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Ayurvedic immunity boosting measures during COVID 19 pandemic

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Abstract

A worldwide pandemic causing virus i.e. Corona (COVID 19) is creating fatal problem for human race due to its lethal attack. Various attempts are under process to develop an effective vaccine. Any kind of infection or disease affects persons with low immunity; Indian Ayurveda is an ancient practice which can help us to boost immunity during this pandemic period. Ayurveda, being the science of human life, propagates the gifts of Mother Nature in maintaining healthy living. There are various natural resources are present in our day to day routine which may be used by us for boosting our immune system, and doing so could help us to prevent corona virus infection.

Keywords: COVID-19, ayurveda, immunity, medicinal plants

1. Introduction

Novel Corona virus Disease (COVID-19) is a highly infectious disease. The outbreak was first detected in Wuhan City, Hubei Province of China and become a pandemic due to its very high transmission rate ^[1].

Ayurveda is the oldest science of life and health care in the world, its antiquity going back to the ancient Vedas. Its classical ancient knowledge-base has survived up to the modern times through a set of six authentic ancient books consisting of three pre-Christian texts namely Caraka, Suśruta and *Samhitā* of Vāgbhatta popularly known as *Bhatrayī* besides three medieval texts namely *Mādhavanidāna*, *Śārangdhara samhitā* and *Bhāvaprakāśa* collectively called *Laghutrayī*. Immunity is the central focus of modern immunology. Immunity is a biological expression that expresses a state of having abundant biological defences to avoid various disease, infections and other unwanted biological invasion ^[2]. Ayurveda's widespread knowledge base on preventive care, derives from the concepts of "*Dinacharya*" - daily regimes and "*Ritucharya*" - seasonal regimes to maintain healthy life. It is a flora-based concept of treatment. The simplicity of wakefulness about oneself and the harmony each human being can accomplish by elevating and maintaining his or her natural immunity is emphasized across Ayurveda's classical literature. Recently various worker documented COVID-19 situation on different countries like in Brazil ^[3], Africa ^[4], Italy ^[5], Nigeria ^[6] and world scenario ^[1, 7, 8].

In the wake of the corona virus outbreak, entire human race worldwide is suffering. Enhancing the human body's natural defence mechanism (immunity) plays a central role in maintaining most advantageous health.

"All individuals are not equally and always empowered with immunity. – CS. Sū. 28.16"

2. Methodology

Extensive literature related Ayurveda and instructions of

AYUSH ministry (AYUSH: Ayurveda, Unani, Siddha and Homoeopathy) were analysed for present output, medicinal plants were collected, identified and photographed. Extensive information regarding medicinal plants was also collected through interview with local inhabitants.

3. Results

We all know that prevention is better than cure. While there is no medicine for COVID-19 as of now, it will be good to take preventive measures which boost our immunity in these days.

Few measures were given by Indian AYUSH ministry out of which three major are as follows: 1. Drink warm water throughout the day. 2. Daily practice of Yogasana, Pranayama and meditation for at least 30 minutes as advised by Ministry of AYUSH and 3. Spices like Haldi (Turmeric), Jeera (Cumin), Dhaniya (Coriander) and Lahsun (Garlic) are recommended in cooking.

Ayurvedic Immunity Promoting Measures

Immunity boosting methods and herbal methods were also suggested by ministry i.e., Drink herbal decoction (Kadha) made from some medicinal plants such as, Tulsi (Basil), Dalchini (Cinnamon), Kalimirch (Black pepper), Ginger and Munakka (Raisin) - once or twice a day. Jaggery (natural sugar) can be used and fresh lemon juice to your taste. Milk with Half tea spoon Haldi (turmeric) powder once or twice a day ^[9, 10]. Above mentioned medicinal plants contain, Curcumin (C₂₁H₂₀O₆), Cuminaldehyde (C₁₀H₁₂O), Cumenic alcohol (C₁₀H₁₄O), Limonene (C₁₀H₁₆), Borneol (C₁₀H₁₈O), Camphor (C₁₀H₁₆O), Allicin (C₆H₁₀OS₂), Methyl chavicol (C₁₀H₁₂O), Eugenol (C₁₀H₁₂O₂) and Linalool (C₁₀H₁₈O). Piperine (C₁₇H₁₉NO₃), Gingerols (C₁₇H₂₆O₄), Resveratrol (C₁₄H₁₂O₃), Cinnamaldehyde (C₉H₈O), Catechin (C₁₅H₁₄O₆) and Citric acid (C₆H₈O₇) as the major compound. (Table 1)



Fig 1: Photographs of some selected plants and materials (1-Turmeric, 2- Lemon, 3- Jiggery, 4-Cumin, 5- Black pepper, 6- Resins, 7- Garlic, 8- Basil, 9- Coriander, 10- Ginger)

Table 1: List of medicinal plant suggested for daily use during COVID 19 period to boost immunity.

Botanical name	Common name	Habit	Part used	Medicinal properties	Principal constituents
<i>Curcuma longa</i>	Haldi, Turmeric	Herb	Rhizome	Cardiovascular and anti-diabetic effects, gastrointestinal effects, anti-cancer effect, antimicrobial activity, hepatoprotective and renoprotective effects, photo-protector activity and in the treatment of inflammatory and edematidisordersand Alzheimer disease etc ^[11] .	Curcumin
<i>Cuminum longa</i>	Jeera, Cumin	Herb	Fruit	Digestive stimulant action, antidiabetic effects, anti-inflammatory effects, antioxidant and antimicrobial activity, anti-cancer properties, chemopreventive effects, cardio-protective influence through hypolipidemicand hypotensive effects, ameliorative effects on dyslipidemia, analgesic activity, immunomodulatory action, gastroprotective effect, pulmonary-protective activity and anti-asthmatic effect etc ^[12] .	Cuminaldehyde, cuminic alcohol
<i>Coriandrum sativum</i>	Dhaniya, Coriander	Herb	Leaf/fruit	Antioxidant activity, hypoglycemic activity, hypolipidemic activity, insecticidal effect, aflatoxin control, antibacterial activity, antimutagenic potential, control of swellings, treatment of diarrhea, mouth ulcers, anemia, menstrual disorders, small pox, eye care, conjunctivitis and skin disorders etc ^[13] .	Carvone, geraniol, limonene, borneol, camphor, elemol, and linalool
<i>Allium sativum</i>	Lahsun, Garlic	Herb	Bulb	Carminative, gastric stimulant, antimicrobial, antiviral properties, broad spectrum antibiotic and reduce cholesterol level etc ^[14, 15]	Allicin
<i>Ocimum basilicum</i>	Tulsi, Basil	Herb	Leaf	Antioxidant, anti-aging, anticancer, antiviral, antimicrobial properties, immunomodulatory activity, immunomodulatory activity, antipyretic activity, anti-arthritis activity, treatment of gum ulcers, kidney problems, earache, menstrual irregularities, arthritis, anorexia and malaria and used as a haemostypticin childbirth etc ^[16] .	Methyl chavicol, eugenol and linalool.
<i>Cinnamomum zeylanicum</i>	Dalchini, Cinnamomum	Tree	Bark/ leaf	Anti-microbial properties, anti-parasitic effects, effects on blood pressure, anti-oxidant properties and glycaemic control etc ^[17] .	cinnamaldehyde (bark),eugenol (leaf) and camphor (root)
<i>Piper nigrum</i>	Kalimirsch, Black Pepper	Climber	Fruit	Treatment of fever, malaria, respiratory diseases, gastrointestinal disorders, neurological, broncho-pulmonary and gastrointestinal disorders, anticancerigenouse etc ^[18, 19]	Piperine
<i>Zingiber officinale</i>	Adrak, Ginger	Herb	Rhizome	Anti-inflammatory and analgesic activities, anti-emetic activity, anti-diabetes activity, cancer preventive activity, equivocal activities and used in Dysmenorrhea etc. ^[20]	Gingerols
<i>Vitis vinifera</i>	Munnakka,	Climber	Dried fruit	Antioxidant property, anti-infectious property, anti-carcinogenic activity, anti-obese property, anti-aging property, anti-atherogenic property, anti-diabetic property and immunomodulatory effect etc ^[21] .	Resveratrol, catechin.
<i>Citrus limon</i>	Nimboo,	Shrub	fruit	Stress reliever, reinforce body defenses and prevent numerous illnesses, antimigraine, depurative property, diuretic effect, anticancerigenous, improve energy and alertness, astringent effects and used in aromatherapy etc ^[22]	Citric acid

4. Conclusion

Present study clearly guides humans for better immunity through traditional methods that we can fight strongly with all kind of pandemics. The whole scientific world is trying

to develop a tool against Corona virus but till this great discovery we need to develop great immunity against these viruses, time witness many pandemics and we the human

race overcome with all of them soon we will defeat corona as well.

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