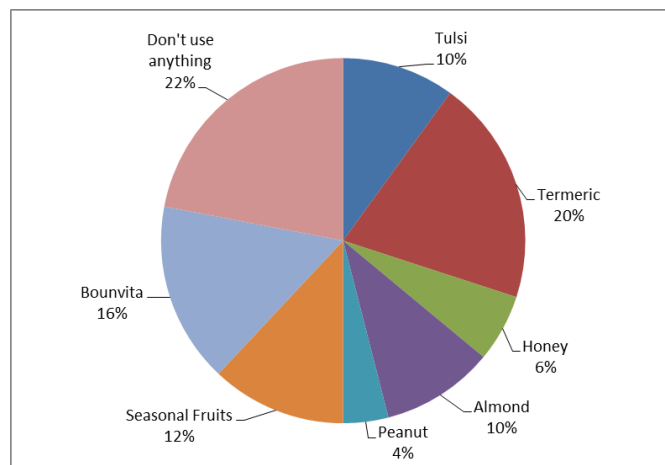


Figure 2 Foods used for enhancing Immunity

So, the information of immunity enhance food (Table 1,2,3) were shared with the mothers through teaching aid to impart awareness regarding home remedial practices to enhance immunity.

Home remedies used for Immunity boosting

There is significant association between diet, nutrients, and the immune system (Venter, C. et al. 2020). Mothers can utilise different food items with different combination in daily diet to enhance their children immunity.

Table 1 Use of Herbs

Herbs	Role
Mint Scientific name: <i>Mentha piperita L.</i> Commonly name: Podine	Antioxidant, Antiulcer activity, Antimicrobial, antispasmodic, carminative, and antiviral agents.
Holy basil Scientific name: <i>Ocimum tenuiflorum</i> Common name: Tulsi.	Anti-inflammatory, Antifungal, Antiviral Antibacterial.
Fenugreek Scientific name: <i>Trigonella foenum-graecum</i> Common name: Methi	Antiviral, Antimicrobial, Antitumor, Antioxidant, Anti-inflammatory
Coriander Scientific name: <i>Coriandrum sativum</i> Common name: Hari Dhaniya	Antibacterial, Antifungal, Anti-inflammatory, Antispasmodic, Antimicrobial, Antioxidant.

Herbal plants act as immunomodulatory agents, because of presence of some active medical ingredients (Das, K, 2022). Herbs are helpful in building immunity in the human body and preventing infection. 10% were aware about use of tulsi in health maintainance. Mothers can use herbs in form of salad, chatni, and drinks, and with vegetables.

Table 2 Use of Spices

Spices	Role
Turmeric: Scientific name : <i>Curcuma longa and Curcuma aromatica</i> Commonly name: Haldee,	Curcumin and manganese complex of turmeric offer protective action against vascular dementia by exerting antioxidant activity to boost the immune system and a potent immunomodulatory agent. (Rathaur, et al., 2012, Shankhdhar et al. 2020).
Black Pepper. Scientific name: <i>Piper nigrum</i> Common name : Kali mirch	Its bioactive compounds have antioxidant and anti-inflammatory properties. Due to its antimicrobial activity, it promotes defence mechanisms against many microorganisms. (Gültekin, et al., 2021).
Ginger: Scientific name : <i>Zingiber</i>	Anti-inflammatory, antibacterial, antioxidant, anticancer, cardiovascular, respiratory, and

<i>officinale</i> Common Name: Adarak	neuroprotective properties in addition to antidiabetic, antiobesity, antiemetic, and antinausea properties. (Mao <i>et al.</i> , 2019)
Garlic Scientific name : <i>Allium sativum</i> Common name: Lahasun	Antibacterial effects, anti-cancer, anti-cardiovascular disease, anti-diabetic, immunity-boosting, and antibacterial actions among other qualities. (Chakraborty, D., & Majumder, A., 2020).
Clove Scientific name: <i>Syzygium aromaticum</i> Common name: Laung	Essential oil of clove spice is shown to possess potent antioxidants and antibacterial properties and relieve symptoms associated with respiratory conditions such as asthma and cough (Elsayed, Y., & Khan, N. A. 2020).
Cinnamon Scientific name: <i>Cinnamomum zeylanicum</i> Common name : Dalchini	Cinnamon essential oil and powder showed appreciable immune-stimulatory activity by increasing survival percent lysozyme, phagocytic index and phagocytic activity (Das, K., 2022).

Including some spices in our diets can serve as a source of immune system support. The potential of common spices and herbs as antiviral agents and immune boosters was demonstrated by Singh, *et al.* (2021).

Table 3 Use of Edible Seeds and Nuts

Nuts	Role
Almonds Scientific name: <i>Prunus dulcis</i> Common name: Badam.	It is rich in antioxidants that regulate free radicals to prevent infections, with an anti-inflammatory effect, immune-boosting properties, and antihepatotoxic effect.
Peanuts Scientific name: <i>Arachis hypogaea</i> Common name: Moongaphalee,	High protein, monosaturated fats, niacin and manganese play role in immunity boosting.
Pistachios Scientific name: <i>Pistacia vera</i> Common name: Pisata,	Rich in vitamin B6 which is required for a healthy immune system.
Cashew nut Scientific name: <i>Anacardium occidentale</i> Common name: Kaajoo.	Cashews are rich in magnesium and zinc, also contain vitamin C and B maintaining healthy immune system.
Walnuts Scientific name: <i>Juglans spp.</i> Common name: Akharot.	Rich in Copper and vitamin B6, helps to maintain bone, nerve, and immune system.

Nuts are low in saturated fats and cholesterol and high in unsaturated fatty acids, dietary fibre, proteins, antioxidants, vitamins E, B6, folic acid, and niacin. They are also rich in minerals including magnesium, zinc, iron, copper, selenium, phosphorus, and potassium. In addition to vitamins E, D, and B6, minerals like zinc and selenium as well as amino acids like glutamine are essential for the body's immune system development (De, L.C., 2020).

Use of Fruits and vegetable: Citrus fruits are rich in vitamin C which is an important micronutrient for human beings and its multi-effect function is associated with its capacity to provide electrons. It is an effective antioxidant and cofactor for biosynthesis and gene regulation enzymes. It is an antioxidant that assists in destroying free radicals and regulating the body's natural immune reaction. Vitamin C sources include red capsicum, tangerine, red straw berries, kiwi, green broccoli, mango, lime, citrus fruits, tomato juice, and potatoes (Khalid, *et al.* 2022) Cucumber, pears, mangoes, and apicorts are all excellent sources of strengthening immunity. (Shrivastava R, 2020).

Use of Millets: Millets are nutritionally superior to major cereals for carbohydrate and energy and are good sources of protein, high dietary fibre, vitamins, minerals, antioxidants and micronutrients. Finger millet grains contain some essential minerals such as calcium (Ca), phosphorus (P) and vitamins.

Pearl millet grains are richest in Fe (6.4 mg/100 g) among various cereals. It is packed with resistant starch, soluble and insoluble dietary fibres, minerals, and antioxidants. The protein content of proso millet is significantly richer in essential amino acids (leucine, isoleucine, and methionine) than wheat protein. The rich source of vitamins and minerals of millets perform vital role in our body to boost our immune response towards pathogens.

Use of Honey (Shahad): Honey, a popular foodstuff, consists of ~ 80% carbohydrates and ~ 19% water and contains organic acids, proteins, amino acids, minerals, polyphenols, vitamins, flavor compounds, and about 500 different kinds of enzymes (Hills, 2019). Honey contains components that are antioxidant, anti-inflammatory, and antibacterial, as well as cough reducing and have wound-healing properties (Gültekin, *et al.*, 2021).

Use of a high-protein diet: A high-protein diet helps strengthen defences to defend against the coronavirus viral infections. Lysine is essential for enhancing immunity. It is well known for easing cold and cough symptoms. The production of proteins uses the important amino acid lysine (alpha-amino acid). Foods high in protein, such as meat, chicken, cheese, yoghurt, certain fish, cod, sardines, and eggs, are also good sources of lysine. Soybean (tofu) pure soy protein, soybean flour, spirulina, and fenugreek seeds are a few vegetarian foods high in lysine. (Shrivastava R. 2020).

Use of Probiotic: Curd is a good source of probiotics. Advantage of probiotic action has been demonstrated to be protection from viral infection. (Yan, & Polk, 2011). The control of the host immune response is one of the main ways that probiotics work. This review focuses on the most current scientific discoveries that help us understand how probiotics control the host immune response and how they might be used to cure and prevent disease.

Use of micronutrients: According to Maggini, *et al.* (2018) and Gombart, *et al.* (2020) micronutrients play significant role in enhancing immunity which are discussed in table 4.

Table 4 Role of micronutrients

Micronutrients	Role	Sources
Vitamin A	Vitamin A helps protect against infections by keeping skin and tissues in the mouth, stomach, intestines and respiratory system healthy.	Orange and red fruits, and vegetables like carrots, apricots and bell peppers.
Vitamin C	Vitamin C stimulates the formation of antibodies, and the production, function and movement of white blood cells.	Sources include citrus fruits like oranges, grapefruit, strawberries and tomatoes.
Vitamin D	Vitamin D helps regulate antimicrobial proteins that can directly kill pathogens.	Sunlight; fatty fish, like salmon; egg yolks; and fortified dairy.
Vitamin E	Vitamin E works as an antioxidant to protect the integrity of cell membranes from damage caused by free radicals.	Seeds, nuts, vegetables oils and peanut butter.
Vitamin B6	Helps to restore cell-mediated immunity, improve lymphocyte maturation and growth, and increase numbers of T-lymphocytes.	Wholegrain cereals Edible Seeds and Nuts, Pistachios.
Vitamin B12	Increases numbers of cells with a role in cell-mediated. Immunity.	Meat and meat products Eggs Milk and dairy products Fish and fish products.
Folate	Increase innate immunity in older people, Alters age-associated decrease in NK-cell activity, Supports Th1 response.	Spinach, broccoli, cabbage, cauliflower, chickpeas, green beans, iceberg lettuce, kidneys, beans, peas, spring greens.

Zinc	Zinc is needed for wound healing and supports immune response. Iron is a component of enzymes critical for immune cell function.	Sources include meats, whole grains, milk, seeds and nuts.
Iron	Improves intracellular microbial killing and cellular immunity.	red meat, beans, nuts and fortified breakfast cereals.
Copper	Increased ability of neutrophils to engulf pathogens.	Nuts Cereals and cereal products Meat and meat products.
Selenium	Improves cell-mediated immunity, Improves T helper cell counts.	Fish, Brazil nuts, Eggs Poultry Meat and meat products.

Every stage of the immune response is influenced and supported by micronutrients, such as vitamins and nutritionally necessary minerals. Micronutrient deficiencies can impair both innate and adaptive immunity, resulting in immune suppression and raising infection susceptibility (Pecora, F. *et al.* 2020).

Other immunity enhancers

In addition to micronutrients there are other factors also that contribute to enhance immune system. some of them are discussed further in this section.

Role of Physical activity: Valdés *et al.* (2010) demonstrate in their study that physical activity modulates the immune system, where moderate levels may enhance its function by increasing the proliferation of lymphocytes from various sites, including gut-associated lymphoid tissue, whereas exhaustive acute exercise may result in immunosuppression.

Role of Sound sleep: Sleep directly affects immune system upkeep and immunological response (Ono *et al.*, 2020). The immunological response is thought to be modulated in significant ways by sleep. As sleep is crucial for maintaining homeostasis, these circumstances must be modified to cause changes in sleeping patterns as well as other physiological characteristics during the body's ongoing immune response to infections (Ibarra-Coronado *et al.*, 2015).

Role of Happiness: Immunological effects of positive emotions was published in 1974 by Solomon and colleagues who described the mechanism through which emotions cause perturbations in the immune system (Barak, Y., 2006).

Role of Sunlight: Morning sun light is a good source of Vitamin D (Baeke *et al.*, 2010) play a vital role on developing immune systems in the body (Prietl *et al.*, 2013).

CONCLUSION

An aware mother play significant role in enhancing immunity of children. Based on the primary and secondary data, it is concluded that utilization of common household ingredients like turmeric, garlic, ginger etc. must be used to strengthen the immunity among children. Sharing, communicating and disseminating home remedial practices for enhancing immunity is the need of the hour. Discussion on the health and home remedial practices to improve health and increase immunity among child will go a long way and create a knowledge bank for the local community.

References

1. Akriti, P. C., Gujar, N., Murab, T., Choudhary, A., & Tripathi, N. (2021). A survey on the effect of indian herbs and spices in boosting immunity against COVID 19 on Bhopal population. *Journal homepage: www. ijrpr. com ISSN, 2582, 7421.*

2. Al-Kuraishy, H. M., Al-Fakhrany, O. M., Elekhawy, E., Al-Gareeb, A. I., Alorabi, M., De Waard, M., Albogami, S. M., & Batiha, G. E. (2022). Traditional herbs against COVID-19: back to old weapons to combat the new pandemic. *European journal of medical research*, 27(1), 186. <https://doi.org/10.1186/s40001-022-00818-5>
3. Babich, O., Sukhikh, S., Prosekov, A., Asyakina, L., & Ivanova, S. (2020). Medicinal Plants to Strengthen Immunity during a Pandemic. *Pharmaceuticals (Basel, Switzerland)*, 13(10), 313. <https://doi.org/10.3390/ph13100313>
4. Barak, Y. (2006). The immune system and happiness. *Autoimmunity Reviews*, 5(8), 523-527. <https://doi.org/10.1016/j.autrev.2006.02.010>
5. Basak, S., & Gokhale, J. (2022). Immunity boosting nutraceuticals: Current trends and challenges. *Journal of food biochemistry*, 46(3), e13902. <https://doi.org/10.1111/jfbc.13902>
6. Chakraborty, D., & Majumder, A. (2020). Garlic (Lahsun) – An Immunity Booster against SARS-CoV-2. *Biotica Research Today*, 2(8), 755-757. Retrieved from <https://biospub.com/index.php/biorestoday/article/view/370>
7. Das, K. (2022). Herbal plants as immunity modulators against COVID-19: A primary preventive measure during home quarantine. *Journal of Herbal Medicine*, 32, 100501. <https://doi.org/10.1016/j.hermed.2021.100501>
8. De, L. C. (2020). Edible seeds and nuts in human diet for immunity development. *Int. J. Recent Sci. Res*, 6(11), 38877-38881.
9. Elsayed, Y., & Khan, N. A. (2020). Immunity-Boosting Spices and the Novel Coronavirus. *ACS Chemical Neuroscience*. doi:10.1021/acscchemneuro.0c00239
10. Gil, A., & Rueda, R. (2002). Interaction of early diet and the development of the immune system. *Nutrition Research Reviews*, 15(2), 263-292. doi:10.1079/NRR200248
11. Gombart, A.F.; Pierre, A.; Maggini, S.(2020) A Review of Micronutrients and the Immune System–Working in Harmony to Reduce the Risk of Infection. *Nutrients*, 12, 236. <https://doi.org/10.3390/nu12010236>
12. Gültekin, F., Sümeyye, A. K. I. N., İzler, K., & Kalkanli, S. (2021). The Key to Strong Immunity: Lifestyle. *Academic Platform Journal of Halal Lifestyle*, 3(2), 90-107.
13. Hills SP, Mitchell P, Wells C, Russell M. Honey Supplementation and Exercise: A Systematic Review. *Nutrients*. 2019 Jul 12;11(7):1586. doi: 10.3390/nu11071586. PMID: 31336992; PMCID: PMC6683082.
14. Ibarra-Coronado, E. G., Pantaleón-Martínez, A. M., Velazquez-Moctezuma, J., Prospéro-García, O., Méndez-Díaz, M., Pérez-Tapia, M., ... & Morales-Montor, J. (2015). The bidirectional relationship between sleep and immunity against infections. *Journal of immunology research*.
15. Isbill, J., Kandiah, J., & Kružliaková, N. (2020). Opportunities for Health Promotion: Highlighting Herbs and Spices to Improve Immune Support and Well-being. *Integrative Medicine: A Clinician's Journal*, 19(5), 30-42. <https://doi.org/https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7815254/>

16. Johns Hopkins Medicine (nd). The Immune System) retrieve on 12 Oct 2022, available at <https://www.hopkinsmedicine.org/health/conditions-and-diseases/the-immune-system>
17. Khalid, W., Arshad, M., Ranjha, M., Róžańska, M., Irfan, S., Shafique, B., Rahim, M., Khalid, M., Abdi, G. & Kowalczewski, P. (2022). Functional constituents of plant-based foods boost immunity against acute and chronic disorders. *Open Life Sciences*, 17(1), 1075-1093. <https://doi.org/10.1515/biol-2022-0104>
18. Kumar, P and Mina, U (2021) Immunology. Life Sciences Fundamental and Practices, Pathfinder Publication, New Delhi, India pp519.
19. Lee, G. Y., & Han, S. N. (2018). The Role of Vitamin E in Immunity. *Nutrients*, 10(11), 1614. <https://doi.org/10.3390/nu10111614>
20. Maggini, S., Pierre, A., & Calder, P. C. (2018). Immune Function and Micronutrient Requirements Change over the Life Course. *Nutrients*, 10(10). <https://doi.org/10.3390/nu10101531>
21. Mehrotra, N. (2020). Medicinal plants, aromatic herbs and spices as potent immunity defenders: Antiviral (COVID-19) perspectives. *Ann. Phytomed*, 9(2), 30-49.
22. Mrityunjaya, M., Pavithra, V., Neelam, R., Janhavi, P., Halami, P. M., & Ravindra, P. V. (2020). Immune-Boosting, Antioxidant and Anti-inflammatory Food Supplements Targeting Pathogenesis of COVID-19. *Frontiers in immunology*, 11, 570122. <https://doi.org/10.3389/fimmu.2020.570122>
23. Namdeo, P. (2021). A review on herbal immunity booster and nutrition—to fight against Covid-19. *J Pharm Adv Res*, 4(5), 1226-1237.
24. Ono, B. H. V. S., & Souza, J. C. (2020). Sleep and immunity in times of COVID-19. *Revista da Associação Médica Brasileira*, 66, 143-147.
25. Opp, M. R., & Krueger, J. M. (2015). Sleep and immunity: A growing field with clinical impact. *Brain, behavior, and immunity*, 47, 1–3. <https://doi.org/10.1016/j.bbi.2015.03.011>
26. Pecora, F., Persico, F., Argentiero, A., Neglia, C., & Esposito, S. (2020). The Role of Micronutrients in Support of the Immune Response against Viral Infections. *Nutrients*, 12(10). <https://doi.org/10.3390/nu12103198>
27. Prietl, B., Treiber, G., Pieber, T. R., & Amrein, K. (2013). Vitamin D and immune function. *Nutrients*, 5(7), 2502–2521. <https://doi.org/10.3390/nu5072502>
28. Rathaur, P., Raja, W., Ramteke, P. W., & John, S. A. (2012). Turmeric: The golden spice of life. *International Journal of pharmaceutical sciences and research*, 3(7), 1987.
29. Shankhdhar, P. K., Mishra, P., Kannoja, P., & Joshi, H. (2020). Turmeric: Plant immunobooster against covid-19. *Research Journal of Pharmacognosy and Phytochemistry*, 12(3), 174-177.
30. Shrivastava R.(2020). Immunity boosters: Solutions from nature – Herbs and spices. *J Renal Nutr Metab* ;6:35-7
31. Singh, NA, Kumar, P, Jyoti, , Kumar,(2021) N. Spices and herbs: Potential antiviral preventives and immunity boosters during COVID-19. *Phytotherapy Research*; 35: 2745-2757. <https://doi.org/10.1002/ptr.7019>
32. Srivastava Ak and Chaurasia Jp and Rakin Khan and Dh and Sarika Verma, (2020), Role of Medicinal Plants of Traditional Use in Recuperating Devastating COVID-19 Situation, *Medicinal and Aromatic plants*,9 pp. 1-16
33. Valdés-Ramos, R., Martínez-Carrillo, B., Aranda-González, I., Guadarrama, A., Pardo-Morales, R., Tlatempa, P., & Jarillo-Luna, R. (2010). Diet, exercise and gut mucosal immunity. *Proceedings of the Nutrition Society*, 69(4), 644-650. doi:10.1017/S0029665110002533
34. Venter, C., Eyerich, S., Sarin, T., & Klatt, K. C. (2020). Nutrition and the Immune System: A Complicated Tango. *Nutrients*, 12(3). <https://doi.org/10.3390/nu12030818>
35. Yan, F., & Polk, D. B. (2011). Probiotics and immune health. *Current opinion in gastroenterology*, 27(6), 496–501. <https://doi.org/10.1097/MOG.0b013e32834baa4d>
36. Zhang, M., Jin, C., Ding, Y., Tao, Y., Zhang, Y., Fu, Z., Zhou, T., Zhang, L., Song, Z., Hao, Z., Meng, J., & Liang, C. (2022). Higher Intake of Fat, Vitamin E-(β+γ), Magnesium, Sodium, and Copper Increases the Susceptibility to Prostatitis-like Symptoms: Evidence from a Chinese Adult Cohort. *Nutrients*, 14(18), 3675. <https://doi.org/10.3390/nu14183675>

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