



Review Article

## CONCEPT OF APATARPANA: BIRD'S EYE VIEW

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### Article info

#### Article History:

Received: 12-01-2023

Revised: 01-02-2023

Accepted: 16-02-2023

#### KEYWORDS:

Trayopa-  
Stambha,  
Kuposana-  
Janyavyadhi,  
Apatarpana,  
Agnimandya,  
Langhana.

### ABSTRACT

Ayurveda has universal and person-centric approach in relation to health and diseases, which requires essential consideration of several factors in the process of diagnostic work-up. Guidelines regarding *Ahara-vihara*, *Nidra* and *Brahmcharya* are elaborately described in different Ayurvedic compendium in scientific way. One needs to follow these principles or guidelines to achieve *Purushartha*, namely *Dharma* (doing activities based on morality), *Artha* (economic prosperity), *Kama* (desire), and *Moksha* (self-realization/liberation). For the maintenance of homeostasis in the body (*Dhatusamyā*) one must follow the instructions regarding daily and seasonal regimens (*Dinaharya*, *Ratricharya* and *Ritucharya*) and treatment modalities of respective diseases. Treatment procedure also depends on individual's *Prakriti*, *Desha*, *Kala*, *Matra* etc. According to Ayurveda all treatment modalities can be divided in two folds i.e., *Santarpana* and *Apatarpana*. *Apatarpana* in terms of malnutrition is responsible for developing of several kinds of *Kuposana-janya-vyadhi* or diseases. *Agni vaisamyā* is prime factors for genesis of all diseases as well as *Kuposana janya-vyadhi*. Based on severity and etiology they are different in type such as *Karshya*, *Phakka*, etc. In India 40% of world's malnourished children and 35% of developing worlds low-birth weight infants are present. Hence, *Agni dipana* and proper nutrition plays a very crucial role to solve all major problems related to *Apatarpana*. In the first step, if we treat the *Agnidusti* and provide proper nutrition, then breaks the vicious chain of pathogenesis of all *Apatarpanaja vyadhis*. The study of *Apatarpana* is very much important in the field of *Chikitsa* to maintain the quality life.

### INTRODUCTION

Diet is most indispensable factors to promote good health and to prevent diseases. Proper nutritional status based on *Sauhityamatra* (proper quantity of food), *Abhyavaharana shakti*, *Jarana shakti* or *Agni* (digestive power) and others factors according to the respective person.<sup>[1]</sup> Nutrition is increasingly being recognized as a vital indicator of the individual and community health to reduce prevalence of *Kuposana* i.e., malnutrition.

With the advancement of the era, nutritional science evolved in an elaborated and organized way. But different types of lifestyle disorder like obesity,

diabetes mellitus, hypertension, atherosclerosis etc. those which comes under chronic non-communicable diseases (NCDs) and PEM, Marasmus, Kwashiorkor etc. are found in large percentage due to over-nutrition or due to malnutrition, which has been depicted in our classics under the heading of *Santarpaniya-adhyaya*.<sup>[2]</sup> In pathological conditions or *Dhatu-vaikritavastha*, *Santarpana* and *Apatarpana* are considered as a treatment procedure also. For example, in *Sthoulya-Guru* but *Apatarpana* type and in *Karshya laghu* but *Santarpana* type<sup>[3]</sup> treatment are given.

*Apatarpana* as a treatment is the basic fundamental principles which are mentioned in *Charaka Samhita*. It is associated with balanced diet with calories restriction and helps to maintain *Dhatusamyā*. *Apatarpana* itself contains *Langhana*, *Langhana-pachana*, and *Dosha-vasechana upakrama*.<sup>[4]</sup> Considering, the clinical importance of *Apatarpana*, it is prime need of hour to explain *Hetu sutra* (description of causes of health and diseases), *Linga*

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<https://doi.org/10.47070/ayushdhara.v10i1.1158>

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*sutra* (description of features of health and diseases) and *Aushadha Sutra* (treatment for promotion of health and cure of diseases) in the field of medicine along with its modern interpretation.

**MATERIALS AND METHODS**

The ancient authentic Ayurvedic literature and books of modern medical science has been studied to explain the concept of *Apatarpana*. The online line search engine i.e., Google Search, Pub Med database, SCOPUS Data base and others sources from where, the word *Apatarpana* and its related word i.e., *Langhana*, *Langhana-pachana*, *Upavas* etc has been searched out to make a clear concept. All relevant information has been collected and made an interpretation accordingly.

**REVIEW AND DISCUSSION**

**Concept of *Apatarpana* in Ayurveda**

**Etymology of the term '*Apatarpana*'**

अपतर्पण [5] = अप + तृप - भावे ल्युट्

अपगतं तर्पणं यस्य वा गतलोपः तर्पणशून्ये त्रि [6] ।

अप-गतं तर्पणं तृप्त्यभावो यस्य तत् । गतलोपः। तृप्तिशून्यः ।

*Tarpana* or *Tripti* means to satisfy.

तर्पणम् means to satisfy, अपतर्पण- Absence of satisfaction.

अपतर्पणम् अभोजनं [7]

**Types of *Apatarpana***

Means- To avoid food or follow the fasting. Synonym of *Apatarpana* is *Langhanam* which denotes *Anashanam* i.e., fasting [8].

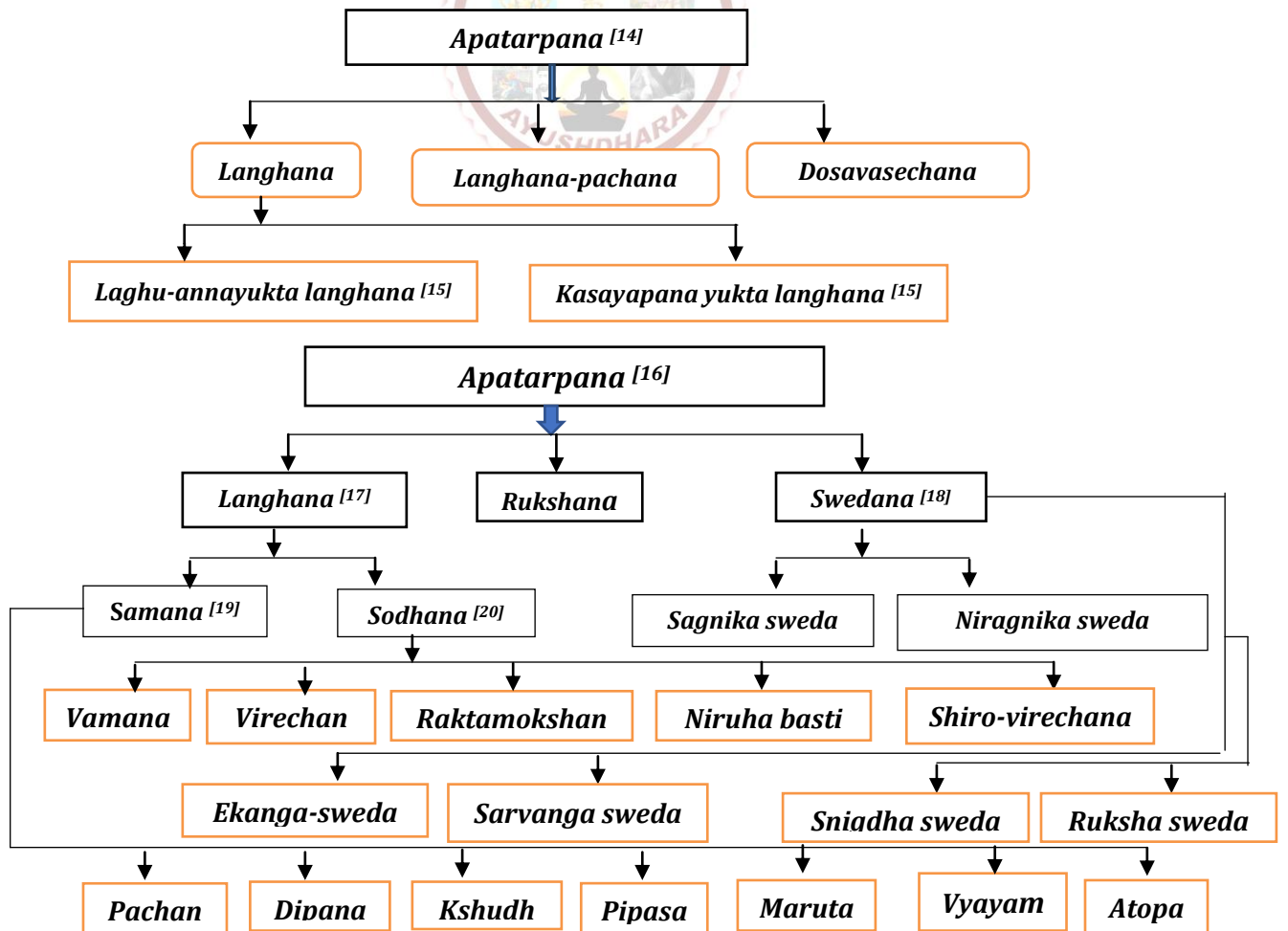
**Definition of *Apatarpana* as *Chikitsa***

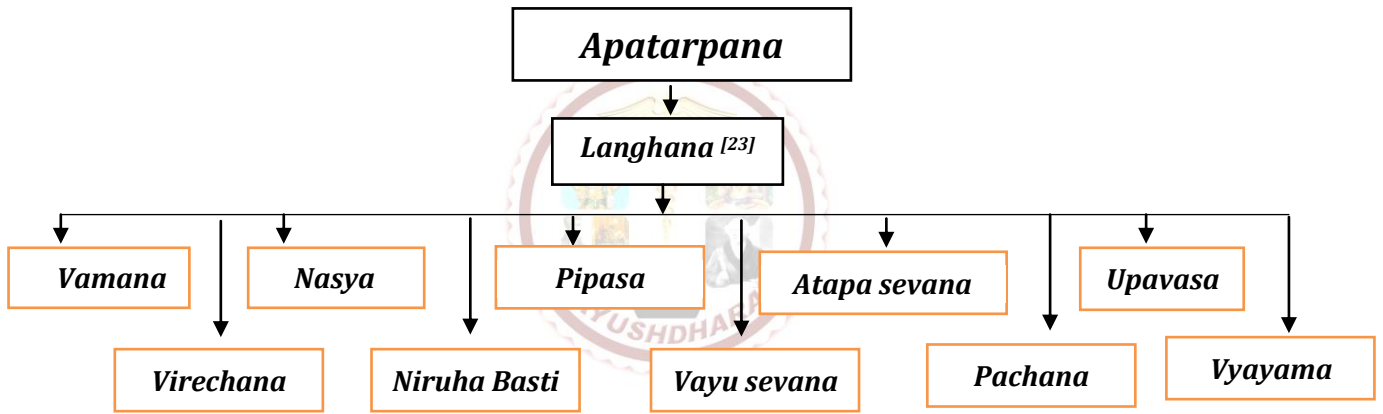
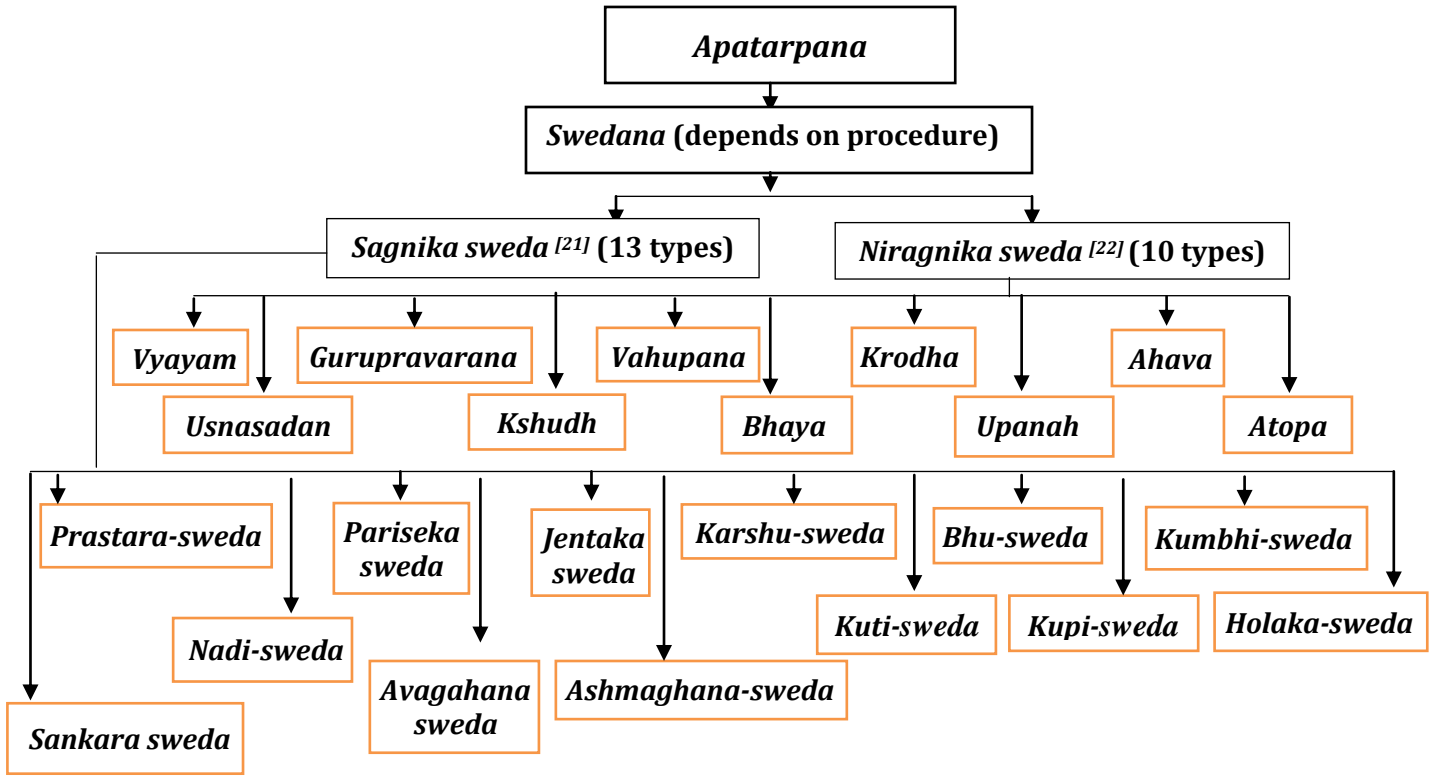
The term *Apatarpana* is mentioned in *Brihatrayi* as therapy or cause of a disease.

Acharya Charaka has mentioned *Apatarpana* as a *Chikitsa* in context to *Jwara* [9] *Janapadodwamsa* [10], etc. *Apatarpana* can be applied as a treatment procedure in the different state of *Dosa*.

*Apatarpana* in terms of *Abhojanam* (fasting) is the first line of treatment described in the context of *Vrana-chikitsa*. [11] It is also applicable in *Amavastha* for the *Amapachana*. [12]

Excessive physical and/or mental activities without intake of proper nutrition cause nutritional deficiency disorders like wasting or psychosis. High calorie or food in excess quantity and nutrition, lack of physical activity (or little exercise) leads to increase body tissues, which ultimately accelerate to develop various metabolic disorders like obesity, atherosclerosis etc. These conditions are to be treated through *Apatarpana* in terms of reduction (*Langhana*) [13] along with regimen of physical exercise, adequate dietary changes and proper administration of drugs.





**Hetu sutra (causative factors) of Apatarpana [24]**

The causative factors of Apatarpana have been mentioned in the authentic classics directly and indirectly, they are as follows-

Aharaja Nidana	Mode Of Action
Laghu anna sevana (Habitual intake of light diet)	Alleviate Kapha dosha and aggravate Vata dosha
Usna anna sevana (Intake of excessive warm or Usna quality food Intake)	Warm food helps in reducing Kapha and causes Lekhana karma (scraping Karma). But intake of excessive warm food is responsible for Mada (intoxication), Daha (burning sensation), Trisna (thirst) and Raktapitta (bleeding disorder)
Tiskhna-anna sevana (Intake of pungent food)	It is responsible for the impairment of Agni (digestive power) and responsible of Vidagdhajirna (indigestion due to Pitta dosha)
Ruksha-anna-sevana (Intake of dry food)	It is responsible for the increasing in Vatadosa
Kathin dravya sevana (Intake of solid food)	If taken excessive solid food causes malnourishment due to impairment of biochemical and biomechanical action of stomach
Intake of less amount of food	Responsible for Vata vridhhi and Kapha kshaya in terms of malnourishment

<i>Lekhana basti</i>	Applying of excessive <i>Lekhan vasti</i> is responsible for decreasing <i>Kapha</i> and <i>Medadhātu</i>
<i>Purana-anna sevana</i> (Intake of old rice etc.,)	Grains after one year are reducing their quality and <i>Prabhava</i>
<i>Ati-madya sevana</i> (Intake of excessive alcohol)	Excessive intake of alcohol responsible for the reduction of <i>Oja</i> due to presence of opposite qualities of <i>Oja</i>

<b>Viharaja Nidana, Manasika Nidana</b>	<b>Mode of Action</b>
<i>Ativyayama</i> (Excessive exercise)	May cause increase of <i>Vata dosha</i> , and responsible for decay of body tissues
<i>Dukkha-Shayya</i> (Lack of rest)	May responsible of increasing <i>Vayu</i> and responsible for decay of body tissues
<i>Prajagarana</i> (Lack of sleep)	Responsible for increasing <i>Vata dosha</i>
<i>Atyadhika maithuna</i> (Perform excessive sexual activities)	Responsible of <i>Kshaya roga</i>
<i>Chintanam atichintanat</i> (Perform excessive mental work)	Responsible for increase of <i>Vata dosha</i> and responsible for <i>Rasavaha srotodusti</i>
<i>Shoka</i> (Excessive grief)	Responsible for increasing of <i>Vata dosha</i>
<i>Bhaya</i> (Excessive fear)	Responsible for increasing of <i>Vata dosha</i>
<i>Krodha</i> (Excessive anger)	Responsible for vitiation of <i>Pitta dosha</i>

**Apatarpana as a Hetu of Vyadhi**

<b>Apatarpana</b>	<b>Diseases</b>	<b>References</b>
<i>Rukshanna sevan</i> (intake of rough food), <i>Atikarshana</i> (marked emaciation)	<i>Asrigadara</i>	M.N.-61/1; Ch. Chi-30/211
<i>Abhojana</i> (fasting), <i>Langhana</i>	<i>Vatavyadhi</i>	Ch.Chi.-28/15-16
<i>Rukshannapana</i> (intake of unctuous diet), <i>Atimalakshaya</i> (excessive loss of excreta)	<i>Vataja gulma</i>	Ch.chi-5/9, M.N-28/9
<i>Atirukshabhojana</i> (intake of very dry meal), <i>Anasana</i> (starvation),	<i>Vataja grahani</i>	Ch.Chi.-15/22
<i>Apatarpana</i> (fasting/nutritional depletion) <i>Rukshabhojana</i> (intake of rough food)	<i>Hikkaswasa</i>	Ch. Chi-17/1,2.
<i>Pramitasana</i> or <i>Alpashana</i> (taking deficit diet)	<i>Vatajagrahani</i> , <i>Arsha</i> , <i>Vataja kasa</i>	M.N.-3/4 & Ch. Ci-14/12, Ch.Chi.-18/10.
<i>Dhatukshyaya</i> (depletion of nutrition), <i>Upavasa</i> (fasting)	<i>Vataja unmada</i>	Ch.chi-9/9

**Name of the Apatarpanaja diseases as a Lingasutra-(diseases due to Apatarpana) along with co-relation in modern sciences [25]**

<b>Name of the Apatarpanaja vyadhi</b>	<b>Co-relation in modern science</b>
<i>Shukramamsa parikshaya</i>	Decrease in semen and muscle tissue.
<i>Agnikshaya</i>	Impairment in the power of digestion
<i>Balakshaya</i>	Impairment of strength
<i>Varna-parikshaya</i>	Impairment of complexion
<i>Ojakshaya</i>	Impairment of <i>Ojas</i> (vital essence of body related with immunity and general strength)
<i>Jvara</i>	Pyrexia

<i>Parshvashula</i>	Pain in chest and flanks
<i>Aruci</i>	Anorexia
<i>Srotradourbalya</i>	Weakness in the power of hearing sounds
<i>Bhrama</i>	Vertigo
<i>Unmada</i>	Psychosis
<i>Baddha-vin-mutra</i>	Accumulation of stool and urine
<i>Hrdvyatha</i>	Pain in cardiac region
<i>Jangha-uru-trka vedana</i>	Pain in calf, thigh and lumber regions
<i>Mutrakricchya</i>	Dysuria
<i>Sandhiparvasthishula</i>	Cracking pain in fingers, bones and joints
<i>Kasa</i>	Diseases related to <i>Urdhavata</i> , cough etc
<i>Pralapa</i>	Irrelevant talk

### **Apatarpana as an Ausadha**

*Apatarpana* is used as treatment procedure in terms of *Langhana*, *Langhana-pachana* and *Dosavasechana*. *Langhana*, *Rukshana*, *Swedana* are also the another classification of *Apatarpana*.<sup>[26]</sup> Characteristics of *Apatarpana* is very similar to the *Langhana*. It is used as a treatment procedure in different diseases, which have been mentioned in different classical compendiums of Ayurveda.

*Rasa pradosaja vikara* is treated with *Langhana*.<sup>[27]</sup> In case of *Sthula-vyakti*, *Guru* and *Apatarpana* is the line of treatment.<sup>[28]</sup> In case of *Amasayottha cchardi*, *Langhana* should be applied.<sup>[29]</sup> In *Granthija*<sup>[30]</sup> type of *visarpa*, one should follow the *Langhana* therapy followed by *Rukshana* drugs. The patient of *Urustambha* should be constantly given *Rukshana* (drying up therapies to facilitate absorption of liquid metabolites from circulation and tissues) therapy with *Yava* (barley), *Shyamaka* (millet), and *Kodravya* along with vegetables cooked with water and oil. In *Urustambha roga*, *Samsamana* (pacifying therapy), *Kshapana* (reduction) and *Shosana* (drying up by absorption) therapies are given judiciously.<sup>[31]</sup> If *Ama dosa* gets absorbed along with *Rasadhatu* and pervades through the body then *Langhana* and *Pachana* should be given.<sup>[32]</sup>

### **Concept of Apatarpana in Modern Science**

The capacity of the food ingestion of a person can be assessed on two factors i.e., *Abhyavaharana shakti* (capacity of the food consumption) and *Jarana shakti* (digestion capacity)<sup>[33]</sup>. Good *abhyavaharana shakti* (capacity of the food intake) and *Jarana shakti* (digestion capacity) are helpful for the supply of proper nutrition. Different types of enzymes are responsible for digestion and metabolism. In Ayurveda it is known as *Agni*. It plays an important role to the formation of seven *Dhatu*s or primordial tissues of the body, which are responsible for the vital strength or

immunity or defence mechanism of the living body. *Jatharagni* (enzymes present in GIT), *Bhutagni* (enzymes accountable for the synthesis of the transforming heterogenous elements in to homologous one) and *Dhatvangi* (enzymes accountable for the synthesis of seven categories of the tissue elements) are three types of *Agni* described in Ayurveda. *Dosha* homeostasis disrupted due to the accumulation of the metabolic waste beyond the certain limits.<sup>[34]</sup> *Ama* and *Amadori* products (AGEs) which leads to formation of many diseases.<sup>[35]</sup> Direct assessment of food consumption depends on dietary surveys.

A diet survey helps to give information about dietary intake patterns, specific foods consumed and intake of estimated nutrients. Nutritional surveillance and growth monitoring both are the different. Growth monitoring depends on the individual child. It is a dynamic measure of health of a child from month to month. It commonly focused on normal nutrition for promotion of continued growth and good health. Nutritional survey gives an idea of the overall nutritional condition of an area. These nutritional indicators are used to measure quality of life.<sup>[36]</sup>

The ingestion capacity of a person is to assess through the satiety (subjective parameters). Satiety and satiation are two different terminologies which gives the actual meaning of the term satiety.<sup>[37]</sup> The process that leads to termination of eating, accompanied by the feelings of satisfaction is known as satiation. Satiety is the feelings of fullness that persists after eating, potentially suppressing further intake of energy until hunger returned. Inadequate dietary intake leads many diseases due to loss of appetite, nutrient loss, malabsorption and altered metabolism, which is responsible for the *Ama* or *Amadori* formations, weight loss, growth impairment, immunity lowered and mucosal damage.

According to the reports of global hunger index 2022, India has possessed the 94<sup>th</sup> position in world. Under nutrition and over nutrition both are responsible for the etiopathogenesis of emaciation. Here different types of factors in relation to brain-gut axis are responsible for controlling of eating behavior. Ghrelin, glucagon-like peptide-1 (GLP-1), peptide tyrosine-tyrosine (PYY), cholecystokinin (CCK), leptin, glucose and insulin, all these are accountable for the appetite and satiety regulation by influencing the function of brain region.

In the simplest terms, the underlying basis of emaciation is a lower energy intake than energy expenditure. CNS modulates energy balance through the brain and peripheral organs. After receiving the information from peripheral tissues, CNS sends the signals or commands to controllers of energy homeostasis. Energy homeostasis is regulated by hypothalamus. Both food intake as well as energy expenditure are controlled by the neurotransmitters and neuromodulators or neuropeptides through hypothalamus in response to changes in energy status. We know that the gut contains endocrine tissues which are involved in the regulation of energy expenditure apart from the digestion and assimilation of nutrients. Apart from the gut, pancreas and liver also produced **Hormone and their functions** [40]

hormone, which regulate body weight, and fat storage in the body. [38]

**Energy Balance and Hypothalamus**

Anatomically hypothalamus situated just beneath the thalamus and above the pituitary glands. It constitutes of several nuclei and has interconnection with different neuronal circuits via axonal projections. It has maintained the body weight, which was reported by lesion studies. It shows that damaging the lateral hypothalamus (LH) leads to aphagia and even death by starvation and hyperphagia along with obesity was caused due to damage of ventromedial part of hypothalamus.

The arcuate nucleus (ARC), situated in the central region of the hypothalamus is responsible for the managing both food intake and energy expenditure integrates signal from the periphery by two main neuronal populations. One neuron contains neuropeptides which stimulate appetite, such as agouti-related protein (AgRP) and neuropeptides Y (NPY) and another neurons express neuropeptides which inhibits feeding, including proopiomelanocortin (POMC), precursor of alpha-melanocyte-stimulating hormone and cocain-and amphetamine-regulated transcript (CART) [39].

Hormone	Site of production	Functions
Ghrelin	Stomach	Stimulates food intake capacity and adiposity, increase stomach emptying
GLP1	Intestinal L cell	Stimulates insulin, inhibits food intake, reduces gastric emptying
GLP2	Intestinal L cell	-
GIP	Intestinal K cell	Stimulates insulin, reduces gastric emptying
PYY	L cell in the ileum and colon	Inhibits food intake, reduces gastric emptying
CCK	L cell in Colon	Inhibits food intake, reduces gastric emptying and secret pancreatic enzymes.
Uroguanylin	Intestinal epithelial cell, increases secretion of Na, Cl and HCO <sub>3</sub>	Increase gastric motility
Oxyntomodulin	Intestinal L cell	Inhibits food intake, reduces gastric emptying
FGF15/19	Ileum	Inhibits food intake, increase gastric motility.
Somatomedins	Liver	Responsible for the tissue growth along with cell maturation
Growth hormone	Anterior pituitary	High levels of GH are responsible for the augmentation of lipolysis

Somatomedins- many factors are responsible for the diminishing of the production of somatomedins in malnutrition. Low protein intake or low-calorie diet-protein or calorific diet is necessary for the production of IGF-I in the liver. Essential amino acids have augmented to the synthesis of IGF-I during nutritional

deprivation. Low insulin/cortisol ratio with PEM could inhibits IGF-I production. State of malnutrition or undernutrition characterized by growth hormone [41]. Isolated energy deficiencies such as protein-calorie deficiency, or total energy deficiency, are the cause of malnutrition. GH resistance state may develop due to

the results of deficiency of the states of total energy. Various studies have shown that, the approximately 50% of IGF-I levels is decreased after four 4 days of fasting. (Grinspoon, et al. 1995) and during the state of fasting elevated GH levels coupled with the low IGF-I level.(Fichter, et al. 1986; Ho, et al. 1988). Protein energy malnutrition characterized by elevated GH level and low IGF-I level. After nutritional recovery it become normal. Vitamin-A & B<sub>6</sub>, Zinc, Potassium deficiency also characterized by lower level of IGF-I levels. (Flyvbjerg, et al. 1991). Saturated fatty acids inhibit promoter activity at the GH level receptor gene and decrease GH receptor mRNA and protein Level. In vitro studies show that, the dietary components demonstrated a positive association between IGF-I levels and total energy intake. (Holmes et al. 2002). GH hormone is secreted from the somatotroph cell of the anterior pituitary glands and after that it binds with GH receptors in many tissues, including hepatocytes. After binding, it activates Janus kinase (JAK) 2, which is responsible for phosphorylation of signal transducer and activator of transcription (STAT) 5. STAT5 is able to bind to regulatory elements of target genes including IGF-I. mobilization of fat stores in state of malnutrition plays an important role to elevate GH. Fat mass loss and subsequent increase in free fatty acid levels were significantly greater in the GH-repleted mice (Gahete et al. 2013). High levels of GH are responsible for the augmentation of lipolysis. Nutritional status is the major factors to lead quality of life or a contributor to self-sufficiency. Not only has that it also played a vital role to recovery from disease or to develop a disease. Over feeding, dietetic errors due to ultra-modernization and hurry life style may develop obesity or emaciation along with behavioral abnormalities.

*Apatarpana* is the treatment principles of *Santarpana*. According to modern intermittent fasting in which fast on consecutive or alternate days has been reported to facilitate weight loss preventing the next step of type 2 diabetes and helps to improve cardiovascular risk.

Different evidence based on fasting suggests that imposing fasting periods upon experimental laboratory animals increases longevity, improves health and reduces disease. It also helps to prevent progression of diverse morbidities with cancer, neurological disorders and disorders of circadian rhythm. Fasting for a period can limit inflammation, attenuates proinflammatory cytokines and immune cells, improve circulating glucose and lipid levels and reduce blood pressure. Fasting reduced oxidative stress. [42]

Intermittent fasting in animal models induces helps to improving blood pressure and heart rate and

reduce carotid intima-media thickness. Due to proangiogenic, anti-apoptotic and anti-remodelling effects of fasting it acts as cardioprotective. Intermittent fasting modulates the levels of visceral fat and several additional adipokines, including leptin, IL-6, TNF- $\alpha$  and IGF-1. [43]

## CONCLUSION

1. *Apatarpana* is the main treatment if given according to the proper stage of diseases then it acts as antidotes of *Santarpanaja vyadhis* followed by *Samanya-vishesa siddhanta*.
2. According to the above discussion it can be concluded that gut hormones that have a major influence on energy balance through regulating the energy consumption and energy expenditure. This review attempt to create a reflection about the role of *Apatarpana* in terms of gut hormones to maintain the *Dhatusamya* (body's homeostasis) through regulation of the energy intake and expenditure along with BMR of human body which will be helpful for scholars in treatment of diseases and advising precautions.

## REFERENCES

1. Agnivesh, Yadavji Trikamji Acharya (ed). Charaka-Samhita, Ayurveda Dipika Commentary of Sri Cakrapanidatta, Vimana sthan-2/4-6, Chowkhamba Sanskrit Sansthan, Varanasi. Reprint 2009, p-238.
2. Agnivesh, Yadavji Trikamji Acharya (ed). Charaka-Samhita, Ayurveda Dipika Commentary of Sri Cakrapanidatta, Sutra sthan-23/1-11, Chowkhamba Sanskrit Sansthan, Varanasi. Reprint 2009, p-123.
3. Agnivesh, Yadavji Trikamji Acharya (ed). Charaka-Samhita, Ayurveda Dipika Commentary of Sri Cakrapanidatta, Sutra sthan-21/20, Chowkhamba Sanskrit Sansthan, Varanasi. Reprint 2009, p-117.
4. Agnivesh, Yadavji Trikamji Acharya (ed). Charaka-Samhita, Ayurveda Dipika Commentary of Sri Cakrapanidatta, Vimana sthan-3/443, Chowkhamba Sanskrit Sansthan, Varanasi. Reprint 2009, p-246.
5. M Monier Williams. A Sanskrit English Dictionary by Sir M. Monier Williams. Motilal Banarasi Das Publishers, Delhi. 1st Edition, reprint 1995; p-1899.
6. Shabdakalpadruma, Radhakanta deva, volume-1, published by-Chowkhambha Sanskrit series office, edition-2006, page-225.
7. Suśhrut Samhita (Dalhan & Gayadas Tika) by Vaidya Yadav ji Trikam ji and Narayan Ram acarya,, Chikitsa sthan-1, sloka-11, Chowkhamba

- Surbharti Prakashan, Varanasi. Reprint Edition 2012, p-399.
8. Agnivesh, Yadavji Trikamji Acarya (ed). Charaka-Samhita, Ayurveda Dipika Commentary of Sri Cakrapanidatta, Chikitsa sthan-22|4-12, Chowkhamba Sanskrit Sansthan, Varanasi. Reprint 2009, p-122.
  9. Agnivesh, Yadavji Trikamji Acarya (ed). Charaka-Samhita, Ayurveda Dipika Commentary of Sri Cakrapanidatta, Chikitsa sthan-3\140, Chowkhamba Sanskrit Sansthan, Varanasi. Reprint 2009, p-409.
  10. Agnivesh, Yadavji Trikamji Ācarya (ed). Charaka-Samhita, Ayurveda Dipika Commentary of Sri Cakrapanidatta, Vimana sthan-3/42-43, Chowkhamba Sanskrit Sansthan, Varanasi. Reprint 2009, p-246.
  11. Suśhrut. Sushrut Samhita (Dalhan & Gayadas Tika) by Vaidya Yadav ji Trikam ji and Narayan Ram acarya, Chikitsa sthan-1/11, Chowkhamba Surbharti Prakashan, Varanasi. Reprint Edition 2012, p-399.
  12. Agnivesh, Yadavji Trikamji Acarya (ed). Charaka-Samhita, Ayurveda Dipika Commentary of Sri Cakrapanidatta. Chowkhamba Sanskrit Sansthan, Varanasi. Reprint 2009, Chikitsa-sthan-3, sloka - 142-144, p-409.
  13. Agnivesh, Yadavji Trikamji Acarya (ed). Charaka-Samhita, Ayurveda Dipika Commentary of Sri Cakrapanidatta, Sutra-sthan-22/1-2, Chowkhamba Sanskrit Sansthan, Varanasi. Reprint 2009, p-123.
  14. Agnivesh, Yadavji Trikamji Acarya (ed). Charaka-Samhita, Ayurveda Dipika Commentary of Sri Cakrapanidatta, Vimana-sthan-3/43, Chowkhamba Sanskrit Sansthan, Varanasi. Reprint 2009, p-246.
  15. Agnivesh, Yadavji Trikamji Acarya (ed). Charaka-Samhita, Ayurveda Dipika Commentary of Sri Cakrapanidatta, Chikitsa-sthan-3/143, Chowkhamba Sanskrit Sansthan, Varanasi. Reprint 2009, p-409.
  16. Vagbhata, Dr. Harish Chandra Singha Kushwa, Astanga Hridaya, Sutrasthana 14/4-6, Chaukhamba Sanskrit Sansthana, Varanasi, 2018, P-620-621.
  17. Vagbhata, Dr. Harish Chandra Singha Kushwa, Astanga Hridaya, Chaukhamba Sanskrit Sansthana, Sutrasthana 14/-4-6, Varanasi, 2018, P-620-621.
  18. Agnivesh, Yadavji Trikamji Acarya (ed). Charaka-Samhita, Ayurveda Dipika Commentary of Sri Cakrapanidatta, Sutra-sthan-14/65, 66, 69, Chowkhamba Sanskrit Sansthan, Var, anasi. Reprint 2009, p-92.
  19. Vagbhata, Dr. Harish Chandra Singha Kushwa, Astanga Hridaya, Chaukhamba Sanskrit Sansthana, Varanasi, 2018, Sutrasthana 14, Sloka-4-6, P-620-621.
  20. Agnivesh, Yadavji Trikamji Ācarya (ed). Charaka-Samhita, Ayurveda Dipika Commentary of Sri Cakrapanidatta, Sutra-sthan-13/14, 67, Chowkhamba Sanskrit Sansthan, Varanasi. Reprint 2009, p-88, 92.
  21. Agnivesh, Yadavji Trikamji Ācarya (ed). Charaka-Samhita, Ayurveda Dipika Commentary of Sri Cakrapanidatta, Sutra-sthan-14/39-40, Chowkhamba Sanskrit Sansthan, Varanasi. Reprint 2009, p-90.
  22. Agnivesh, Yadavji Trikamji Ācarya (ed). Charaka-Samhita, Ayurveda Dipika Commentary of Sri Cakrapanidatta, Sutra-sthan-14/64-65, Chowkhamba Sanskrit Sansthan, Varanasi. Reprint 2009, p-92.
  23. Agnivesh, Yadavji Trikamji Ācarya (ed). Charaka-Samhita, Ayurveda Dipika Commentary of Sri Cakrapanidatta, sutra-sthan-22/18, Chowkhamba Sanskrit Sansthan, Varanasi. Reprint 2009, P-121.
  24. Agnivesh, Yadavji Trikamji Ācarya (ed). Charaka-Samhita, Ayurveda Dipika Commentary of Sri Cakrapanidatta, Sutra-sthan-22/12, Chowkhamba Sanskrit Sansthan, Varanasi. Reprint 2009, P-121.
  25. Agnivesh, Yadavji Trikamji Ācarya (ed). Charaka-Samhita, Ayurveda Dipika Commentary of Sri Cakrapanidatta, Sutra-sthan-17/76, Chowkhamba Sanskrit Sansthan, Varanasi. Reprint 2009, P-103.
  26. Agnivesh, Yadavji Trikamji Ācarya (ed). Charaka-Samhita, Ayurveda Dipika Commentary of Sri Cakrapanidatta, Sutra-sthan-21/20, Chowkhamba Sanskrit Sansthan, Varanasi. Reprint 2009, P-117.
  27. Agnivesh, Yadavji Trikamji Ācarya (ed). Charaka-Samhita, Ayurveda Dipika Commentary of Sri Cakrapanidatta, Chikita-sthan-21/118, Chowkhamba Sanskrit Sansthan, Varanasi. Reprint 2009, P-565.
  28. Agnivesh, Yadavji Trikamji Acharya (ed). Charaka-Samhita, Ayurveda Dipika Commentary of Sri Cakrapanidatta, Chikita-sthan-27/25-26, Chowkhamba Sanskrit Sansthan, Varanasi. Reprint 2009, P-615.



29. Agnivesh, Yadavji Trikamji Ācarya (ed). Charaka-Samhita, Ayurveda Dipika Commentary of Sri Cakrapanidatta, Chikita-sthan-15/74-75, Chowkhamba Sanskrit Sansthan, Varanasi. Reprint 2009, P-519.
30. Dalhan, Nibandha Samgraha, commentary on Susruta Samhita commentary, Edited by Yadavji Trikamji Acharya, Chikitsa sthan-1/11, published by Chowkhamba Sanskrit Pratisthan, Varanasi 6<sup>th</sup> edition,, p-39.
31. Agnivesh, Yadavji Trikamji Acarya (ed). Charaka-Samhita, Ayurveda Dipika Commentary of Sri Cakrapanidatta, Sutra-sthan-23/23-24, Chowkhamba Sanskrit Sansthan, Varanasi. Reprint 2009, p-123.
32. Gopeswar Mukherjee, Chattopadhyaya A, A bird's eye of Ayurveda: Modern Perspective, chapter-6, Ananda publication, edition-2020, page-13.
33. Gopeswar Mukherjee, Chattopadhyaya A, A bird's eye of Ayurveda: Modern Perspective, chapter-5, Ananda publication, edition-2020, page-13.
34. Gopeswar Mukherjee, Chattopadhyaya A, A bird's eye of Ayurveda: Modern Perspective, chapter-5, Ananda publication, edition-2020, page-13
35. [http://www.cfs.purdue.edu/class/f&n630/amado-ri\\_rearrangement](http://www.cfs.purdue.edu/class/f&n630/amado-ri_rearrangement), accessed on 1<sup>st</sup> Feb,2023.
36. Pounesh K, Anne Klibanski, Determinants of Growth Hormone Resistance in malnutrition, Journal of NIH public Access, available in PMC 2015, 220(3): R57-R65.
37. K. Park, Parts textbook of Preventive & social Medicine, chapter-10, published from-banarasidas Bhanot Publishers, edition-2020, page-608-610.
38. <https://wikidiff.com/satiety/satiation>, accessed on- 5<sup>th</sup> Feb, 2023.
39. Pounesh K, Anne Klibanski, Determinants of Growth Hormone Resistance in malnutrition, Journal of NIH public Access, available in PMC 2015, 220(3): R57-R65,
40. Pounesh K, Anne Klibanski, Determinants of Growth Hormone Resistance in malnutrition, Journal of NIH public Access, 220(3): R57-R65.
41. Lizeth Cifuentes, Andres Acosta, Homeostatic regulation of food intake, Clinics and Research in Hepatology and Gastroenterology, 10.1016/j.clinre.2021.101794, 46, 2, (101794), (2022).
42. Salah Mesalhy Aly, Role of intermittent Fasting on improving Health and reducing Diseases, International Journal of Health Sciences, Vol-8: 2014: 3.
43. Salah Mesalhy Aly, Role of intermittent Fasting on improving Health and reducing Diseases, International Journal of Health Sciences, Vol-8, 2014:3.

**Cite this article as:**

Afroja Yeasmin Akhtar Roji, Murlidhar Paliwal. Concept of Apatarpana: Bird's Eye View. AYUSHDHARA, 2023;10(1):93-101.

<https://doi.org/10.47070/ayushdhara.v10i1.1158>

**Source of support: Nil, Conflict of interest: None Declared**

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