Research Article

iMedPub Journals
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American Journal of Pharmacology and Pharmacotherapeutics
ISSN 2393-8862

2021
Vol.8 No.8:6378

ROLE OF HERBS AND SPICES AS IMMUNITY BOOSTER

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Received date: October 12, 2020; Accepted date: August 17, 2021; Published date: August 27, 2021

Citation: Dr. Sunita S (2021) Role of herbs and spices as immunity booster. Acta Psychopathol 8:2

Abstract

In the wake of COVID-19 pandemic, there's been a lot of interest in ways to strengthen one's immune system, and thus build a first line of defense against the deadly virus. Immunity cannot be built up in a day, but the good news is that eating a well-balanced diet and being physically and mentally active is usually enough to keep our immune system in good health. There are however, many natural ingredients are well known in boostingour immunity. Since ancient times, herbs and spices were well known for their medicinal properties, with over 80 spices grown in different parts of the world, particularly in Asia. India is home to several spices that are used extensively in traditional medicine. Since time immemorial, several Ayurvedic potions have been created using a combination of ingredients including spices. Some natural immunity supplements include ginger, gooseberries (amla) and turmeric. Some of these superfoods are common ingredients in Indian dishes and snacks. There are several herbs that help in boosting immunity like garlic, Basil leaves and Black cumin. The health enhancing qualities of spices are endless and so are their applications. Consumption patterns and lifestyles have also changed, thereby encouraging players to rev up their R&D engines and develop a range of nutraceutical products that leverage the manifold benefits of Indian spices.

Keywords: COVID 19, Immunity, Spices, Super foods, Basil leaves

Introduction

World community is facing an unprecedented pandemic of novel corona virus disease (COVID-19) caused by Severe Acute Respiratory Syndrome Corona virus 2 (SARS-CoV- 2). The disease has spread globally with more than 7.73 million confirmed cases and .43 million deaths as of June 14, 2020 [1]. Despite worldwide efforts to contain it, the pandemic is continuing to spread for want of a clinically-proven prophylaxis and therapeutic strategy. The dimensions of pandemic require an urgent harnessing of all knowledge systems available globally. Utilization of Traditional Chinese Medicine in Wuhan to treat COVID-19 cases sets the example demonstrating that traditional health care can contribute to treatment of these patients successfully [2]. At a time when the world is dealing with the deadly coronavirus, it is necessary to take extra precautions to keep yourself protected from getting infected. This is why you need a healthy and strong immune system. Strong immunity plays a vital role in keeping the disease-causing virus and bacteria away from you and reduces the risk of falling sick. People with compromised immunity often get sick and even their symptoms are more severe as compared to others. There are however, many natural ingredients know to help boost your immunity. Since ancient times, herbs and spices were well known for their medicinal properties, with over 80 spices grown in different parts of the world, particularly in Asia. India is home to several spices that are used extensively in traditional medicine [3]. There are different ways to improve your immune system, making your body ready to fight any foreign pathogens.

Approximately 80% of India's population uses Ayurveda in some form or another through more than half a million Ayurveda practitioners. Since time immemorial, several Ayurveda potions have been created using a combination of ingredients including spices. Ayurveda also focuses on lifestyle practices and immunity for cure and prevention of diseases.

According to the World Health Organization, around 80% of the world population uses herbal medicines for primary health care, particularly across South Asia and Europe. Research studies indicate that along with building up the body's immunity, they also have anti-inflammatory properties and relatively have fewer side effects.

Oregano (Origanumvulgare)

It is a popular herb in the mint family which is known for its impressive medicinal qualities. Carvacrol, the major component offers antiviral properties. In a study, both oregano oil and isolated carvacrol reduced the activity of murine norovirus (MNV) within 15 minutes of exposure [4]. MNV is highly contagious and the primary cause of stomach flu in humans. Oregano oil and carvacrol have also been shown to exhibit anti-viral activity against herpes simplex virus type-1 (HSV-1), rotavirus, a common cause of diarrhea in infants and children, and respiratory syncytial virus (RSV), which causes respiratory infections [5].

Sage

Virus type1 (HIV-1), which can lead to AIDS. In one study, sage extract significantly inhibited HIV activity by preventing the virus from e (Salvia officinal is), member of mint family is an aromatic

herb that has long been used in traditional medicine to treat viral infections [6]. The antiviral properties of sage are mostly attributed to compounds called safficinolide and sageone, which are found in the leaves and stem of the plant [7] Studies indicate that this herb may fight human immunodeficiency entering target cells [8].

Fennel (Foeniculumvulgare)

It is a licorice-flavored plant that may fight certain viruses. A study showed that fennel extract exhibited strong antiviral effects against herpes viruses and Para influenza type-3 (PI-3), which causes respiratory infections in cattle [9]. Trans-Anatole, the main component of fennel essential oil, has demonstrated powerful antiviral effects against herpes viruses [10].According to animal research, fennel may also boost your immune system and decrease inflammation, which may likewise help combat viral infections [11].

Garlic (Allium sativum)

It has potent anti-oxidant properties, and helps in reducing stress and high blood pressure. It also helps to enhance thiamine (vitamin B1) absorption in the body and prevents beriberi. It is always best to chop or crush garlic before consuming it, because it works better when in contact with oxygen. Garlic is a popular natural remedy for a wide array of conditions, including viral infections. In a study in 23 adults with warts caused by human papillomavirus (HPV), applying garlic extract to affected areas twice daily eliminated the warts inall of them after 1–2 weeks [12]. Additionally, previous studies reported that garlic may have antiviral activity against influenza A and B, HIV, HSV-1, viral pneumonia, and rhinovirus, which causes the common cold. Clinical trials on animals indicate that garlic enhances immune system response by stimulating protective immune cells, which may safeguard against viral infections [13].

Peppermint (Menthapiperita)

It is known to have powerful antiviral qualities and commonly added to teas, extracts, and tinctures meant to naturally treat viral infections. Its leaves and essential oils contain active components, including menthol and rosmarinic acid, which has antiviral and anti-inflammatory activity [14].In a test-tube study, peppermint-leaf extract exhibited potent antiviral activity against respiratory syncytial virus (RSV) and significantly decreased levels of inflammatory compounds [15].

Ginger (Zingiberofficinale)

It is well known for its anti-inflammatory, antifungal, and anti-cancer properties. In traditional medicine, ginger has been extensively used for curing colds and coughs, nausea, asthma, travel sickness, morning sickness, arthritis, gastrointestinal complaints and even depression. Ginger products, such as elixirs, teas, and lozenges, are popular natural remedies and for good reason. Ginger has been shown to have impressive antiviral activity thanks to its high concentration of potent plant compounds. Research findings demonstrate that ginger extract has antiviral effects against avian influenza, RSV, and feline calicivirus (FCV), which is comparable to human norovirus [16].Additionally, specific compounds in ginger, such as gingerols and zingerone, have been found to inhibit viral replication and prevent viruses from entering host cells [17]. Powdered ginger mixed with pulverized cloves, cardamom and caraway has been used for digestive ailments since ancient times.

Holy Basil (Ocimumtenuiflorum)

It is commonly known as Tulsi is quite possibly most revered medicinal herb. The leaves of this easily available plant are rich in phytonutrients (such as antioxidants, flavanol) chlorophyll, vitamins, and minerals. Eugenol, a bioactive compound present in different varieties of basil is responsible for its antimicrobial, antifungal, anti-bacterial, anti-inflammatory properties and reduces stress and plasma glucose levels [18]

Turmeric (Curcuma longa)

Since ancient times the golden spices has been widely explored for its medicinal uses.In Ayurveda, the turmeric is well documented for the treatment of respiratory ailments such as asthma, bronchial hyperactivity.Sometimes, turmeric mixed with milk or water is taken to treat intestinal disorders as well as colds and sore throats.Turmeric helps in boosting up the immunity and helps to fight against various infections. Anti-inflammatory properties, antimicrobial activities of turmeric have been exploited by pharmaceutical industries [19]. Curcuminoids consists the major composition of turmericwhich is major component responsible for its healing properties [20].

Conclusion

There is no single food that is a magic pill for a healthy body. Apart from including these herbs and spices in your diet, exercising both body and mind regularly, made necessary lifestyle changes, and practice gratitude. It can be suggested that the traditional medicine system has the potential to cure and prevent infectious diseases. However, there is a need to strengthen and standardize the treatments. Further, the use of these traditional medicines not only helps cure symptoms but also helps improve immunity and reduce the risk of infections to a great extent. The potential of these plant-based remedies in curing and preventing the COVID-19 infection must be extensively explored to develop globally acceptable therapeutic remedies along with the modern medicines and vaccines.

Acknowledgements

The author is grateful to Department of Chemistry, Navyug kanya Mahavidyalaya Lucknow for their unconditional support.

References

1. Zhou, P., Yang, X.L., Wang, X.G., Hu, B., Zhang, L., Zhang, W. et al. (2020) A pneumonia outbreak associated with a new coronavirus of probable bat origin. Nature. 579:270–273

2. Rastogi, S.,Pandey, D., Singh, R. (2020) COVID 19- pandemic-A pragmatic plan for Ayurveda intervention. J Ayurveda Integr Med.

3. Kunnumakkara AB, Koca C, Dey S, Gehlot P, Yodkeeree S, Danda D, Sung B, Aggarwal BB. et al. (2009) Traditional Uses of Spices: An Overview.in the Molecular targets and therapeutic uses of spices: Modern uses of Ancient Medicine, World scientific, Singapore.

4. Gilling D.H, Kitajima M, Torrey J.R, Bright K.R. et al. (2014) Antiviral Efficacy and Mechanisms of Action of Oregano Essential Oil and Its Primary Component CarvacrolAgainst Murine Norovirus. ApplMicrobiol. 116:5 1149-1163

5. Pilau M.R., Alves S.H., Weiblen R., Arenhart S., Cueto A.P., Lovato L.T. (2011) Antiviral Activity of the LippiaGraveolens (Mexican Oregano) Essential Oil and Its Main Compound Carvacrol Against Human and Animal Viruses.Braz J Microbiol. 42:4 1616-24

6. Hamidpour, M.,Hamidpour, R.,Hamidpour, S.,Shahlari, M. (2014) Chemistry, Pharmacology, and Medicinal Property of Sage (Salvia) to Prevent and Cure Illnesses such as Obesity, Diabetes, Depression, Dementia, Lupus, Autism, Heart Disease, and Cancer. J Tradit Complement Med. 4:2 82-88

7. Ghorbani, A.,Esmaeilizadeh, M. (2017) Pharmacological properties of Salvia officinalis and its components. J Tradit Complement Med. 7:4 433-440

8. Geuenich, S.,Goffinet, C.,Venzke, S et al. (2008) Aqueous extracts from peppermint, sage and lemon balm leaves display potent anti-HIV-1 activity by increasing the virion density. Retroviro. 5:27

9. Badgujar, S.B., Patel, V.V.,Bandivdekar, A.H. (2014) Foeniculumvulgare Mill: a review of its botany, phytochemistry, pharmacology, contemporary application, and toxicology. Biomed Res Int.

10. Astani, A., Reichling, J., Schnitzler, P. (2011)Screening for Antiviral Activities of Isolated Compounds From Essential Oils. Evid Based Complement AlternatMed

11. Lee, H.S., Kang, P., Kim, K.Y., Seol, G.H. (2015) Foeniculumvulgare Mill. Protects against Lipopolysaccharide-induced Acute Lung Injury in Mice through ERK-dependent NF-κB Activation. Korean J PhysiolPharmacol.19(2), 183-189. https:// doi:10.4196/kjpp. 2015.19.2.183

12. Bayan, L.,Koulivand, P.H.,Gorji, A. (2014) Garlic: a review of potential therapeutic effects. Avicenna J Phytomed.4(1),1-14

13. Arreola, R., Quintero-Fabián, S.,López-Roa, R.I. et al. (2015) Immunomodulation and anti-inflammatory effects of garlic compounds. J Immunol Res. 2015:401630

14. Aboubakr, HA.,Nauertz, A.,Luong, NT., et al. (2016) In Vitro Antiviral Activity of Clove and Ginger Aqueous Extracts against Feline Calicivirus, a Surrogate for Human Norovirus. J Food Prot. 79(6),1001-1012.

15. Arora, R.,Chawla, R.,Marwah R, et al. (2011) Potential of Complementary and Alternative Medicine in Preventive Management of Novel H1N1 Flu (Swine Flu) Pandemic: Thwarting Potential Disasters in the Bud. Evid Based Complement Alternat Med. 2011.,2011:586506

16. Li, Y., Liu, Y., Ma,Bao, Y., Wang, M., Sun, Z. (2017)In vitro antiviral, anti-inflammatory, and antioxidant activities of the ethanol extract of Menthapiperita L. Food SciBiotechnol. 26(6),1675-1683

17. McKay, D.L., Blumberg, J.B. 2006. A review of the bioactivity and potential health benefits of peppermint tea (Menthapiperita L.). Phytother Res. 20(8), 619-633

18. Jamshidi, N., Cohen, M.M. 2017. The Clinical Efficacy and Safety of Tulsi in Humans: A Systematic Review of the Literature. Evid. based Complement. Alter. Med.

19. Sandur SK, Pandey MK, Sung B, et al. (2007) Curcumin, demethoxycurcumin, bisdemethoxycurcumin, tetrahydrocurcumin and turmerones differentially regulate anti-inflammatory and anti-proliferative responses through a ROS-independent mechanism. Carcinogenesis.; 28(8):1765-1773

20. Prasad, S.,Aggarwal, B.B. 2011Turmeric, the Golden Spice: From Traditional Medicine to Modern Medicine. in: Benzie, I.F.F., Wachtel-Galor, S., (Eds). Herbal Medicine: Biomolecular and Clinical Aspects. 2nd edition. Boca Raton (FL): CRC Press/Taylor Francis.