



REVIEW ON: Ayurvedic Plants And Spices As Immunity Booster

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ABSTRACT

The review focus on the study of immunity booster. Immunity booster is mainly available in the form of powder, tablet, kadha, tea, juices, drops and many other forms. Immune system acts to protect the host cell from infectious agents such as bacteria, virus, fungi etc. The immunity or body protection mechanism is divided into two types- natural & specific. Immunity booster have ayurvedic plants and spices such as Tulsi, Dalchini, Sunthi, Marich, Clove, Amla, Turmeric, Jaggery, etc. which are used for immunomodulatory, anti-oxidant, anti-viral, anti-inflammatory, antiplatelet, anti-atherosclerotic, hepato-protective, reno-protective properties. Seems to be effective in immune-regulation for controlling viral infection. Various research has been done in the past as well as are in progress for immunity enhancing. It is a ayurvedic preparation of immunity booster so it have very less side effects. In this review paper mentioned ayurvedic plants and spices act as an immunity booster .

Keywords: Immunity, immunomodulatory, immunity booster, ayurvedic plants.

1. INTRODUCTION

The term immunity derived from Latin word “immunita” means freedom from disease. Immunity is defined as the capacity of the body to resist pathogenic agents. The system acts to defense the host from infectious agents such as bacteria, virus, fungi etc. [18] Immunity is the ability of the body to protect against all type of foreign bodies like bacteria, virus, toxic substances which are enter in the body. As immunity protects us from disease so it also called as disease resistance. Lack of the immunity is known as susceptibility. Immunity is done by immune system which is complex network of lymphoid organs such as bone marrow, thymus, spleen etc.

Types of immunity

1) Innate immunity:

It is also called as natural or native immunity, Consist of Mechanisms that exist before infection and are capable of rapid responses to microbes. There are three types of innate immunity:

- Species immunity
- Racial immunity
- Individual immunity

2) Acquired immunity: Acquired or adaptive immunity is the immunity that is developed by the host in its body after exposure to suitable antigen. There are two types of acquired immunity.

- Active immunity: It is induced by natural exposure to a pathogen or by vaccination.
- Passive immunity: Passive immunity is achieved by transfer of immunity products such as antibody or sensitized T cells.

The various cells comprising system are:

- i. Lymphocytes
 - ii. Monocytes and macrophages
 - iii. Mast cells and basophils
 - iv. Neutrophils
 - v. Eosinophils
- **Antibody**- Antibody is Y' shaped protein component that's produced by B lymphocytes in response to the presence of an antigen. it's a γ globulin in nature and is additionally called as immunoglobulin (Ig). The five classes of circulating antibodies are immunoglobulins are IgG, IgA, IgM, IgE and IgD.
 - **Lymphocytes**- Lymphocytes are white blood cells and one of the body's main types of immune cells. They are found in the bone marrow and found in the blood and lymph tissue. The immune system is a complex network of cells known as immune cells that include lymphocytes.

Types of lymphocytes:

- i. **B lymphocytes**- These cells are included in humoral immunity by inciting antibody response. It belongs to adaptive immunity. It develops from stem cells in the bone marrow. It has antibody-mediated immunity
- ii. **T lymphocytes**- T cells mature in thymus gland. It has cell-mediated immunity and a delayed class of hypersensitivity. T cells have two major subtypes
 - **T helper cells**- TH cells help and enhance the immune reaction and are termed as T-regulatory cells. These induce macrophages to destroy other antigens.
 - **Natural killer (NK) cells**- These are large granular lymphocytes and are a part of natural immunity. Natural killer cells destroy viruses. These cells produce antibody-dependent cell-mediated cytotoxicity. [18]

Mechanism of Immunity:

The immune mechanism is often produced when the infection agents attack our body or go through vaccination. However, the identical immune mechanism (Antibodies and cytotoxic T-cells) which were discussed earlier, in certain situations can cause the destruction to the cells or tissues in our body. Macrophage captures, engulfs, and digests an antigen. Macrophage presents a fragment of the antigen on its surface then interaction between proteins on the macrophage and helper T lymphocyte occurs, activating the helper lymph cell, which proliferates into either TH 1 or TH 2 cells, which secrete different types of cytokines. Cytokines secreted by the TH 1 cell activate a cytotoxic T cell to kill the infected target cell. [11]

How to boost immunity?

- i. Stay hydrated.
- ii. Ayurvedic diet for immune boosting.
- iii. Intake immune strengthening herbs.
- iv. Reset your sleep cycle.
- v. Manage your stress level.
- vi. Exercise regularly.
- vii. Supplements for immunity.
- viii. Ayurvedic medications for immunity.
- ix. Stop intake alcohol & smoking.
- x. Limit added sugar.

AYURVEDIC ROLE

- Ayurveda being an ancient science have both medicinal and cultural values.
- Ayurvedic medicines help to improve the system internally and protects the body from symptoms of infections.
- Ayurvedic medicines for immunity and strength contain Tulsi, Dalchini, Sunthi, Marich, Clove, Amla, Turmeric, Honey or Jaggery that helps to relieve symptoms related to infections.
- Tulsi has disinfectant and germicidal factors are not the only reason because of that tulsi is a great herb for boosting your immunity. sunthi will help in easing cold and cough. Dalchini is employed in various ailments like flu, indigestion, edema, cough, etc. Clove can help provide relief from cough and raw throat. Turmeric helps reduce induced inflammation and improves brain and cardiovascular disease. Amla benefits include antibacterial & astringent properties which help improve the body's immunity system. Marich is very useful in treating asthma, cough and other chronic respiratory disorders. Jaggery is known to produce heat and provides instant energy to the human body.[7]
- This medicines keeps your daily health perfect from the goodness of Ayurveda.

2. OBJECTIVES

- The objective of this review is to study the immunity-boosting ayurvedic plants and spices to support of maintaining health.
- To increase patients immunity, these are very helpful immunity booster.
- To protects the patient from serious health problem.
- To review anti-microbial, anti-bacterial, anti-inflammatory, anti- fungal activity of ayurvedic plants.
- Ayurvedic plants are natural remedies which can help to cure disease and there is no side effect in patient.

Table No.1: DESCRIPTION OF INGREDIENTS

SR. NO.	NAME	SCIENTIFIC NAME	PARTS USED	MAIN CHEMICAL	AYURVEDIC DOSHAKARMA
1	Tulsi	Ocimum Sanctum Linn.	Leaves	Volatile Oil (Phenol, Aldehyde), Eugenol, Ascorbic Acid, Linoleic Acid, Carotin	Kaphavatashamak a Pittabardhaka
2	Dalchini	Cinnamomum Zeylaniam Breyn.	Stem Bark	Cinnamaldehyde, Cuminaldehyde, Eugenol	Kaphavatashamak a Pittavardhaka
3	Sunthi	Zingiber Officinale Rocs	Rhizome	Zingiberene, Zingiberol	Kaphavatashamak a
4	Marich	Piper Nigrum Linn.	Fruit	Piperine, Piperidine, Piperettine, And Chavicine	Kaphashamaka
5	Clove	Syzygium Aromaticum	Flower Buds	Eugenol, Eugenyl Acetate, Caryophyllene	Kaphapittahara
6	Amla	Emblica Officinalis	Fruit	Vit.C,(Ascorbic Acid), Ellagitannis, Phyllanemblinin Flavonoids	Kaphapitta
7	Turnerica	Curcuma Longa	Rhizome	Curcuminoids, Demethoxycurcumin, Bisdemethoxycurcumin	Kaphapitta
8	Jaggery	Saccharam Officinarum	Powder	Sucrose, Glucose,Fructose	Kaphadosha

3. DRUG PROFILE:

3.1 Tulsi



(Fig No.1: Tulsi)

3.1.1 Taxonomical classification

Kingdom: *Plantae*

Division: *Tracheophyta*

Class: *Magnoliopsida*

Genus: *Ocimum*

Species: *O.tenuiflorum*

Family: *lamiaceae*

Order: *laminates*

Tulsi is considered as one of the tonic for the body and also for mind. It is an aromatic perennial plant that has unique place on ayurveda. Tulsi is rich source of Vitamin A and C, calcium, zinc and chlorophyll. Many studies have shown that Tulsi (aqueous and methanol extract of leaf and seed oil) besides improving vital capacity also is an immune-modulator .[4]

Synonyms: Holy basil, sacred basil.

Biological source:

Tulsi consists of fresh and dried leaves of *ocimum Sanctum* Linn. Family lamiaceae, and contains not less than 0.40 percent eugenol on dried basis.[10]

3.1.2 Chemical constituents:

Oleanolic acid, Ursolic acid, Rosmarinic acid, Eugenol, Carvacrol, Linalool, and β -caryophyllene.[9]

3.1.3 Mechanism of action:

Tulsi has antioxidant properties and reduces blood glucose levels. Thus it is useful for diabetics. It reduces total cholesterol levels and blood pressure. Thus it is useful for heart disease patients. It is also used to prepare herbal tea. It helps in building up stamina. It is used for malaria, gastric disorders, headache, cough, common colds. It is used as mouth wash for reducing tooth ache. Tulsi oil has modulatory properties against malarial larva. It has immuno-modulatory properties.[9]

3.1.4 Uses:

1. Tulsi is great herb for boosting our immunity.
2. It helps to protect from infections and diseases like cold, cough, and viral infections.
3. It has disinfectant and germicidal factors
4. Tulsi leaves are helpful for promoting a sharp eyesight.
5. Tulsi increase immune response the defense mechanism against the infection.[9] [11]

3.1.5 Properties:

- **Antioxidant:** In tulsi Polyphenol Rosmarinic acid present. This chemical composition acts as the powerful antioxidant. It defence the cells in the body from smash up due to the presence of free radicals. Excess of oxidation in the body also causes the cell damage. This acid prevents from formation of excess oxidation.
- **Antibacterial:** Carvacrol and terpene are the antibacterial agents present in tulsi plant. Sesquiterpene B-caryophyllene also serves the same purpose. It helps keeping the body safe from bacterium that causes illness.
- **Anti-inflammatory:** Rosmarinic acid also is a good source of anti-inflammatory along with being an antioxidant. one more compound that is pegenin available in the composition serving the same function. Above two, the most important anti-inflammatory activity in tulsi is 'eugenol'. It is main ingredient responsible for controlling the blood sugar levels in the body. It provide the beta cell function of the pancreas and insulin secretion.
- **Immuno-modulator:** It is very essential to have some immuno-modulator in the body that stabilizes, recovers and maintains the proper balanced functioning of the immune system. Tulsi possess excellent immune enhancing properties that prepare the body against foreign elements like bacteria, viruses, microbes, allergens etc. So, it maintains the overall balance in the body.[9]

3.2 Dalchini



(Fig No.2: Dalchini)

3.2.1 Taxonomical classification

Kingdom: *Plantae*

Division: *Magnoliophyta*

Class: *Magnoliopsida*

Genus: *cinnamomum*

Species: *zeylanicum*

Family: *lauraceae*

Order: *laurales*

Dalchini or Cinnamon is considered as one of the most ingredients used in Ayurveda. Dalchini is known for its delicious taste and beautiful aroma. It is a strong immune system booster and is used in various ailments such as flu, in digestion, edema, cough, etc. Cinnamon extracts, essential oils, and their compounds have been reported to inhibit bacteria by damaging cell membrane.[4]

Synonyms: Cinnamon bark, kalmi- Dalchini, Ceylon cinnamon

Biological source:

Cinnamon consists of dried inner bark of the shoots of coppiced trees of *Cinnamomum zeylanicum* Nees., belonging to family lauraceae. It should not contain less than 1.0 percent of Volatile Oil.[10]

3.2.2 Chemical constituents:

Cinnamon bark contains cinnamaldehyde, benzaldehyde, cuminaldehyde and terpenes.

3.2.3 Uses:

1. Cinnamon helps to low cholesterol.
2. Cinnamon helps to boost brain power.
3. It reduces inflammations and fight bacteria.
4. Cinnamon bark is used as carminative, stomachic and mild astringent.
5. It is also used as flavouring agent, stimulant, an aromatic and antiseptic.[5]



3.2.4 Properties:

- **Antioxidant:** The methanol extract have maximum anti-oxidant property as compared to the ethanolic and water extract. The antioxidant property is due to the eugenol component which inhibited peroxy nitrite induced nitration and lipid peroxidation in *in-vitro* models.[6]
- **Anti-inflammatory:** Cinnamon water extract possesses anti-inflammatory effect in *vitro* ascribed to fall in levels of tumor necrosis factor α and Interleukin. Twigs of *C. osmophloeum* contain compounds like trans-cinnamaldehyde, caryophyllene oxide, eugenol, L-borneol which contains anti-inflammatory activity.[8]

3.3 Sunthi

(Fig No.3: Sunthi)

3.3.1 Taxonomical classification

Kingdom: *Plantae*

Division: *Angiospermae*

Class: *Monocotyledoneae*

Genus: *Zingiber*

Species: *Z.officinale*

Family: *Zingiberales*

Order: *Zingiberaceae*

Sunthi or sonth is also called as dry ginger. Sunthi is root or rhizome of the flowering plant known as *Zingiber officinale*. It has been used as an active ingredient and several ayurvedic medicine. It helps to treat an upset stomach and improves metabolism.

Synonyms: Zingiber, Zingiberis, Sunthi.

Biological source:

Ginger consists of whole or cut, dried scrapped or unscrapped rhizomes of *Zingiber officinale* Roscoe, family Zingibraceae. It contains not less than 0.8 percent of total gingerols on dried basis.[10]

3.3.2 Chemical constituents:

Sunthi contains Volatile Oil containing Cineole zingiberol, and sesquiterpene like zingiberene, bisobolene and sesqui phellandrene, gingerosol in the oleo-resin. It also contains Essential oil, pungent constituents (gingerol and shogaol) and starch.

3.3.3 Uses :

1. It is also used in digestive disorders, cough, cold, vomiting, cancer, fever, inflammation, preventing flu, asthma.
2. It also relieves painful irregular menstruation and improves immunity.
3. It is used in decreasing cholesterol level.
4. It is also used for burn fats.

3.3.4 Properties:

- **Anti-viral:** Ginger is effective against viruses. As per the previous clinical study, fresh ginger has a significant inhibitory impact on Human respiratory syncytial virus.
- **Anti-bacterial:** Anti-bacterial potential of *Zingiber officinale* against gram-positive and gram-negative bacterial species. It was found that the ethanol extract was more potent against both the gram positive as well as gram negative bacterial species than the aqueous extracts of Ginger.
- **Anti-oxidant:** The anti-oxidant activity of *Zingiber officinale* was evaluated in an in-vitro study by 2, 2'-Diphenyl-1-picrylhydrazyl (DPPH) Radical Scavenging Method which suggested that ginger is associated with anti-oxidant property.
- **Anti-inflammatory:** Its anti-inflammatory properties can help to heal and regenerate cells in the body faster.[3]

3.4 Marich

(Fig No.4 : Marich)

3.4.1 Taxonomical classification

Kingdom: *Plantae*

Division: *Magnoliophyta*

Class: *Equisetopsida*

Genus: *Piper*

Species: *Nigrum*

Family: *Piperaceae*

Order: *Piperales*

Marich is commonly called as black pepper is used in many Ayurvedic preparations and formulation and is known for many health benefits. Marich is known to cause sneezing. It is show to enhance the bio-availability of certain drugs.[4]

Synonyms: pepper, *Piper nigrum*, Kali miri

Biological source:

Pepper is the dried unripe fruit of perennial climbing vine *Piper nigrum Linn.*, family piperaceae. It contains not less than 2.5 percent of piperine on dried basis.[10]

3.4.2 Chemical Constituents:

Piperidine, N-trans-feruloytyramine, Methylenedioxycinnamic, Piperettine, Ascorbic acid Trichostachine, Citronellol, Serine, Cryptone, Piperonal, Camphene, Pipecolic acid, Cryptone, Piperonal,



Threonine, Carotene, Piperine.

3.4.3 Uses:

1. It helps promote calm down nerves and increased body resistance.
2. It causes feeling of heating and used as condiment.
3. It also stimulates taste - buds, with increase in gastric juice.
4. Piperine reduces pain and reduces inflammations.
5. It also might slow blood clotting and affect blood sugar level.

3.4.4 Properties:

- **Anti-inflammatory:** Piperine has anti-inflammatory and anti- arthritis activity. Piperine have inhibition of prostaglandin release mediated anti-inflammatory properties that helps to relive joint and muscular pain.
- **Anti-asthmatic and immunomodulator:** Piperine decreases the infiltration of eosinophils and reduced airway hypersensitiveness by suppressing T cell activity and Th2 cytokine production.
- **Antioxidant:** With high content of phenolic and flavonoid compound piperine search and neutralises free radicals and protects body cells.
- **Antimicrobial:** Black pepper showed strongest anti- bacterial activity. Compared to aqueous decoction of *Laurus nobilis*. In the recent study the silver nanoparticles from leaf and stem of *Piper nigrum* where synthesized.[3]

3.5 Clove



(Fig No.5: Clove)

3.5.1 Taxonomical classification

Kingdom: *Plantae*

Division: *Magnoliophyta*

Class: *Equisetopsida*

Genus: *Syzygium*

Species: *Aromaticum*

Family: *Myrtaceae*

Order: *Myrtales*

Clove is also known as “ Mother Nature’s Antiseptic”. Clove give the pungent and astringent tastes. Eugenol and flavonoids compounds are present in clove to inhibits the growth of bacteria, virus and yeast.

Synonyms: Caryophyllum, Clove flower, Clove buds.

Biological source:

Clove consists of dried flower Buds of *Eugenia carophyllus* , family Myrtaceae. It should contain not less than 7.0 percent (w/w) of eugenol calculated on dried basis.[10]

3.5.2 Chemical constituents :

The main components were found to be eugenol (76.8%), followed by β -caryophyllene (17.4%), α -humulene (2.1%), and eugenyl acetate (1.2%). Further constituents were found to be in quantities below 0.5%

3.5.3 Uses:

1. Clove can helps to provide relief from cough and sore throat.
2. It can also help in the diabetes and lower the blood sugar levels.
3. It also acts as an expectorant and helps in expelling mucus from the respiratory passage.
4. clove reduces inflammations.
5. It is considered to enhance circulation, digestion and metabolism and help counter stomach disorders. [17]

3.5.4 Properties:

- **Anti-inflammatory:** Cloves include multiple compounds that are linked to anti-inflammatory properties. Eugenol has been shown to reduce the inflammatory response in the body. It also reduces the risk of diseases such as arthritis and helping to manage symptoms.
- **Antioxidant:** Eugenol is also a potent antioxidant. These compounds help your body to fight free radicals, which damage your cells and can lead to disease. Cloves can helps to reduce risk of developing heart disease, diabetes, and certain cancers by removing free radicals.
- **Anti-Microbial:** Clove used in oral and buccal infection. Clove used to inhibit the growth of molds, yeasts and bacteria. The high levels of eugenol contained in clove essential oil are responsible for its strong biological and antimicrobial activities. Cloves have antimicrobial properties that can help stop the growth of microorganisms like bacteria.
- **Anti-fungal:** The present study indicates that clove oil and eugenol have considerable antifungal activity. Various Studies have shown that clove essential oil is both fast and effective in killing fungal infections.

3.5 Amla

(Fig No.6 : Amla)



3.5.1 Taxonomical classification:

Kingdom: *Plantae*

Division: *Magnoliophyta*

Class: *Dicotyledonae*

Genus: *Phyllanthus*

Species: *P.emblica*

Family: *Phyllanthaceae*

Order: *Malpighiales*

Amla is also known as Indian gooseberry, which is rich in Vitamin C; an essential component to strengthen the immune system. Amla contain vitamin C which increases the count of WBC. It is also rich in iron, calcium and other minerals that make it a nutrition fruit.

Synonyms: Amalaki, Emblica, Indian gooseberry.

Biological source:

This consists of dried, as well As fresh fruits of the plant *Emblica officinalis* Gaerth *Phyllanthus emblica* Linn. belonging to family *Euphorbiaceae* contains not less than 1.0 percent w/w of garlic acid calculated on dry basis.

3.5.2 Chemical constituents:

Emblicanin A (37 %), emblicanin B (33 %), punigluconin (12 %), and pedunculagin (14 %) [10]. Amla also contains punicafolin and phyllanemblinin A, phyllanemblin other polyphenols, such as flavonoids, kaempferol, ellagic acid, and gallic acid.[11]

3.5.3 Uses:

1. The regular use of Amla-Berry can strengthen digestion, absorption, and consumption of food.
2. It is specially good rasayana for people with pitta and vata body types.
3. Amla act as detoxifying agent for the body.
4. It improve brain health and function.

3.5.4 Properties:

- **Antioxidant:** Amla juice is great source of vitamin C which is water soluble vit. that acts as an antioxidant. Antioxidant are compound having ability to scavenge free radicals and inhibit the oxidation of moieties.
- **Anti-inflammatory:** Amla promotes anti- inflammatory properties that cool, tone, and nourishes tissue and organ. Amla helps in reducing arthritis-related pains.[7]

3.6 Turmeric



(Fig No.7: Turmeric)

3.6.1 Taxonomical classification

Kingdom: *Plantae*

Division: *Magnoliophyta*

Class: *monocotyledonae*

Genus: *Curcuma*

Species: *C.longa*

Family: *Zingibraceae*

Order: *Zingiberales*

Turmeric is used as condiment or spice, and coloring agent, especially for ointments and creams. For improving immunity power, iron is most important and turmeric has riches Iron.

Synonyms: Haldi, Indian saffron, curcuma.

Biological source:

Termeric consists of dried, as well as, fresh rhizomes of the plant known as *Curcuma longa* Linn. belonging to family *Zingiberaceae*. It contains curcumin contains not less than 1.5 percent.[10]

3.6.2 Chemical constituents:

Turmeric curcumanoids about 5%, as coloring agent. The curcumanoid contains curcumine-I, curcumine-II, curcumine-III. Turmeric contains 5% Volatile oils. Curcumin, Curcuminoids, Cymene, Turmeric, Demethoxycurcumin, Daryl heptanoids.

3.6.3 Uses:

1. Turmeric helps to improve heart disease and it is help to reduce inflammation,, Alzheimer and cancer.
2. Turmeric helps to fights against viral-replication.
3. It helps in digestion.
4. It helps to control cholesterol level.[11]

3.6.4 Properties:

- **Antioxidant:** Curcumin has been shown be a powerful scavenger of oxygen free radicals. Curcumin has antioxidant activity is comparable to vitamins C and E. It protect lipids or hemoglobin from oxidation. It can significantly inhibit the generation of ROS such as H₂O₂, superoxide anions and nitrite radical generation by activated macrophages.[12]
- **Antimicrobial:** Turmeric has been shown to inhibit the growth of a variety of bacteria, pathogenic fungi, and parasites. Curcumin has also been found to have moderate activity against Plasmodium falciparum and Leishmania major organisms.

3.6 Jaggery



(Fig No.8: Jaggery)

3.7.1 taxonomical classification

Kingdom: Plantae

Division: Magnoliophyta

Class: Equisetopsida

Genus: Saccharum

Species: S.officinarum

Family: Poaceae

Order: Poales

Jaggery provides instant energy to the human body. It prevents constipation due to its laxative property and activates digestive enzymes. As per Ayurveda, eating Jaggery daily after meals improves digestion due to its Ushna (hot) property. Jaggery is believed to be one of the best immune-boosting foods available to humankind. Jaggery is enriched with nutrients such as iron, magnesium, potassium that help keep the body healthy.

Synonyms: Gud, carbohydrate, sugar.

Biological source: Jaggery is a sugar rich product and medicine obtained by evaporation of sugarcane. Saccharum Officinarum Linn. Belonging to family *poaceae* .

3.7.2 Chemical constituents: One teaspoon of jaggery contains approximately 4-5 mg calcium, 2-3 mg phosphorus, 8 mg Magnesium, 48 mg potassium, 0.5 mg iron, as well As detect amounts of zinc, copper, thiamin, Riboflavin, and niacin. .

3.7.3 Uses:

1. It also helps in keeping certain ailments such as the common cold and flu at bay.
2. Jaggery can also boost your immunity and improve health.
3. Helps in Relieving fatigue, relaxation of muscles, nerves and Blood vessels
4. Maintains blood pressure and Reduces water retention; increases hemoglobin level.
5. It stimulates the bowels and helps the release of digestive enzymes.

3.7.4 Properties:

- **Antioxidant:** The jaggery showed significant antioxidant activity. Jaggery contains phosphorus, iron, magnesium, zinc, selenium, potassium and multiple antioxidants, help boost the immune system and fight against cold, cough, throat pain, respiratory trouble etc. The antioxidants and

minerals in jaggery give it a cytoprotective quality, which clear the mucus off the lungs but also cleans the respiratory and digestive tracts.

- **Anti-inflammatory:** Jaggery soothes any inflammation or pain in the joints and supports bone health. jaggery powder consuming on a regular basis can prevent respiratory conditions such as bronchitis and asthma as it contains anti-allergy properties.[20]

(Table No.2): AYURVEDIC PROPERTIES

SR. NO.	NAME	AYURVEDIC PROPERTIES				PROPERTIES
		Rasa	Guna	Veerya	Vipak	
1	Tulsi	Katu, Tikta	Laghu, Rooksha, Teekshna	Ushna	Katu	Anti-Bacterial, Anti-Oxidant, Anti-Septic, Anti-Fungal
2	Dalchini	Katu, Madhura, Tikta	Laghu, Rooksha, Tikshna	Ushna	Katu	Anti-Bacterial, Anti-Fungal.
3	Sunthi	Katu	Laghu, Snigdha	Ushna	Madhur	Anti-Inflammatory, Anti-Emetic
4	Marich	Katu	Laghu, Tikshna, Sookshma	Ushna	Katu	Anti-Bacterial, Anti-Microbial
5	Clove	Tikta, Katu	Laghu, Snigdha	Sheeta	Katu	Anti-Inflammatory, Anti-Bacterial, Anti-Fungal, Anti-Oxidant
6	Amla	Panch Rasa	Laghu, Rooksha	Sheeta	Madhur	Anti-Microbial, Anti-Bacterial
7	Termeric	Katu	Laghu, Rooksha	Ushna	Katu	Anti-Microbial, Anti-Bacterial
8	Jaggery	Madhur	Laghu, Snigdha	Sheeta	Madhur	Anti-Oxidant

4. CONCLUSION

There are other certain ways to boost the 'immune system' such as active lifestyle, physical exercise, healthy diet, relaxation, and sound sleep. Ayurvedic plants and Spices are better alternatives to treat several diseases. In the present review we have discussed the possible potential uses of ayurvedic plants and Spices to boost immunity against infections and also prevent or even treat infections.

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