



ENLIGHTENING CONCEPT OF FUNCTIONAL FOOD IN AYURVEDA

Review article

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ABSTRACT

Background: This article is about to explore functional food in Ayurveda. Food is a source of basic nutrition and energy. Functional food provides health benefits beyond it. It benefits the body by targeting one or more functions by enhancing physiological response and/or reducing the risk of diseases. Functional food can be conventional or modified. Ayurveda believes that food is a basic necessity for life, but beyond it is responsible for complexion, strength, intelligence, contentment of mind and soothing senses.

Aim: to study functional food in Ayurveda with special reference to Charak Samhita

Material and Methods: For understanding concept of functional food, scientific journals, articles and books were reviewed. Mainly Charak samhita sutrasthan was reviewed for Ayurvedic correlation. .

Conclusion: Around 12 categories of foods and their functions are mentioned .According to Ayurveda, most of the foods that we consume daily are functional. It has health promotive, preventive or curative actions beyond basic nutrition.

Keywords - Functional food, Ayurveda, charak samhita

INTRODUCTION: Food is the source of nutrition and energy. Consumption of balanced food provides basic nutrition and energy, so the body's physiological functions keep going ^[1]. It is believed that diet is important factor for many lifestyle diseases. Many countries are fighting with an increasing number of people affected with DM, HTN, cancer and obesity. Functional food can provide important nutrients that can help protect against diseases. It should provide health benefits beyond the provision of essential nutrients (e.g., vitamins and minerals), when they are consumed at efficacious levels as part of a varied diet on a regular basis.

Functional foods types

1. Conventional
2. Modified - enriched/ fortified

India has its own food culture. Its base is in Ayurveda. It believes food is supreme, it

nourishes body and mind^[2]. Ayurveda has explained food habits, food items, processes, criteria, indication, contraindications in detail so which food should be included in the plate/ avoid can be decided. Ayurveda believes most of the food items which we consume daily are functional and if consumed wisely one can live up to 100years ^[3]. There are some general rules regarding it. Some food items have a proactive, promotive, preventive and curative role in health, so they must be consumed daily by each person. While other food items can benefit your body according to *Doshavastha* (current balance of *Tridosha*) and *Prakriti* (Body Constitution) i.e. according to your personal needs.

Conventional food is base and most of the population consumes it, so here we are

reviewing conventional functional food in charak samhita.

Ayurveda advises, one should consume food that maintains health and prevents diseases which resembles to functional food^[4].

MATERIAL AND METHODS

1. Article, journal and books related to functional food reviewed to understand concept of functional food.

2. Charak samhita reviewed and studied with aspect of functional food

DISCUSSION

Functional food has following properties

1. It is a food (not a capsule, tablet, or powder) derived from natural ingredients; Most of the food is animal/plant source or available naturally

Ayurveda mentioned classification of food in 12 groups. It includes *shookdhanya* (cereals), *shamidhanya*(pulses), *shakvarga* (vegetables),*phala varg a*(fruits), *Mamsavarga* (meat),*Gorasavarga* (Dairy), *Ikshuvarga*(sugars and honey),*Jalavarga* (water),*haritavarg*(food for raw consumption),*madyavarga*(alcohols),

kritanna varga(processed food) and *aaharyogi dravya*(oils, salts,spices and condiments).[5]

2. It can and should be consumed as part of the daily diet

Ayurveda has two categories while applying siddhant, generalized and specific.

Generalized are food items that should be consumed by each and daily. It includes food that *nitya sevaneeya/abhyaasneey dravya* [6] and *Hitakar dravyas*[7]

1. Desi cow ghee (obtained from native species of cow and by traditional method i.e. milk- curd- butter process)

2. Rice - Native varieties of rice both white and red rice

3. *Mudga* -Green gram

4. *Saindhav* - rock salt

5. *Amla* - Indian gooseberry

6. *Yava* - Barley *Hordeum vulgare*

7. *Jangal mamsa* - goat meat, meat of deer species

8. Honey

Table 1. Information of Nitya Abhyaasaniya functions

No	Food	Function
1	<i>Goghrita</i> (A2 type cow ghee)	Enhances Memory, intellect, reproductive capacity, metabolism, vitality
2	Rice	Nourishing, enhances reproductive capacity, balances three <i>Dosha</i> , stability
3	Green gram	Balances <i>kapha</i> and <i>pitta</i> , cleansing property
4	Rock salt	Enhances taste, appetite, beneficial for vision, Aphrodisiacs, balances three <i>Dosha</i>
5	<i>Amla</i>	Enhances appetite and digestion, nourishing, delay aging, enhances intellect , strengthen senses
6	<i>Yava</i>	Enhances Strength and stability

7	<i>Jangal Mamsa</i>	Easy to digest and beneficial to humans Goat meat nourishes all tissue and maintains three <i>dosha</i>
8	Honey	Wound healing property and balances <i>pitta</i> and <i>kapha</i>

Hitkar dravya

It includes Red rice, green gram, rock salt, desi cow ghee, desi cow milk, sesame oil, pork, chicken, goat meat, ginger, raisins, sugar, *jeevanti*. it is beneficial for health.

3. It has a particular function when eaten, serving to regulate a particular body process.

Some food shows acceleration physiological functions such as

1. Godhum (wheat) has wound/ fracture healing properties.
2. *Maasha* (Black gram) has aphrodisiacs property

3. *Ajamamsa* (Goat meat) has quick nourishing property

4. *Trapus* (cucumber) has diuretic property.

5. Sesame is beneficial for skin and hair

5. Aphrodisiacs - Black gram, dates, asparagus root, raisins, figs, liquorice, sugar, cow ghee, cow milk, Ginger powder, water chestnut, Rice, wheat, honey, long pepper.

6. *Peya* (rice gruel cooked with 14 part of water) increases digestive capacity

7. Puffed grains mostly useful in weight loss

Table 2 Food regulating particular body process

Sr no	Food	Regulation of body process
1	<i>shastishali</i>	stability
2	Barley	stability
3	Wheat	has wound/ fracture healing
4	Greengram	Cleansing
5	Black gram	Aphrodisiac
6	Chawli	Enhance taste, cleansing
7	Horse gram	Solidify stool
8	Moth	Solidify stool
9	Chana	Causing dryness
10	Masoor	Causing dryness
11	Sesame	Enhances strength, skin and hair
12	Goat meat	Weight gain
13	Sheep meat	Weight gain
14	Chicken	Enhances strength, voice, weight, aphrodisiac
15	Quail	Promoting digestion
16	<i>Vaastuk</i>	Solidify stool
17	<i>tanduliyak</i>	Nullify toxins

4. Enhancement of biological defense mechanisms-

Food that has *balya* property (strength enhancing), *Agnideepan* (regulates *agni*) and increasing *Oja* are responsible for body's defense mechanism. It includes

Drakshasava Grape wine, *yava*, bamboo rice, Black gram, chicken, pork, fish, egg, *vidari Kanda*, mango, coconut, almond, walnut, pistachio, pine, apricot, onion, Desi cow milk, curd, Desi cow ghee, flour made with roasted grains, sugar, sesame, goat

meat, animal fat, bone marrow, dry ginger, black pepper, asafoetida, rock salt, coriander seeds, cumin seeds, carom seeds, *Manda*, *peya*, *vilepi*

5. Prevention of diseases/disorders

1. Ayurveda believes imbalance in three *Dosha* is the cause of diseases. In Charaka Samhita they have elaborated role of food on *Dosha*, so one can consume wisely [8] Green gram is balancing *kapha* and *pitta* so it will act as functional food for those conditions Black gram balanced *vata*, so it will act as functional food in *vata* dominant diseases/ conditions.

Charaka Samhita have mentioned it in details

2. These food items are *dhatusatmyakar* (wholesome to all tissues) so prevents diseases/disorders

It includes Meat soup, *Manda*, *lajamanda* *godugdha*, *goghrita*, *amaranth*, goose foot vegetable, goat meat, barley, *shashtishali* rice

6. Recovery from specific diseases

Some food help in speedy recovery from diseases by balancing *Dosha*, for example

Table 3 Food useful in various diseases

No	Food	Should used in diseases
1	Horse gram	<i>Kaas, Hikka, shwas, arsha</i>
2	Moth beans	<i>Raktapitta</i>
3	Quail meat	<i>Sannipaat vikar</i>
4	Beef	<i>Shushka kaas, peenas, atyagni, vishamjwar, mamsakahay</i>
5	Eggs	<i>Kaas, hridroga, kshat,</i>
6	<i>Changeri</i>	<i>Grahani, Arsha</i>
7	<i>Upodika</i>	Alcohol hangover
8	<i>Tanduliyak</i>	<i>Raktapitta</i>
9	Raisins	<i>Trushna, daah, jwar, shwas, raktapitta, kshat, kshay, udavarta, swarbheda, kaas</i>
10	Dates	<i>Kshay, abhighat, dah</i>
11	Guava	<i>Aruchi, Atyagni</i>
12	Ginger	<i>Vibandha</i>
13	Basil	<i>Hikka, shwas, kaas, parshavashool</i>

14	Red onion	<i>Arsha</i>
15	Garlic	<i>Krimi, kushtha, kilas, gulma</i>
16	Buffalo milk	<i>Anidra, atyagni</i>
17	Goat milk	<i>Raktapitta, atisar, kshay, kaas, jwar</i>
18	Curd	<i>Peenas, atisar, sheetak, vishamjwar, aruchi, mutrakeuccha, karshya</i>
19	Butter	<i>Grahani, arsha, ardita, aruchi</i>
20	<i>Peya</i>	<i>Jwar</i>

7. Control mental disorders – Hridya (pleasing) foods control mental disorders. It includes *goghrita*, curd, star gooseberry, *sidhu* (wine prepared from sugarcane), grape wine, *vilepi* (rice gruel cooked with 4 part of water), rag shadav (chautneys), dry ginger, meat soup, carrom seeds, drumstick, fennel seeds, mustard seeds

8. Slowing of the aging process-

Rasayan foods nourishes all tissues and maintain vitality[9]. It slow down the process of aging. It includes *Godugdha*, *goghrita* , *amla*(Indian gooseberry), cardamom, sesame oil, honey, raisins, long pepper, asparagus root, liquorice, goat meat, kaakmachi

CONCLUSION

Charak Samhita have described the functionality of food in detail. It advices to consume functional food. Each food has some role according to quality and action on *Dosha*. It has described contraindications and cautions also. Some foods and preparations are helpful in diseases. It can prevent further complications. It can reverse the condition. Most foods derived from nature are functional. Cooking Processes, additives, storage have a great impact on functionality of food. One can get more

health benefits from food, if they choose food wisely. *Prakriti, Desh* , season, impact of *Dosha* are the factors that should be considered. Blind followings of some trends can cause health issues. People having sedentary lifestyle should consider digestion capacity before consuming.

Scope for further study

1. Study of modified functional food in Ayurveda
2. Study of process that enhanced or fortified food in Ayurveda
3. Study of factors having positive or negative effect on functionality of food
4. Designing diet according to personal requirements

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