

## ***UNDERSTANDING THE CONCEPT OF THERAPEUTIC FOOD IN AYURVEDA - A REVIEW ARTICLE***

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### **ABSTRACT**

Any nutritious substance that people or animals eat or drink or those plants absorb in order to maintain life and growth is called as food. In the types of food, therapeutic food is foods which are used in the healthy individuals and diseased condition. Ex. Plumpy nut, Micro nutrient powder (MNP), corn soya blend etc. This concept is not new to *Ayurveda*, it is said as long back in our texts as *Pathya kalpana*. *Pathya kalpanas* are the food preparations used in the both *swasta* and *atura* and they produce soothing effect on both *shareera* and *manas*. So in this article an effort has been made to understand the concept of therapeutic food in *Ayurveda*, its similarities, importance and applications.

**Keywords:** Therapeutic food, *Pathya kalpana*, *Manda*, *Yavagu*.

### **INTRODUCTION**

Any nutritious substance that people or animals eat or drink or those plants absorb in order to maintain life and growth is called as food. Food is an essential part of everyone's lives. It gives energy and nutrients to growth and development, to be healthy and active, to move, work, play, think and learn. Food is made up of macro nutrients and micro nutrients. Carbohydrate, proteins and fats are macro nutrients and vitamins, minerals and water are micro nutrients. Now it is a fact that not every

food item has all of these macro nutrients in proportions those bodies requires which means that we need to have a variety of foods to fulfil our daily requirements of these nutrients. In general, lots of vegetables and fruits are needed to maintain the balance of vitamins and minerals along with carbohydrate, milk and dairy products for fat and proteins, and grains and meat products for proteins and more of proteins and fats. To fulfil these drawbacks and improve the health condition of the human

beings the concept or foods called “Therapeutic foods” evolved. The food which helps in the diseased and in the well being of the healthy person is therapeutic foods. Concept of therapeutic food is not new to Ayurveda, on the basis of ingredients used in the preparation of therapeutic food and functions of therapeutic food it can be correlated to *pathya kalpanas* explained in *Ayurvedic* texts.

#### **AIMS AND OBJECTIVES:**

1. Collect the information available on therapeutic food in Ayurveda.
2. Similarities between Therapeutic food and *pathya kalpana*.

#### **MATERIALS AND METHODS:**

For the above study the materials available in classical texts book of Ayurveda, modern texts, journals, materials collected in the different symposia etc are used.

#### **REVIEW**

##### **Therapeutic Food**

##### **Derivation of the word therapeutic food:**

Therapeutic Food term is the combination two words, therapeutic and food. The word therapeutic is coined from the Greek term Therapeutikos. This means which produces good effects on body and mind and which helps in the treatment of disease<sup>1</sup>.

**Synonyms of the word therapeutic** are curative, healing, officinal, remedial, restorative and medicinal.<sup>2</sup>

##### **Definition of therapeutic food:**

Therapeutic foods are foods designed for specific nutritional, therapeutic purposes as a form of dietary supplement. The primary ex-

amples of therapeutic foods are used to supplement the diets of persons with special nutrition requirements. Therapeutic foods are also called by the name Ready to use therapeutic foods.<sup>3</sup>

#### **Importance of therapeutic foods:**

- Ready to use therapeutic foods are designed and manufactured to ensure that, they are ready to eat straight from the packaging.
- Ready to use therapeutic food is any appropriate food product or products, enhanced nutritionally, and thus made to be more energy-dense and more nutrient-dense.
- These foods are needed usually in emergency situations it should be used in effect as medicine, in conjunction with necessary therapy, for as short a time as possible.<sup>4</sup>

#### **Applications of therapeutic foods with examples**

##### **Ex.1. Compressed bars<sup>5</sup>**

**Definition:** Bars of compressed food, composed of baked wheat flour, vegetable fat, sugars, soya protein concentrate and malt extract.

**Application:** They are used in disaster relief operation, when local food can't be distributed or prepared.

##### **Nutritional value per 56 g compressed bar:**

- Energy 250kcal.
- Protein 8.1g.
- Fat 9.4 g.

##### **Ex.2. Plumpy nut.<sup>6</sup>**

**Definition-** Plumpy nut is a peanut based paste used for treatment of severe acute malnutrition manufactured by a French company, nutriset.

**Application;** Plumpy nut is lipid based nutrient supplement used in malnutrition patients those needed, essential fatty acids.

Nutritional	value	(per100g)
Energy-	534Kcal/	545K
Protein	-12.7g/	13.6g
Fat-	34.5g /	35.7g

Like this other therapeutic foods like micronutrient powder (MNP), corn, soya blend or wheat soya blend, chick pea sesame is the other examples of therapeutic food which are used in the emergency conditions.

Concept of therapeutic food is not new to Ayurveda, based on the ingredients used in the preparations and functions of the therapeutic foods it is correlated to “*Pathya kalpanas*” concept explained in Ayurvedic texts.

### **Pathya kalpana:**

#### **Derivation of pathya**

The word *Pathya* is made up of (*patin+ dharmapatyarthanyayadhanapete* 4|4|62|iti yat. It is made up of ‘*patin*’ *dhatu* and ‘*dharmapatyarthanyayadhanapete*’ *prathyaya*.

#### **Synonyms of pathya;**<sup>7</sup>

- *Chikitsadho hitakaraka*- which is wholesome in *chikitsa*.
- *Karanam*- Cause for health
- *Hitam*-It is conducive to *shareera*.

**Meanings of pathya:** *Pathya* means ‘belonging to the way’. Suitable, fit, proper, wholesome, salutary, especially said to diet in medical sense.

### **Derivation of the word kalpana**

- “*Kalpana sajjana same*” and “*Keti kalpana*” (*Am.Ko*)<sup>8</sup>

The word *Kalpana* means doing, performing or composition.

#### **Definition of kalpana**

- According to *Chakrapaani*,<sup>9</sup> “*Kalpanam upayogartham prakalpanam samskaranam iti*”(commentary on *Cha.Su. 4/7*). The process through which *samskara* is done is *kalpana*.

#### **Definition of pathya kalpana**

“*Pathyam roginam hitakaram pathyam*”(*raja nighantu*)

Which is *hita* for *rogi* is called *pathya*.

“*pathyam ayushyam*”(*raja nighantu*)

Which increases life is called *pathya*.

*Pathya kalpanas* are preparation of food which is wholesome to both body and mind without causing any untoward effect. They are useful in both in healthy and diseased persons.

### **Importance of pathya kalpana**

‘*Ayurveda*’- the science of health and healing gives importance to the method of preparation of foods in addition to its components and the prescribed diets should be suitable to the constitution of the person. It should cause wholesome effect on both body and mind of an individual without causing any untoward effect<sup>81</sup>. All these benefits of *pathya ahara* can be ripped off with the help of *Kritanna varga* described in various ancient texts. Properties of these *Kritanna* differ from each other depending upon the method of preparation even if material used is the same. In case of *manda*, *peya*, *yavagu* and *vilepi*, the amount of water used for cooking and then amount of liquid

and solid content is different for each of them. This determines qualities like heaviness or lightness of food for digestion etc.

### Applications of *pathya kalpana*

In *Yogaratanakara* it is said that for the treatment of diseases aetiology, drug treatment and *Pathya* are three important factors which should be studied thoroughly before starting the treatment. Judicious planning of treatment by proper understanding of these three factors always yields a successful eradication of disease. *Yogaratanakara* uses the metaphor of *Ankura* (seedling) is used for progressive form of disease. This *Ankura* will dry and be destroyed if it is not nourished by water; similarly disease will be destroyed if a patient does not consume *Apathya ahara*. (*Yoga ratnakara*) In all diseases *apathya* should be avoided because *apathya* is predisposing factor for various diseases and helps in fast progression of pathos physiology. As climbers and plants grow in rainy season similarly diseases will increase due to *apathyas*. Only *pathya* also can cure diseases but one who does not follow *pathya* cannot be cured by the use of hundreds of drugs. (*Yoga ratnakara*).

*Bhela Samhita* also explains about merits of *pathya* and demerits of *apathya* in the *Sutrasthana*. *Pathya ahara* nourishes all *dhatu*s and *srotasa* leading to complete nutrition of body. *Pathya ahara* helps to detoxify the body by getting rid of vitiated *dosha*. Contrary to this, *apathya ahara* helps in vitiation of *Vata* etc. *doshas*. Hence for maintenance of health and treating diseases *pathya ahara* should be consumed.

### Examples of *pathya kalpanas*:

#### *Manda*<sup>10</sup>.

**Definition** – This *Kalpana* is prepared by using rice and water in **1:14 proportion**. The rice is cooked in said proportion of water and only water content of the prepared formulation is collected as *Manda* (watery portion of rice gruel).

**Properties of *manda*** -*Laghu*, *Sheeta*.

**Biological actions:** *Deepana*, *Pachana*, *Grahi*, *Vatanulomaka*, *Kaphaghna*.

**Indications:** *Jwara*, *Atisara*, *Trishna*, After *Vamana*, *Virechana*, After Exertion, After Fasting.

#### Nutritive values of *Manda kalpana*

**Table 1:** showing the nutritive value of *manda kalpana* per 100gm

Energy	164k cal
Protein	4.5gm
Fat	4.1gm
Carbohydrates	27.3gm
Calcium	0.12gm
Phosphorus	0.11gm
iron	0.2 gm
Thiamine	0.07mg
Nicotinic acid	0.1mg
Riboflavin	0.26mg

### ***Peya***<sup>11</sup>

**Definition-** *Kalpana* prepared by using rice and water in 1:14 proportion. The rice is cooked in said proportion of water and then maximum watery content of the prepared formulation is collected with few grains of cooked rice is known as *Peya* (rice gruel).

- ❖ **Biological properties:** *Laghu*
- ❖ **Biological actions:** *Deepana, Pachana, Vatanulomaka, Dhatupushtikara.*
- ❖ **Indications:** *Jwara, Atisara.*
- ❖ **Nutritive values of *Peya Kalpana***

**Table 2:** showing the nutritive value of *peya kalpana* per 100gm

Energy	94 Kcal
Protein	2.7 gm
Fat	2.2gm
Carbohydrates	15.8gm
Calcium	0.11gm
Phosphorus	0.07gm
iron	0.25gm
Thiamine	0.04mg
Nicotinic acid	0.11mg
Riboflavin	0.12mg
Vitamin c	3.3mg

### ***Yavagu***<sup>12</sup>

**Definition** –*Yavagu* is a type of gruel prepared with six times water to nearly thick or semi-solid consistency.

#### **Classifications of *yavagu*-**

*Acharya Charaka* mentioned 28 types of *yavagu* based on their *karma* in *aragwadhi adhyaya* like,

1. *Shoolahari yavagu*<sup>74</sup>
2. *Pachani yavagu*
3. *Brumhani yavagu* etc.

**Indicated conditions.** -Before *Siravedha, Garbhini, Unmaada, Mandagni, Trushna*, Like this other *pathya kalpanas* like *yusha, mamsa rasa, takra kalpana, mantha kalpana* etc are understood.

**Table 3:** showing the *pathya kalpana*'s explained in *brihatrayi*<sup>13</sup>

Sl.no	<i>Krtanna</i>	<i>Charaka</i>	<i>Susruta</i>	<i>Vagbhata</i>
1	<i>Peya</i>	+	+	+
2	<i>Vilepi</i>	+	+	+
3	<i>Manada</i>	+	+	+
4	<i>Laja peya</i>	+	+	+
5	<i>Laja manda</i>	+	-	+
6	<i>Laja saktu</i>	+	-	+
7	<i>Odana</i>	+	+	+
8	<i>Kulmasa</i>	+	-	-
9	<i>Yusa and rasa</i>	+	+	-

10	Saktu	+	-	+
11	Yava pupa and yava vatya	+	-	-
12	Bhakshya	+	-	-
13	Vesavara	+	+	+
14	Pupaka	+	-	-
15	Vimardaka	+	-	-
16	Rasala	+	+	-
17	Panaka	+	-	-
18	Raga sadava	+	+	-
19	Leha	+	-	-
20	Sukta	+	-	-
21	Paayasa	-	+	-
22	Krashara	-	+	-
23	Mamsa rasa	-	+	-
24.	Shakha	-	+	-
25	Parishuska mamsa	-	+	-
26	Udruta mamsa	-	+	-
27	Khaniska mamsa	-	+	-
28	Mamsa rasa	-	+	+
29	Nirastita mamsa	-	+	-
30	Mudga yusha	-	+	-
31	Raga kadava	-	+	-
32.	Raga sadava	-	+	-
33.	Prathuka	-	-	-
35.	Dhana	-	+	-
36.	Pinyaka	-	+	+

## DISCUSSION

### Discussion on analysis of therapeutic foods in Ayurveda

Analysis of concept of therapeutic foods can be explained in two ways,

1. By analysing the concept of therapeutic food w.s.r to *pathya kalpana*
2. Analysis of therapeutic foods as explained in different Ayurvedic texts.

1. By analysing the concept of therapeutic food w.s.r to *pathya kalpana*
2. Upon analysing the very definition of therapeutic food, it is the food which performs the nutritive & therapeutic function by the processing, there by ultimately producing the good effects on the body.

**Table4:** Showing the correlated concepts of therapeutic food to that of *pathya kalpana*

Therapeutic food	<i>Pathya kalpana</i>
Prepared by processing the food	<i>Samskarana</i> of <i>ahara</i> done to enhance its <i>guna-karmas</i> .
Fulfils Nutritive requirements both in healthy & diseased	<i>Santarpana karma</i> ( <i>balya, bruhmana</i> etc) Both in <i>swastha &amp; atura</i>

Used in treating the disease condition	<i>Doshahara&amp;vyadhiharatva karma (svedajanaka, agnide-paka etc)</i>
Produces good effects on body & mind	<i>Hita to sharira &amp; manas</i>

The *pathya kalpana* when looked upon in this regard can be stated as follows,

1. Producing good effects on body & mind – *hita to sharira & mana*. The *hitaahara* is one which does *prakritisthapana* of *samadhatu&samikarana* of *vishamadhatu*.
2. Processing of food is done to enhance its properties – *Samskara* of *ahara* to induce *gunavridhi*, thereby *karma prapthi*. On *samskara*, even *aahitaahara* gets converts itself into *hitaahara* (Cha.Su.27/32)
3. The processed food fulfilling the nutritive requirements – *Santarpana karma* of *kritannas*
  - The *kritannas* of *kritannavarga* does *santarpana karma* in both *swastha & atura* as per the requirement.
  - *Sadyobalakara karma* of *Masuradhi mantha*.
  - *Pranadhrana* by *manda*
  - *Kshudahara&dourbalyahara* by *peya*
  - *Tarpana&hrudya karma* of *vilepi*
  - *Rochana* by *shandaki*
  - *Brumhana, vrushya, balya, ruchiprada, tarpana & hrudya karma* by *rasala*
  - *Balya karma* by *payasa&krishara*
  - *Brumhana & balya karma* of *odana* which is prepared out of *mamsa-phala-kanda-vidala*

- *Snigdha karma* by *khada*
1. The processed food alleviating the disease conditions – the *doshahara-vyadhiharatva* of *kritannas*.
  - The *kritannas* upon their *samskara* alleviate the *doshas* & helps to cure *vyadhis*.
  - *Chardi hara karma* of *Masuradhi mantha*.
  - *Svedajanakakrama* of *manda, peya*– In *jwara*
  - *Agni deepana karma* of *manda, peya & vilepi* – In *mandagni* as a result *vyadhi* or after *shodhana*
  - *Grahi karma* of *vilepi* - in *atisara*
  - *Vatanulomaka karma* of *peya, shukta* – In *udavarta*

Hence, the description of therapeutic food can be rightly addressed for *kritannavarga aharadravyas*. These *kritannas* forms one illustration of *hitaaharaupayoga*.

#### Discussion on Similarities between Therapeutic food and *Pathya kalpana*

Both therapeutic food and *pathya kalpanas* are conducive to healthy and diseased person and produce good effect on mind and body. Some of the similarities between therapeutic food and *pathya kalpanas* are,

**Table 5:** showing the similarities between Therapeutic food and *pathya kalpana*

Sl.no	Therapeutic food	<i>Pathya kalpana</i>
1	These are easy to prepare	Easy to prepare
2	Easy to consume	Easy to consume

3	Prepared by with or without adding water	Preparation of <i>pathya kalpana</i> water is essential.
4	Made from easily available drugs ex. Pea nut	Made from easily available food substance like <i>shas-tika, shami dhanyas</i> .
5	Effective in both healthy and diseased individual.	Effective in <i>swasta</i> and <i>atura</i>
6	Used in emergency conditions like disaster, earthquake. Ex. Compressed bars in disaster management.	Used in emergency condition of the disease. Ex. <i>Masuradhi mantha</i> in <i>tridosha janya chardi</i> .

**Discussion on similarities between *pathya kalpana* and therapeutic food on their nutritive values**

Both *pathya kalpanas* and therapeutic foods are made up of macro and micro nutrients. They provide energy, proteins and minerals.

**Table 6:** showing nutritive values of Compressed bar and *chanaka yusha*

Example of therapeutic food	Example of <i>pathya kalpana</i>
Ready to use Compressed bar(50gm)	<i>Chanaka Yusha</i> (100gm)
Energy – 450Kcal	Energy- 188Kcal
protein- 8.1gm	Protein- 6.7gm
Fat- 9.4gm	Fat- 10.9 gm
Iron- 0.2gm	iron- 2.5gm
Ribo flavin- 0.26mg	Riboflavin- 0.07

Both ready to use compressed bars and *chanaka yusha* are had approximately same nutritive values. Compressed bars are used to

treat severe acute malnutrition. So *chanaka yusha* also provided in the treatment of severe acute malnutrition.

**Table7:** showing nutritive values of micro nutrient powder and *peya kalpna*.

Example of therapeutic food	Example of <i>pathya kalpana</i>
Micro nutrient per sachet	<i>Peya kalpana</i>
Calcium- 20gm	Calcium- 0.12gm
Phosphorus- 15gm	Phosphorus- 0.11gm
iron- 0.2gm	iron-0.2gm
Thiamine- 1mg	Thiamine- 0.07mg
Nicotinic acid – 0.9mg	Nicotinic acid -0.1mg
Riboflavin- 1mg	Riboflavin- 0.26mg

Micro nutrient powder is a rich source of minerals and vitamins and it is used in micro nutrient deficiency disorders. *Manda kalpana* is also having approximately same micro nutrients as that of Micro nutrient powder. So it can be given in the micro nutrient deficiency disorders.

From the above comparison, nutritive values of therapeutic food and *pathya kalpana* are approximately same, *pathya kalpanas* are used in the treatment where therapeutic foods are used.

## CONCLUSION

Therapeutic foods and *pathya kalpanas* are not have many differences; these are the food preparations which are used in emergency condition, beneficial for both diseased and well being of healthy person and also produce soothing effect on *shareera* and *manas*.

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