

## Review Article

# Chyawanprash: A wonder Indian Rasayana from Ayurveda to Modern Age

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### ABSTRACT

Chyawanprash is a dietary health supplement. There are distinct ways of defining Chyawanprash such as energy booster, rejuvenator, health tonic and many more. It offers a multitude of health benefits for which it has become so popular in India and abroad. 'Chyawanprash' is one of the most popular Ayurvedic preparations placed under 'Rasayana'. Rasayana are considered as the ultimate tonic preparations in ayurveda. Chyawanprash manifests the entire human quest for immortality, freedom from disease and prevention of aging. The formulation as a whole is an expression of a blessing from Rig-Veda. Perhaps it also represents the quest of mankind for a 'Panacea', which could address a wide array of health issue from aging to cough and common cold. However, the main emphasis in this review article has been on correlating the ethnomedicinal uses of its major ingredients with the medicinal properties attributed to it, and evaluation of its physicochemical values for quality evaluation.

**KEY WORDS:** Chyawanprash, Rasayana, Rig-Veda, Ingredients, Physicochemical values

### INTRODUCTION

In Ayurveda, the ultimate tonic preparations are known as *rasayana* because of their capacity to impart superior rasa as well as other *dhatu*s. Dhatus are the components that support both the structure and functions of the body viz. rasa, blood, flesh, bone, and marrow. Rasayana is made up of two words Rasa and Ayana. Rasa is the pure nutrient part of food. Ayana, or turning towards, basically means that the dhatus, instead of degrading and drying due to disease and aging, will be nourished, supplemented, and replenished [1]. In short *rasayana* is a tonic for the whole body and deemed to be beneficial for nearly all diseases, but especially for

disorders of aging when the ability to obtain adequate nutrition and maintain vigorous function declines. One of the rasayanas mentioned thereof is called *Chyawanprash* (also spelled: *cyavanaprasha*, *chyavanaprasha*, *chyavanaprash*, *chyavanaprasham* and *chyawanaprash*). This recipe has remained India's most popular remedy for around 2000 years, since the times of the Vedas. According to the *Charaka Samhita*, Chyawanprash is "the foremost of all rasayanas." By using chyawanprash "a person acquires intelligence, memory, comeliness of body, freedom from disease, longevity, strength of the senses, great pleasure in

the companionship with women, great increase in the strength of the digestive fire, improvement of the complexion, and the restoration of wind to its normal course." It is especially good for alleviating cough and asthma. Chyawanprash has been widely used in India as tonic, rejuvenator, energizer, anabolic, immunomodulator and memory enhancer [2, 3]. This Ayurvedic health tonic is often called "the elixir of life" due to its numerous nutritional properties and benefits to the body [4].

### Appearance

Chyawanprash is a brown-colored, sticky paste with the consistency of jam and a sweet/sour/spicy taste. It can be eaten directly, or mixed in warm milk or water. It can be used like any other jam, spread onto crackers or bread. Even though no strict diet is administered during the intake of Chyawanprash it is always advised to drink a glass of milk after each intake of the above.

### Ingredients

It is prepared from more than 40 herbs (Table 1). The recipe may differ a bit from company to company but the main ingredient of all Chyawanprash is amla. Amla (Indian Gooseberry) is a fruit rich in Vitamin C and Pectin. Other than herbs it also contains sugar, honey, ghee, sesame oil and preservative potassium sorbate [5] In the original composition of chyawanprash, as mentioned in the Vedas, numerous herbs belonging to different classes, like Dashmula class, Ashtavarga class, Chaturjata class are included in ayurvedic chyawanprash. But in today's fast life certain herbs of these classes are not available. So in the

classical chyawanprash, substituted herbs are used in chyawanprash preparation. Ashtavarga Class being not available in sufficient quantity is substituted by *Asparagus racemosus* [Substitution for Meda, Mahameda], *Pueraria tuberosa* [Substitution for Jivak, Rishabhaka], *Withania Somnifera* [Substitution for Kakoli, Kshira-kakoli], *Dioscorea bulbifera* [Substitution for Riddhi, Vriddhi].

The ingredients of chyawanprash have been divided into following categories:

**1) Pradhana Dravya** (main ingredient): *Emblica officinalis* (Amla) or Indian gooseberry.

**2) Samsadhana Dravya** (processing ingredients): These ingredients helps to process the main ingredient i.e. Amla. Some examples are: Pippali (Long Pepper), Draksha (*Vitis vinifera*), Bala (*Sida Cordifolia*) etc.

**3) Yamaka Dravya** (ingredients as lipid media): This set of ingredients helps to treat Amla fruits. The process, which is also called lipophilization, helps to promote tissue penetration of the main ingredient. Clarified butter and sesame oil fall under this category.

**1) Samvahaka Dravya** (preservative ingredients): This group of ingredients not only acts as a carrier for the main and supportive ingredients but also helps preserve the clinical efficacy of the main ingredient (Amla). Sugars used in Chyawanprash are included under this category.

**2) Prakshepa Dravya** (flavoring ingredients): These ingredients are also termed as balancing drugs. They help

balance the Doshas and Dhatus (tissues) in the body.

Over time, various formulas for chyawanprash comprised of herbs highly respected and available in modern India, have been developed from the ancient instructions. In all cases chyawanprash contains the pulp of *Emblica officinalis* as the prime ingredient, along with powders and extracts of several other herbs, which contain many phytoconstituents.

### Dietary benefits of Chyawanprash

Chyawanprash is used as a dietary health supplement. Chyawanprash's major ingredient is *amla*, which is known as the richest source of Vitamin C. Ascorbic acid, commonly known as vitamin C is known to benefit the immune system and helps to fight against common cold and respiratory infections [6]. According to Charaka Samhita (the ancient ayurvedic text book for internal medicine), Chyawanprash has been known to promote following conditions:

#### (A) Digestion

- Regular consumption of chyawanprash strengthens digestion, absorption and assimilation
- It eases constipation
- *Piper longum*, *Cinnamomum zeylanicum*, and *Emblica officinalis* help correct hyperacidity, dyspepsia, and flatulence
- *Cinnamomum tamala* helps reduce intestinal cramping and flatulence
- *Aegle marmelos* and *Pistacia integerrima* alleviate intestinal inflammation and diarrhea

#### Table 1. Ingredients of Chyawanprash

- *Terminalia chebula* have anti-ulcer, astringent and mild laxative effects [7].

#### (B) Immune System

- Due to its high vitamin C content, Chyawanprash is well known to enhance the immune system and thereby reducing the incidence of common infections like cough, cold and fever

#### (C) Brain and heart

- Amla is a very good cardiac stimulant and helps in the smooth functioning of the heart.
- Amalaki, kanwal, punarnawa, pushkarmool, kachur, vasaka, bala, shalparni, prishniparni, brihati and gokhru help in strengthening the cardiovascular system (CVS).
- Chyawanprash nourishes the neuronal cells and promotes intelligence and memory.
- In addition, the formula has a calming effect on nervous energy and on stress, while improving concentration and memory, with its inclusion of *Withania somnifera*, *Bacopa monnieri*, and *Asparagus racemosus*.
- It promotes coordination among various body parts.
- It has a calming effect on Central Nervous System (CNS), thereby reducing anxiety and stress induced psychiatric problems and imparts sound sleep.
- Nagkesar, guduchi, nagarmotha, vidarikand, kanwal, agar, ashwagandha, shalparni, prishniparni and amalaki help to sharpen the CNS [7].

S.No.	Botanical Name	S.No.	Botanical Name
	<b>GENERAL CLASS</b>		<b>DASHAMULA CLASS</b>
1.	<i>Adhatoda vasica</i>	21.	<i>Aegle marmelos</i>
2.	<i>Aquilaria agallocha</i>	22.	<i>Desmodium gangeticum</i>
3.	<i>Bambusa arundinacea</i>	23.	<i>Gmelina arborea</i>
4.	<i>Boerhaavia diffusa</i>	24.	<i>Oroxylum indicum</i>
5.	<i>Curcuma zedoaria</i>	25.	<i>Premna integrifolia</i>
6.	<i>Cyperus rotundus</i>	26.	<i>Solanum indicum</i>
7.	<i>Emblica officinalis</i>	27.	<i>Solanum xanthocarpum</i>
8.	<i>Inula racemosa</i>	28.	<i>Stereospermum suaveolens</i>
9.	<i>Leptadenia reticulata</i>	29.	<i>Tribulus terrestris</i>
10.	<i>Nymphaea stellata</i>	30.	<i>Uraria picta</i>
	<i>Phaseolus trilobus</i>		<b>CHATURJATA CLASS</b>
11.	<i>Phyllanthus amarus</i>	31.	<i>Cinnamomum tamala</i>
12.	<i>Piper longum</i>	32.	<i>Cinnamomum zeylanicum</i>
13.	<i>Pistacia integerrima</i>	33.	<i>Elettaria cardamomum</i>
14.	<i>Martynia diandra</i>	34.	<i>Mesua ferrea</i>
15.	<i>Santalum album</i>		<b>SUBSTITUTION OF ASHTAVARGA</b>
16.	<i>Sida cordifolia</i>	35.	<i>Asparagus racemosus</i> (Substitution for Meda, Mahameda)
17.	<i>Teramnus labialis</i>	36.	<i>Dioscorea bulbifera</i> (Substitution for Riddhi, Vriddhi)
18.	<i>Terminalia chebula</i>	37.	<i>Pueraria tuberosa</i> (Substitution for Jivak, Rishabhaka)
19.	<i>Tinospora cordifolia</i>	38.	<i>Withania somnifera</i> (Substitution for Kakoli, Kshira-kakoli)
20.	<i>Vitis vinifera</i>		

**(D) Respiratory system**

Chyawanprash helps in the smooth functioning of the respiratory system by

maintaining moisture balance and stimulating the metabolism.

- It is especially beneficial for cough and asthma patients.
- *Pistacia integerrima*, *Adhatoda vasica*, *Inula racemosa*, *Tinospora cordifolia*, *Cinnamomum tamala* and *Mesua ferrea* are commonly used to alleviate cough, asthmatic breathing, and bronchi spasm.
- *Piper longum*, *Elettaria cardamomum* are used for respiratory infections (e.g., common cold and bronchitis) and asthmatic breathing [7, 8]

#### **(E) Hair, skin, bones and teeth**

- Chyawanprash helps improve skin complexion and prevent skin infections.
- It promotes hair growth and helps in calcium absorption and hence strengthening of bones and teeth.

#### **(F) Chyawanprash as a liver tonic**

- The presence of herbs like Bhumiamalaki (*Phyllanthus niruri*), Amla (*Emblica officinalis*), Punarnava (*Boerhaavia diffusa*), and Guduchi (*Tinospora cordifolia*) makes chyawanprash a very good liver tonic.
- It is believed that chyawanprash purifies blood, eliminates toxins and is beneficial to liver [9, 10].

#### **(G) Effects on Doshas**

Chyawanprash helps to balance all the three Doshas. It has a marked effect on Kappa which governs the defense systems and plays a role in stabilization of all systems of the body. This formulation is fit for all Doshas types and perhaps through all seasons of the year.

#### **(H) Others**

- It also works as an antioxidant, thus slowing down the aging process.
- It lowers blood glucose and blood cholesterol levels [11].
- It also improves muscle tone by enhancing protein synthesis.
- It enhances fertility and keeps menstruation regular.
- It has also shown benefits in decreasing anxiety, stress and depression.
- It is effective in enhancing libido and fertility in both sexes. It thickens semen in males and streamlines menstrual cycle in females [12]. Gokhru, varahikand, til oil, shatavari, vidarikand, bala, jivanti, mudgaparni, mashparni, ashwagandha and vanshlochan, have been found to act as aphrodisiac [7].
- It has been reported to substantially reduce the risk of genetic injury caused by exposure to benzene [13], halogenated ethers [14] and coal-tar [15]. Because of the trend to find antimutagens and anticarcinogens in diet, *chyawanprash awaleha* was investigated owing to its continuous use as a tonic, and primarily for its contents of *Phyllanthus emblica*, a rich source of antioxidants.
- It improves overall personality by imparting splendor, loveliness, youthfulness, wisdom, vigour and glow [16].
- Many aspects of this formulation have been studied to corroborate its therapeutic use as described in ancient texts and traditions [8].

#### **Need for Standardization**

Standardization of herbal extracts and their based products is always a challenge for drug companies as well as quality control professionals. Lot of variation exists in ayurvedic products or their based preparation in terms of their quality as well as biological activity as there are not specific and stringent standard parameters for their evaluation and assessments. Standardization results in a consistently strong product with guaranteed constituents. When the quality of most commercial formulation is considered, standardization assures that they have something in it and that correct herb is being used. Chyawanprash is a well known ayurvedic preparation, currently being manufactured by several drug companies. The original chyawanprash recipe has been lost somewhere in between the procedures of preparation and the methods of promotion. More than this, the companies are manufacturing chyawanprash in large quantities and thus they need all those rare herbal ingredients in bulk amounts. These raise the chance of adulteration. So in lack of standardization companies have an easy way out for the preparation of chyawanprash. This is the area, which needs to be addressed.

### **Quality assurance profile for Chyawanprash**

Chyawanprash is very commonly used health supplement since centuries. Chyawanprash incorporates more than 40 herbals or botanical ingredients. It is observed that the consistency and the taste etc vary from one manufacture to another. Even these variations are observed between different batches of the same manufacturer. Hence it is the

need of the hour to standardize the raw materials to obtain consistency product. The chief ingredient amalaki being a seasonal fruit is a problem for manufacturing the product throughout the year. In practice, the received raw material has to be checked for its acceptability. With the advent of new analytical tools and sophisticated instrumental technology [HPLC, HPTLC, Spectrophotometry], the quality assurance profile for a crude drug or its bioactive constituent can be made possible. The method of drug evaluation includes confirmation of its identity, determination of its quality, purity and detection of the nature of adulteration. The evaluation of crude drug is necessary because of the biochemical variation in the drug, deterioration due to treatment and storage, and substitution and adulteration. Evaluation should also include methods of estimating active constituent present in the crude drug in addition to its morphological and microscopic analysis. Microscopic evaluation allows detailed examination of a drug and it can be used to identify the organized drugs by their histological characters. e.g. Dashmula and Chaturjata used in this formulation can be identified and evaluated by this parameter. Physical evaluation of the drugs can be carried out with reference to moisture content i.e. Loss on drying (LOD), ash values and Extractive values. The moisture contents of the final product of chyawanprash ranges from 6-9 per cent. If it is so then there no need to add preservative in chyawanprash. The isolation, purification and identification of active constituents are chemical methods of evaluation. E.g., Total carbohydrates, tannin, and saponin. Quantitative chemical tests such as Acid value, Saponification value, Total

acidity, estimation of Vitamin C content, total fat, Estimation of Gallic acid, Catechin, Epicatechin and Piperine also provides valuable data for evaluation of chyawanprash formulation. Fingerprint of Individual class drug is important parameter for identification and presence of drug in chyawanprash formulation. For e.g. Fingerprint of Dashmula, Amalaki and Chaturjata class, Co-matching with chyawanprash formulation conforms the presence of individual drug class present in chyawanprash formulation.

### CONCLUSIONS

Currently, Chyawanprash is being prepared by several manufacturers, and claim to have its beneficial effect on immunity, physical strength and mental health, antioxidant defense, increased metabolic activity, detoxifying and cleansing properties. However, these ayurvedic preparations are not fully validated or scientifically tested in terms of modern tools and techniques. Besides, their claims are based on its long term traditional use. Due to lack of suitable quality control standards of Ayurvedic/traditional preparations, it is very difficult to ensure uniformity of their composition and consequently quality standards of final products.

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