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Shramahara Mahakashaya as Anti-fatigue Herbs: A Review

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ABSTRACT

Fatigue is one of most common complaints that is present more or less in various disease conditions. It usually refers to nonspecific sense of a low energy level or the feeling that near exhaustion is reached after relatively little exertion. *Shramahara* word refers to antifatigue action. So the herbs that work for tiredness have been included in *Shramahara mahakashaya* group. As per *Ayurveda*, *Darksha*, *Kharjura*, *Priyala*, *Badara*, *Dadima*, *Phalgu*, *Parushaka*, *Ikshu*, *Yava*, *Shashtika* are included in this group. They have good nutrition value and many bioactive phytochemicals. Many researchers found that these herbs have antioxidant, anti-inflammatory, cardioprotective etc activities. So these drugs are effective in fatigue. This article discusses the pharmacological action of herbs of *Shramahara mahakashaya*.

KEYWORDS

Shramahara, *Mahakashaya*, *Antioxidant*



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INTRODUCTION

Shramahara mahakashaya is a group of ten herbs which work over fatigue in body. The word *Shramahara* is combination of *shrama* and *hara*. *Shrama* means feeling of exhaust so can be used for fatigue. Another word *hara* means removing. Hence *Shramahara* word refers to antifatigue action. '*Mahakashaya*' word refers to group of herbs in *ayurveda*. So the herbs that work for tiredness have been included in *Shramahara mahakashaya* group.

This paper is being written to document scattered knowledge about pharmacological action of herbs of *Shramahara mahakashaya*.

Method

This study reviewed textbooks of *Ayurveda*, textbooks of biomedicine and many research papers.

Concept of *Shrama* in *ayurveda*

According to *ayurveda*, *Shrama* means feeling of tiredness or exhaustion. It is a subjective symptom which is present after excessive work/exercise or with pathological condition in form of *purva rupa* (prodermal symptoms), *rupa* (clinical features). *Shrama* is present as *purva rupa* in *jwara*³ (fever), *pandu*⁴ (anaemia). As *rupa*, *shrama* may occur in *vataj jwar*³ (type of fever), *rasa kshya*⁵, *pipasa nigrahana*⁶, *meda vrudhi*⁷ etc. *Shrama* occurs due to

imbalance of *Vata dosha*. It is considered as one of *Asheeti Nanatmaja Vatavikara*.

Concept of fatigue in Biomedicine⁸

Fatigue is one of most common symptoms of various diseases. It is subjective feeling of tiredness that has a gradual onset. Although often fatigue is self-limiting and frequently associated with psychosocial stress but also it is often uncertain regarding a serious cause and requires appropriate diagnostic work-up. Sometimes this symptom present previous to diseases. Sometimes it may occur after silent bacterial infection. It can be acute (less than 6 week) or chronic (more than 6 week).

The prevalence rates for fatigue range from 7% to 42% and is probably because there is no agreed definition upon what comprises a fatigue case [Lewis and Wessely 1992]. In a community survey of women in India, 12% reported chronic fatigue.

Most common cause of Fatigue

- Anaemia
- Nutrition : Obesity, malnutrition, vitamin deficiency
- Pregnancy
- Infection: HIV, Malaria, hepatitis
- Drugs-many medication, drug use, withdrawal, chronic alcohol
- Endocrine disorders- hypothyroidism, hyperthyroidism, adrenal insufficiency, diabetes mellitus, hypercalcemia etc.



- Sleep disorders: insomnia, restless leg syndrome
- Neurological disease: multiple sclerosis, dementia
- Psychiatric disease
- CLD/CKD
- COPD/CHF
- Autoimmune diseases: RA, Polymyalgia rheumatica
- Disorder of unclear cause Chronic fatigue syndrome

Hence the concept of *shrama* can be explained through the theory of fatigue after analysing various concepts and theories regarding *shrama* in different ancient text.

***Shramahara mahakashaya*- Group of herbs**

Acharya Charaka has described 50 types of *Mahakashaya* in *charak sutra sthana*. This classification is based on specific pharmacological action. Each *mahakashaya* have 10 herbs. In this, herbs have been grouped according to their specific mode of action on particular body

system and disease, and they can be used as a whole/ part or in different combinations/ dosage/ forms. *Shramahara mahakashaya* is one among them and also contains 10 herbs.

Shramahara derived from ‘*Sharma*’ and ‘*hara*’. ‘*Sharma*’ means tired, exhausted, exertion, effort either physically or mentally. ‘*Hara*’ means taking away, destroying, removing etc. so the term ‘*shramahara*’ can be interpreted as ‘anti-fatigue’ action. The *Shramahara mahakashaya* contain *Draksha*, *Kharjura*, *Priyala*, *Badara*, *Dadima*, *Phalgu*, *Parushaka*, *Ikshu*, *Yava*, *Shashtika*.

The herbs combination *Shramahara mahakashaya* can balance *vata*, *pitta*, *khapha* by their *rasa*, *guna*, *virya*, *vipaka*, *prabhava*. All the ten herbs have *Balya* and *Brunhana* action. so these increase the anabolism and normalize *Vayu* and promote the health. These have good nutrients value hence can fulfil the need of body. Properties of each herb of this group are compiled in table 1, 2, and 3.

Table 1 herbs of *Shramahara mahakashaya* – content, Latin name, & useful part

S. No.	Content	Latin name	Useful part
1	<i>Draksha</i>	<i>Vitis vinifera</i>	Fruit
2	<i>Kharjura</i>	<i>Phoenix sylvesteris</i>	Fruit
3	<i>Priyala</i>	<i>Buchanania lanzan</i>	Seed kernel
4	<i>Badara</i>	<i>Zizyphus jujube</i>	Fruit
5.	<i>Dadima</i>	<i>Punica granatum</i>	Fruit
6	<i>Phalgu</i>	<i>Ficus carica</i>	Fruit
7	<i>Parushaka</i>	<i>Grewia asiatica</i>	Fruit
8	<i>Ikshu</i>	<i>Saccharum officinarum</i>	Stem
9	<i>Yava</i>	<i>Hordeum vulgare</i>	Grain
10	<i>Shashtika</i>	<i>Oryza sativa</i>	Grain (rice-harvested in 60 days)



Table 2 Herbs of *Shramahara mahakashaya*- Ayurveda based properties¹⁹

S.N.	Content	Rasa	Guna	Virya	Vipaka	Effect on dosha
1	<i>Draksha</i>	<i>Madhura</i>	<i>Guru, Snighdha</i>	<i>Sheeta</i>	<i>Madhura</i>	<i>Decrease Vata pitta</i>
2	<i>Kharjura</i>	<i>Madhura/kashaya</i>	<i>Guru, Snighdha</i>	<i>Sheeta</i>	<i>Madhura</i>	<i>Decrease Vata pitta</i>
3	<i>Priyala</i>	<i>Madhura</i>	<i>Guru, Snighdha</i>	<i>Sheeta</i>	<i>Madhura</i>	<i>Decrease Vata pitta</i>
4	<i>Badara</i>	<i>Amla, Madhura, kashaya</i>	<i>Guru, Snighdha</i>	<i>Sheeta</i>	<i>Madhura</i>	<i>Decrease Vata pitta</i>
5.	<i>Dadima</i>	<i>Madhura, kashaya, Amla</i>	<i>Laghu, Snighdha</i>	<i>Anushna</i>	<i>Madhura</i>	<i>Balance Vata pitta kapha</i>
6	<i>Phalgu</i>	<i>Madhura</i>	<i>Guru, Snighdha</i>	<i>Sheeta</i>	<i>Madhura</i>	<i>Decrease Vata pitta</i>
7	<i>Parushaka</i>	<i>Madhura, Amla, Kashaya</i>	<i>Laghu, Snighdha</i>	<i>Sheeta</i>	<i>Madhura</i>	<i>Decrease Vata pitta</i>
8	<i>Ikshu</i>	<i>Madhura</i>	<i>Guru, Snighdha</i>	<i>Sheeta</i>	<i>Madhura</i>	<i>Decrease Vata pitta</i>
9	<i>Yava</i>	<i>Kashaya Madhura</i>	<i>Ruksha, Snighdha</i>	<i>Sheeta</i>	<i>Madhura</i>	<i>Decrease kapha pitta</i>
10	<i>Shashtika</i>	<i>Madhura, kashaya</i>	<i>Guru, Snighdha</i>	<i>Sheeta</i>	<i>Madhura</i>	<i>Balance Vata pitta kapha</i>

Table 3 Herbs of *Shramahara mahakashaya*- pharmacological effect as per Ayurveda & biomedicine

S.N	Content	Main action as per Ayurveda literature ¹⁹	Chemical constitutes	pharmacological effect
1	<i>Draksha</i>	<i>Balya</i> (increase strength) <i>Brunhana</i> (improve nourishment) <i>Vrushya</i> (aphrodisiac)	Various phenolic compounds, flavonoids, stilbenes	Antioxidant, antibacterial, anticancer, anti-inflammatory, antidiabetic activities, cardioprotective
2	<i>Kharjura</i>	<i>Balya</i> (increase strength) <i>Brunhana</i> (improve nourishment) <i>Vrushya</i> (aphrodisiac) <i>Tarpana</i>	carbohydrates, dietary fibre, enzymes, protein, fat, minerals, vitamins, phenolic acids and carotenoids(depend on ripe stage)	antioxidant, antimutagenic, anti-inflammatory, gastroprotective, hepatoprotective, nephroprotective, anticancer and immunostimulant activities
3	<i>Priyala</i>	<i>Balya</i> (increase strength) <i>Brunhana</i> (improve nourishment) <i>Vrushya</i> (aphrodisiac) <i>Hrudya</i> (act as cardio tonic)	phenolics, flavanoid, tannins, alkaloids, saponins	Antioxidant, antimicrobial, antifungal activity
4	<i>Badara</i>	<i>Hrudya</i> (act as cardio tonic) <i>Chadri nigrahana</i> (antiemetic) <i>Sukrala</i> (increase sperm count) <i>Brunhana</i> (improve nourishment)	vitamin C, phenolics, flavonoids, triterpenic acids, and polysaccharides(27 compound s were isolated)	anxiolytic, anticancer, antimicrobial, anti-inflammatory, anti-allergy, cognitive, antioxidant and wound healing properties



5.	<i>Dadima</i>	<i>Hrudya</i> (act as cardioc tonic)	Ellagic acid, ellagitannins, puniceic acid, flavonoids, anthocyanidins, anthocyanins, estrogenic flavonols and flavones	Antioxidant, anti-inflammatory, anticarcinogenic, antiatherogenic, antiglycemic
6	<i>Phalgu</i>	<i>Brunhana</i> (improve nourishment) <i>Tarpana</i>	phenolic compounds, phytosterols, organic acids, anthocyanin composition, triterpenoids, coumarins, and volatile compounds	antioxidant, hepatoprotective, anticancer, anti-inflammatory, hypolipidemic, hypoglycemic activity
7	<i>Parushaka</i>	<i>Raktaprasadaka</i> (increase blood)	Flavonoides, glycosides, saponins, phenolic acid, alkaloids, tannins	Antioxidant, Immunomodulatory effect, prevent body weight loss, Radical scavenging activity, antihyperglycemic activity
8	<i>Ikshu</i>	<i>Brunhana</i> (improve nourishment) <i>Vrushya</i> (aphrodisiac) <i>Balya</i> (increase strength) Mutral	Sucrose, fiber flavonoids, -O- and -C-glycosides, and phenolic acids	antioxidant activity, cholesterol-lowering properties, diuretic, analgesic
9	<i>Yava</i>	<i>Balya</i> (increase strength) <i>Sthairyakrut</i> (increase stability)	β -glucan dietary fibres, vitamin B1, B2, B6, calcium, Iron, zinc, phosphorus	Improve glucose tolerance reduce cholesterol*
10	<i>Shashatika</i>	<i>Balya</i> (increase strength) <i>Sthairyakrut</i> (increase stability)	carbohydrates, fatty acid profile, triglycerides, protein, thiamine, riboflavin, niacin, dietary fiber and micronutrient flavonoid, tricin	Antioxidant

Herbs of *Shramahara mahakashaya-*

Pharmacological action

Vitis vinifera fruits (*Draksha*) contain various active phenolic compounds, flavonoids, stilbenes derivative resveratrol⁹. So it has wide pharmacological action like antioxidant, anti-inflammatory, antimicrobial, cardioprotective, hepatoprotective, neuroprotective effects. So it's good health promoter.

The main chemical components of Date fruit (*Khajoor*) include carbohydrates, dietary fibre, enzymes, protein, fat, minerals, vitamins, phenolic acids and

carotenoids¹⁰. Hence it has great nutritional value as well as medicinal action like antioxidant, antimutagenic, anti-inflammatory, gastroprotective, hepatoprotective, nephroprotective, anticancer and immunostimulant activities. *B. lanzan* (*Priyala*) seeds are a rich source of protein (43.24%), fat (38%), and high dietary fiber content (18.50%) with many micronutrients. The phytochemical analysis revealed the presence of phenolics, flavanoid alkaloids, saponins and other secondary metabolites¹¹. Phytochemicals, mainly phenolics considered as the



important bioactive compounds which are responsible for multiple biological effects due to antioxidant activity.

Z. jujube (*Badara*) contains vitamin C, phenolics, flavonoids, triterpenic acids, and polysaccharides¹². So this fruit possesses many important biological properties, including antioxidant, neuroprotective, anticancer, anti-inflammatory, immunomodulatory, antiobesity, cardio, hepato and gastrointestinal protective activities.

Pomegranate (*Dadima*), juice, seeds and peels are a source of many nutrients but the pomegranate whole fruit can also be used for various medicinal purposes. The sweet types of pomegranates are said to be mildly laxative, while the less sweet types are believed to be good in inflammation of the stomach and in heart pain. Pomegranate is a potent antioxidant, superior to red wine and equal to or better than green tea. It has many pharmacological action like anti-inflammatory, anticarcinogenic, antiatherogenic, and antiglycemic¹³.

The dried fruits of *F. Carica* (*Phalgu*) have been reported as an important source of vitamins, minerals, carbohydrates, sugars, organic acids, and phenolic compounds¹⁴. The antioxidant potential of the phytoconstituents is responsible for its anticancer, hepatoprotective,

hypoglycemic, hypolipidemic, and antimicrobial activities.

The fruit of *Grewia asiatica* fruit (*Parushaka*) contain various bioactive compounds, like anthocyanins, tannins, phenolics, and flavonoids and has good amount of nutrients such as vitamins, minerals. These contains are indicated that fruit possesses considerable hypoglycemic, antioxidant, and immunomodulatory effects¹⁵.

Sugarcane (*Ikshu*) juice comprises of 70 - 75% water, 13 - 15% sucrose, and 10 - 15% fiber. flavonoids, -O- and -C-glycosides, and phenolic acids have also been identified. Thus sugarcane has antioxidant activity, cholesterol-lowering properties, diuretic, analgesic activity¹⁶.

Hordeum vulgare (*Yava*) is good source of fibres, vitamin B1, B2, B6, calcium, Iron, zinc, phosphorus. Fibre improves glucose tolerance and reduces plasma cholesterol level in body. So yava has antihyperglycemic and vascular protection activity¹⁷. *Yava* improves fatigue in Diabetes and hypercholesterolemia condition.

Shashitika (*O.sativa*) contain carbohydrates, fats, fatty acid, triglycerides, protein, thiamine, riboflavin, niacin, dietary fiber and micronutrient. Physicochemical properties and nutritive components were found higher in *Shashitika* than non-



medicinal rice varieties-jyothi and IR64¹⁸. Shalini V.nair et.al flavonoid, tricin is present in this type of rice at significantly higher levels. These constitutes are responsible for antioxidant property.

DISCUSSION

Fatigue is very commonly reporting symptom that is present in mild to severe form and interfere with daily routine work. It decreases physical and mental capacity. For improving quality of life, it is necessary to treat fatigue along with causative factors. In biomedicine, multivitamin, glucose, protein powder, anabolic steroids etc. are used for this purpose. In *ayurveda*, *Shramahara mahakashaya* is mentioned for improving fatigue. These herbs have *madhura rasa*, *madhura vipaka* and *sheet virya*¹⁹. So they can decrease vitiated *vata pitta* prominently. They have properties of *Balya*, *Bruhna*, *vashya*, *Sthairyakrut*, *hrudya*, *tarpana* etc¹⁹. So they may improve physical and mental health of body.

Carbohydrates, dietary fibres, enzymes, proteins, fats, minerals, vitamins, phenolic acids Flavonoides, glycosides, saponins, alkaloids, tannins etc. are available in these herbs. So these are good source of nutrients as well as antioxidant. Different experimental model described antioxidant,

antimutagenic, anti-inflammatory, Vasucular protection, cardioprotective, gastroprotective, hepatoprotective, nephroprotective, antihyperglycemic, anticancer, antimicrobial and immunostimulant activities more or less in each herb of this group. So these herbs may work on fatigue directly by nutrient and indirectly through work on underlying diseases.

Hence this *mahakashaya* herbs can be used for fatigue as sublimite in various disease.

CONCLUSION

Fatigue is a common symptom that occurred in various disease conditions. In the current scenario plants based medicine is a good way to stay healthy. *Shramahara mahakashaya*'s herbs are easily available in pure form. The above discussion clearly indicates that *Shramahara mahakashaya* are one of the important groups that increase the nourishment and strength of body so improve fatigue. Phytoconstituents of these herbs also protect the body from different diseases. This article will enhance the existing knowledge of *Shramahara mahakashaya*'s herbs, and also create awareness of the possible new therapeutic uses for the development of pharmaceutical entities for better health care in the near future.



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