



Medicinal Plants for Immunity Boosting in Covid-19

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ABSTRACT

Abstract: The novel coronavirus disease (COVID-19) has spread over the globe infecting more than 164,000,000 populations leading to more than 3,000,000 deaths. Due to lower immunity, peoples are suffering from non-infectious and infectious diseases including hypertension, diabetes, kidney disorder are considered at more risk from this epidemiologic infection. Immunity (natural body system) enhancing may have the major influence as a prophylactic measure against multiple pathogenic situations as well as maintaining finest health. Ministry of AYUSH of the Government of India, in the interest of mass health promotion, recommends 'Ayush Kwath,' or 'Kada,' or 'Ayush Joshanda,' which contains some medicinal herbs. In presented paper, discussed about these medicinal herbs.

1. Introduction

The novel coronavirus disease (COVID-19) has infected over 164,000,000 people worldwide, resulting in over 3,000,000 deaths [3]. COVID-19, also known as unadorned acute respiratory syndrome corona virus 2 is an transferrable virus believed to be originated from bats and spread to human beings [6]. Subjects with infectious or non-infectious diseases, such as diabetes, hypertension, or kidney disease, are considered to be at a higher risk of contracting this virus due to their weakened immunity. Hence, strengthening the immunity (natural body system) may contain the critical significance as a preventive step against different pathogenic illnesses and keep optimal health. Based on research found that this viruses can form drug-resistant mutants, which reduce the current drug's efficacy. So, these type of viruses can be a threat to the human for extended time [2].

The global human population is struggling as a result of the Covid 19 epidemic. Immunity enhancement is critical for ensuring optimal fitness. We all aware that treatment is preferable to remedy. Although there is currently no cure for COVID-19, it is prudent to take preventative steps that improve our immunity during these trying times.

As the philosophy of creation, Ayurveda propagates nature's gifts for sustaining a safe and balanced lifestyle. Ayurveda employs the concepts of "Dinacharya" and "Ritucharya" to promote wellness through the use of natural remedies (herbal medicines) on a daily/seasonal basis. Ayurveda, an ancient science of existence, advocates for simplifying one's lifestyle and often emphasizes the importance of boosting and preserving one's immunity by using several plants/herbs found in the kitchen gardens of the majority of society.

The Ministry of AYUSH proposes self-care recommendations for maintaining good health and improving immunity, emphasizing respiratory health. These assertions are backed up by Ayurvedic and empirical literature [8]. As a preventative measure against the severity of infection induced by a novel coronavirus (COVID-19), this analysis aimed to determine the possible modulated pathways by the combined action of AYUSH-recommended

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herbal tea and golden milk (half teaspoon *Curcuma longa* (turmeric) powder in 150 mL hot milk) as an immune booster against COVID-19.

2. Ayush Kwath

In light of the critical nature of immunity-boosting measures in the aftermath of the COVID-19 outbreak, the Ministry of AYUSH of the Government of India, in the interest of mass health promotion, recommends 'Ayush Kwath,' 'Ayush Kudineer,' or 'Ayush Joshanda,' which contains four medicinal herbs [5, 12]. Herbs such as holy basil, cinnamon, ginger, and black pepper are readily affordable, affordable, and commonly used in the kitchen, making it easy to teach and train community health professionals, members of the group, and even the general public about the benefits of herbal home remedies. This would aid in the promotion of immunity and reduce hospital and pharmacy crowding through this pandemic [14]. This form of public health measure will ultimately advocate 'health for everyone under the slogan 'our health is in our own hands,' holding every individual accountable for their health by direct participation in it rather than focusing on mass delivery of any medication. When people migrate to make a living, this herbal infusion can ensure widespread access to health care. The WHO SEARO approved a resolution to revitalize primary health care by improving health services to promote wellness for everyone, focusing on disease prevention and health promotion [13]. This Kwath is not merely a mechanical concoction produced in response to the COVID-19 pandemic; it is a resurrection of ancient health practices. The Ministry of Ayurveda and Ayurvedic Medicine proposed a combination of the following medicinal plants.

Ocimum tenuiflorum (Holy basil, Tulasi):

2.1. *Ocimum Tenuiflorum* (Holy basil, Tulasi)

Tulsi, also known as Holy basil, is a well-known member of the Lamiaceae family of herbs. It is indigenous to India and extensively grown in Southeast Asia [1]. Tulsi is highly efficient in defending our bodies against various infections and diseases affecting the heart, liver, skin, and kidneys. As a result, Tulsi is appropriately referred to as the 'Queen of Herbs.' Tulsi has a special place in Ayurveda as well as the home of Hindus in India. It is considered sacred by Hindus and worshipped by them. There are main types of Tulsi are growing in India first is Bright green leaves known as Ram Tulsi, second is Purplish green leaves known as Krishna Tulsi, and third is Common wild known as Vana Tulsi. Tulsi leaves are rich source of vitamins A, C, and K and other minerals like magnesium calcium, iron, phosphorus, and potassium, and it also a good source of fibre and protein [11].



Figure 1: Type of Talsi, Rama, Krishna, and Vana

2.2. Cinnamomum Verum (Cinnamon):

Cinnamon is a spice that is commonly used in lattes and toast. However, for thousands of years, extracts of the cinnamon tree's wood, leaves, flowers, vegetables, and roots have been used in herbal medicine in the world. It is a popular ingredient in cooking and baking, as well as in a variety of foods [15].

There are four major types of cinnamon.

Cinnamomum Verum (Ceylon Cinnamon)

Cinnamomum Burmannii (Korintje Cinnamon)

Cinnamomum Cassia (Saigon Cinnamon)

Cinnamomum Loureiroi (Royal Cinnamon)



Figure 2 : Cinnamon Leaf and Bark

2.3. Piper Nigrum (Black pepper):

Black pepper (*Piper nigrum*), also known as pepper, is a perennial climbing vine in the Piperaceae family that produces a pungent spice from its fruits. Its fruits are circular and measure 6 mm in diameter. They are grouped. It is the dried fruit of the pepper plant as shown in figure 3. Black pepper has historically been used as a seasoning and natural remedy for a wide variety of ailments [2].



Figure 3: Fruit or Dried Fruit of Black pepper

2.4. Zingiber officinale (Ginger)

Ginger (*Zingiber officinale*) is one of the most commonly used natural ingredients as a seasoning and remedy for dehydration, dysentery, heartburn, flatulence, diarrhea, appetite loss, infections, coughs, and bronchitis. Ginger is a herbaceous flowering plant native to Southeast Asia. It is one of the world's most nutritious (and delectable) spices. It is closely linked to turmeric, cardamom, and galangal and is a member of the Zingiberaceae genus. The rhizome (an underground portion of the stem) is the portion of the plant that is most often used as a seasoning. Ginger root is frequently referred to as Ginger or simply Ginger. Fresh, roasted, powdered, or as an oil or juice, Ginger may be used [10].



Figure4: Ginger with Plant and Ginger

2.5. Vitis Vinifera (Munakka)

Munakka, generally referred to as Raisins, is one of the most nutrient-dense dried fruits with a substantial therapeutic benefit. It is naturally sweet and has no known side effects. It contains calcium, fiber, and antioxidants, making it an excellent nutrient for healthy bones. Catechin is a unique antioxidant found in Munakka that helps avoid colon cancer. Another nutrient contained in Munakka is polyphenolic, which is highly beneficial for the eyes and skin. Continue reading to learn more about this marvelous fruit [16].



Figure 5: Grapes(Green), Munakka or dried Grapes

2.6. Methods of use of Ayush Kwath

Prepare coarse powder from all the ingredients in their dried state according to Ayurvedic Pharmacopoeia requirements. Prepare sachets or tea bags containing 3 g of powder or 500 mg of aqueous extract to be drunk as tea or hot beverage by dissolving in 150ml of boiling water once or twice every day. While drinking the formulation, you can add Gud (Jaggery)/Draksha (Resins) and/or Lemon Juice.

3. Conclusion

The worldwide human population is struggling as a result of the Covid 19 widespread. Immunity improvement is critical for safeguarding optimal fitness. We all aware that treatment is preferable to remedy. Although there is currently no cure for COVID-19, it is prudent to take preventative steps that improve our immunity during these trying times. Ministry of AYUSH of the Government of India, recommends 'Ayush Kwath,' or 'Kada,' or 'Ayush Joshanda,' which contains some medicinal herbs. In presented paper, discussed about these medicinal herbs.

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