

## EVALUATION OF THERAPEUTIC ROLE OF UPAVASA IN AYURVED

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### ABSTRACT

Ayurveda the scientific way of life guides the humanity to combat sickness as well as to keep up and maintain supreme well-being. Ayurveda recognizes the viewpoint that fasting causes digestion of metabolic toxins which are not good for health. *Agnimandya* (weakened digestive fire) and *ama* (toxin) are considered to be the main reason for disease manifestation. It is stated in Ayurveda that fasting encourages digestive fire with exclusion of blockage in the channel which helps in reducing of effects of the disease. There are 10 types of *langhana* enlisted Ayurveda and *Upavasa* (Fasting) is one of them. Ayurveda guides three therapies for the well-being and health spiritual, psychological, rational/physical. Many experts believe that fasting is the mixture of all three. *Upavasa* (Fasting) is withdrawal of food for specific time periods. An advantage of fasting incorporates clarity of organs which are responsible for sense. During fasting person can feel the easiness of body as well as brain. It gives better feeling in diseased state. Collectively these things contribute to make individual feel energised. Ayurveda advocates fasting according to the *avastha* (*sama*) and strength of *vyadhi* and patient. The strength of the patient is decided on *vaya*, *agni*, *kaala* and *dosha*. *Upavasa* (Fasting) is advised precautionary and in addition remedial methodology. This article is a sincere effort to comprehend the therapeutic role of *langhana* (*Upavasa*) as non-invasive and evidence-based modality in the management of various diseases mentioned in Ayurveda.

**Keywords:** *Agni*, *Agnimandya*, *Ama*, *Dosha*, Fasting, *Samavastha*, *Upavasa*.

**INTRODUCTION:** Ayurveda advocates to protect health of the healthy and alleviate disorders in the diseased. It emphasizes on prevention from the diseases and promotion of health. Ayurveda has explained various such treatment modalities. One such is concept of *Langhana* (*Upavasa*). *Langhana* is been advised in many of the diseases as prime treatment or in *Amavastha* of the diseases and also according to the strength of the diseases and the patient and also as precautionary and preventive modality. *Agnimandya* leading to formation of *Ama* is the main reason for diseases manifestation. Ayurveda has advised *Upavasa* in initial / *Amavastha* of

diseases at many instances. The lists of diseases are mentioned further. This indicates the therapeutic importance of *Upavasa*. By understanding the role of *Upavasa* in each disease and its co-relation to the concept of autophagy makes the concept of *Upavasa* unique and priceless therapy to stay healthy and to defeat diseases.

*Upavasa* is derived from ‘*vas*’ *dhatu* meaning to dwell and ‘*ghnya*’ *prataya* and starts with ‘*Upa*’ *Upasarga* (*upa+vas+ghnya*) meaning towards, near to, by the side of.<sup>1</sup> To abide in a state of abstinence, abstain from food.<sup>2</sup> *Upavasa* also means abstinence from *krodha* (anger) *shokha* (grief) *lobha* (greed)

*mohadi* (fascination) etc<sup>3</sup>. It is considered as abstinence from all the 4 forms of food chewing, licking, swallowing and drinking. In Ayurveda it is stated that “*aho ratribojana abhavaha*”<sup>4</sup> which means the condition of withdrawal of food for a night. It is also considered as one type of fast along. Fasting is also revealed as “*sarva bhoga vivarjana*” which means abstaining from every single delight<sup>4</sup>

#### ***Langhana and Upavasa :***

*Langhana* word derived from ‘*langha*’ *dhatu* and ‘*lyut*’ *pratyaya*. *Langha dhatu* indicates *gati shoshana*.

“*yat kinchit laghavkaram dehe tat langhanam smrutam*”<sup>5</sup> In gross meaning it indicates the whole procedure of producing lightness in the body.

*Anasana, apatarpana, laghubhojna, and upavasa* are the synonyms of *langhana*.

In Ayurvedic literature *langhana* and *apatarpana* are mostly used in context of *Upavasa* and literally convey the same meaning<sup>6</sup>. *Langhana as one of the shadvidhopkrama and Upavasa as one of the type of Langhana*.

#### ***Dipana, Pachana and Upavasa :***

***Pachana:*** “*Pachayati aamam na vahni kuryad yat taddhi pachanam*”<sup>7</sup>

A *Pachana dravya* performs the digestion of the *ahara* but does not increase the *agni*. Acharya Charaka has advised *pachana* type of *langhana* in conditions like *Chhardi* (vomiting), *Atisara* (diarrhea), *Jwara* (fever), *Gourava* (heaviness) which predominantly involve *kapha* and *pitta* and the *bala* (patients and disease strength) is *madhyama* (medium).

***Deepana:*** “*Pachet na aamam vahnikruncha deepanam*”<sup>7</sup> Acharya Vaghbhata has included the *deepana* in 12 types of *langhana*.<sup>8</sup> The definition of the *deepana* is described by Acharya

*Sharngdhara. Dravyas* which increases the *agni* but does not digest the *ama* is known as a *deepana dravyas*. *Deepana dravyas* are *vayaviya* in nature hence increases the *agni*. Increased *agni* digests the undigested food and does the *shoshana* of the *kleda* and produces the lightness of the body, hence is included in the types of the *langhana*.

Both *Deepana* and *Pachana* treatments are done through *dravays* (medicines). Until the *ama* is not treated there is no use of giving various medicines for curing the diseases; rather than the given drug will also convert into *ama* and the disease will increase.

Fasting/*Upavasa* is a type of *adravya aushada*.<sup>9</sup> Fasting, in the absence of food in viscera brings about the digestion of metabolic toxins, kindles the digestive fire, removes the blockages in the channels and thereby aids in minimising the disease. It first causes *amapachana* due to which *agnideepana* appears.

#### ***Upavasa and Fasting :***

Fast: abstain from all or some kinds of food or drink, an act or period of fasting.<sup>10</sup>

*Upavasa* : a fast, fasting ( as a religious act comprising abstinence from all sensual gratifications, from perfumes, flowers, unguents, ornaments, betel, music, dancing etc, abstinence from food.)<sup>11</sup>

*Upavasa* : *upakrama*; *Atharvaved chikitsa*<sup>12,14</sup> *Bhojana parityaga*; *anashana* type of *shaman chikitsa*<sup>13,14</sup>

#### ***CLASSIFICATION OF LANGHANA***

Acharya Charak has mentioned 10 types of *langhana* 1. *vamana* (emesis) 2. *virechan* (purgation) 3. *nasya* (administration of drug through nasal cavity) 4. *niruhbasti* (administration of decoction through anus) 5. *aatapsevan* (sun exposure) 6. *pachan* (digestive) 7. *upavasa* (fasting) 8. *vyayama* (exercise) 9. *pipasa*

*nigrah* (control of thirst urge) 10.*vayusevan* (wind exposure).<sup>15</sup>

*Astanga hrudaya* as mentioned 12 types of *langhana* and divided in *shodhana* 5 types *raktasravana* (bloodletting) addition to above and *shaman* (6 types) *deepan* addition to above.<sup>16</sup>

*Acharya Charak* has mentioned *Trividha langhana*<sup>17</sup>

When the strength of vitiated *dosha* is less than *langhana* variety of *apatarpana* is to be advised. As a result of which there will be *Vruddhi of agni and vayu* which cures the disease similar to the drying of a pond consisting of very small quantity of water by the influence of wind and sun.<sup>18</sup>

When the strength of vitiated *dosha* is medium then *langhana pachana* is advised. The *langhana dravyas* does the *vruddhi of agni and vayu* while the *pachana dravyas* does *ama pachan*. This is similar to the drying of a pond of water by the influence of dust, wind, and sun.

When the strength of vitiated *dosha* is extreme, *doshavasechana (shodhana)* is indicated. *Doshavasechana* removes *Doshas* similar to the emptying of water from a reservoir by opening the gates.<sup>18</sup>

#### **Indication of Langhana**

Diseases caused by *Amadosha* are destroyed by *langhana Upavasa*. Also in *amashaya samutta vyadhi langhana* is the foremost treatment.

Also when the *vyadhi bal* is *alpa pipaasa nigraha* and *upavasa* are treatment advocated.<sup>19</sup>

*Langhana* is indicated in *amavastha* (disorders of poor digestive activity), skin diseases, *atisnigdha, abhishyandhi, bruhat sharira* (those who poses corpulent body together with unctuousness and fluidity), *pramudhata* (unconscious) in *sheet pradhan hemant and shishir rutu* (winter season November to Februaray),

*vaatvyadhi* (diseases due to the vitiation of *vata*) (as per *avastha and dosh involved*)<sup>20</sup>

Indications of *langhana upakrama* as per *Astanga hrudaya* include conditions such as *meha* (diabetes), *ama dosha* (disorders of poor digestive activity), *atisnigdha* (more of moistness, lubrication), *jwara* (fever), *urusthamba* (stiffness of thighs), *kushta* (leprosy and other skin diseases), *visarpa* (herpes), *vidradhi* (abscess), *pleeha, shirorog, kantha and aakshiroga* (diseases of spleen, head, throat and eyes).<sup>21</sup>

Similarly *Yogratnakar* has stated that *aakshiroga* (eye diseases), *kukshiroga* (ascities, diarrhoea), *pratishaya* (rhinitis), *vrana* (ulcer), *jwara* (fever) can totally be cured by *langhana* therapy within 5 days.<sup>22</sup>

#### **Assessment of Samyak Upavasita And Langita Purusha Lakshana:**

*Acharya Charaka* states Proper elimination of flatus, urine and faeces, feeling of lightness of the body, purity of the chest, belching, throat, and mouth; disappearance of stupor and exhaustion, appearance of sweat and taste in the mouth, inability to bear hunger and thirst and absence of discomfort in the mind are the signs of *langhana* properly done<sup>23</sup>. In addition to above *Acharya Vagbhat* states *vimal indriya* (freshness or keenness of sense organs).<sup>24</sup> Also mentioned in *Jwara chikitsa adhyay, langhana (anashana /upavasa)* alleviates the aggravated *doshas* and stimulates the *agni* the body becomes light and there is appetite.<sup>25</sup>

#### **Significance of Upavasa /Fasting**

The vitiated *dosha* in the body particularly the *Amashaya* reduce the intensity or impair the digestive fire and cause digestive impairment and produce *ama* (metabolic toxins) which is the root cause of all diseases. They together block the

minute channels of the body which results in various diseases.

Fasting has been practised since ancient times for religious, spiritual, physical and psychological purposes. As spiritual practise it is the oldest and most common form of asceticism and is found in virtually every religion and spiritual tradition. But nowadays spiritual fasting has not been practised in right manner. People tend to eat more on these days and also end up eating food stuffs which are heavy to digest *sabudana* (sago/tapioca pearls wafers), fruits, boiled potatoes etc.

In psychology, studies have suggested that fasting can alleviate the symptoms of some psychiatric conditions including depression and schizophrenia.<sup>26</sup> In Buddhism fasting is recognized as one of the methods for practising self-control.<sup>27</sup> The Buddha advised monk not to take solid food after noon.<sup>27</sup> Buddhist monks and nuns following vinaya rules commonly do not eat each day after the noon meal. The *Uposatha* is a Buddhist day of observance in existence from the Buddha's time and still being kept today in Buddhist countries. The Buddha taught that the *Uposatha* day is for the cleansing of the defiled mind resulting in inner calm and joy.<sup>28</sup>

The Greek Physician Hippocrates states "Everyone has a physician inside him or her; we just have to help it in its work. The natural healing force within each one of us is the greatest force in getting well. Our food should be our medicine. Our medicine should be our food. But to eat when you are sick is to feed your sickness"<sup>29</sup>.

Already modern scientists accepted many *Ayurveda* principles after undertaking a scientific study and concept of fasting is one such.

According to experiment conducted on fasting rats at the centre for cellular and molecular biology Hyderabad the belief is scientifically true. Intestinal cells absorb more from the reserve food available in the body during starvation. Reserved food is stored in the body either as glycogen or fat.<sup>30</sup> Glycogen a polymer of glucose is stored in liver and during non- availability of food certain enzymes break it down into glucose which provide energy to body. If one never fasts this enzyme system which breaks glycogen into glucose may not remain effective and therefore periodical fasting is considered beneficial to body.

Once the glycogen reserve is exhausted the adipose tissue comes to the rescue of fasting person. Prolonged fasting is not advisable as in fasting for longer periods the fat cells consumed become pathological. Further during fasting the cell membrane lining the intestine undergoes a reorientation program to achieve the maximum efficiency. The membrane cholesterol level goes down and hence the membrane becomes free and absorbs more during fasting. Fasting also has inhibitory effect on cell proliferation and also eliminates pre-neoplastic cells.<sup>30</sup> Yoshinori Ohsumi a cellular biologist from Japan became a Nobel Prize winner in 2016 in physiology and medicine for discovery importance of autophagy for a large number of physiological processes such as adaption to fasting and Mechanism of Autophagy. These discoveries have opened new ways of understanding the fundamental response to an infection<sup>31</sup>. Fasting detoxifies the body and boosts the immune system.

According to Wolowczuk immune enhancement is due to 3 factors<sup>32</sup>

- a . Absence of burden of digestion that demands all the resources of the immune system.
- b. lowered plasma viscosity due to less traffic in blood stream (less fatty sugar and proteins)
- c . Increased nutrient assist in immune performance.

Mark Mattson a scientist with National Institute on Aging says that when we convert food into energy our bodies create a lot of by-products we could do without including free radicals. These free radicals will attack proteins, DNA, the nucleus of cells, the membranes of the cell.<sup>33</sup>

Mattson says they can damage all those different molecules in cells and hence fasting has numerous benefits from improving glucose regulation which can protect against diabetes to also lowering blood pressure .Some animal studies have also shown that partial fasting has very beneficial effects on the brain protecting against Alzheimer's, Parkinson's and Stroke.<sup>34</sup>

Partial fasting may even extend lifespan because eating less sends a message to the cells of the body that they should conserve and use energy more efficiently.

#### Misconception About Fasting:

**Weight loss:** losing weight is only one part of the picture but it can be and certainly important to maintain or restore good health.

**Starvation:** people think food is the only source of energy for our body. If they fast

they will starve their body but fasting and starvation are two completely different .As long as the body supports itself on the stored reserves within its tissues and body functions are running smoothly .It is fasting when these stored reserves are used up have dropped to dangerously low level it becomes starvation.

**Weakness:** During fasting, if we miss our meal we feel giddiness weakness. The fact is just appeals during cleansing process of the body while fasting. When cleansing is completed body gains a new vigour and vitality.

#### Autophagy:

The controlled digestion of internal cell components is called autophagy.<sup>35</sup>

Level of autophagy increases when cells are starved or when cells are highly exposed to the accumulation of waste material. In this case, cells recycle the unwanted products by degradation and maintain all body functions.<sup>36</sup>

*Upavasa/ Fasting induce Autophagy.*

Basically when we give fuel to mitochondria when they don't need they release a large number of electrons which give rise of reactive oxygen species which act as free radicals . Then these free radicals not only damage mitochondrial but also nuclear DNA .<sup>37</sup>

Following are therapeutic indications of fasting in different diseases with respect to the stage or phase of the disease and the duration of fasting as explained in classics of Ayurveda.

Table .1

Disease	Stage /Phase	Duration
Jwar	<i>Saamavastha /initial stage</i>	till <i>niram lakshana</i>
	<i>Vataj jwar</i>	seen
	<i>Pittaj jwar</i>	7 days
	<i>Kaphaj jwar</i>	10 days
		12 days

<i>Dhatugat jwar</i>	<i>rasagat</i>	
	<i>mamsagat</i>	
<i>Raktpitta</i>	<i>initial stage,urdwa marg,</i>	acc to strength of the
	<i>Sama kapha,sama pitta,</i>	Patient
	<i>snigdha,ushna nidan</i>	
<i>Gulma</i>	<i>Kapha pradhan</i>	
<i>Prameha</i>	<i>Kapha pradhan</i>	
<i>Shoth</i>	<i>Amajanya</i>	
<i>Arsha</i>	strength of patient is minimal	
<i>Grahini</i>	<i>aahar ras associated with ama has</i>	
	circulated in whole body	till <i>ama</i> digested
<i>Atisaara</i>	initial stage,vyadhi bala minimal	till <i>ama</i> gets digested
<i>Chardi</i>	<i>amavastha,minimal dosha</i>	till <i>ama</i> gets digested
<i>Visarpa</i>	<i>kaphasthan/kaphapradhan</i>	
<i>Madatya</i>	<i>kapha pradhan</i>	
<i>Hrudroga</i>	<i>kaphaj,sannipataj,krumija</i>	
<i>Pravahika</i>	<i>atisaarukta chikitsa</i>	
<i>AnnajShool</i>	<i>avipaak</i>	
<i>Kukshishool</i>	<i>agnimandya</i>	
<i>Ajeerna</i>	<i>amajeerna</i>	
	<i>Vidagdhajirna</i>	
<i>Aadhamana</i>		
<i>Amavata</i>	<i>aamaj, srotorodha</i>	till <i>niram lakshana</i> seen
<i>Abhishyandh</i>	<i>samavastha</i>	4 Days
<i>Pratishya</i>	<i>samavastha with fever</i>	5 nights
<i>Netraroga</i>	<i>abhishyandi/ samavastha</i>	3 nights ( <i>dalhana</i> )
		Avoiding food at night
		5 nights ( <i>yogratnakar</i> )
<i>Udarrog</i>		
<i>Vran</i>		
<i>Annavaha srotas</i> <i>Amashaya gat vata</i>	<i>amavastha</i>	

<i>Rakthavaha srotas)</i>		
<i>Avabahuka</i>	<i>Samavastha</i>	

Hence to conclude from above mentioned table, *upavasa* is been advised

Wherever *ama* is underlying cause in pathogenesis of diseases,

In initial stage of diseases (*amavastha*), Strength of *dosha* is less and when patient *bala* (strength) is medium,

In *atipravrutti* (excessive flow of tissue elements in the channels), *srotorodha* (blockage in the channels), *santarpanjanya vyadhi* (diseases caused by over-nourishment), *amashaya samutha vyadhi* (diseases having origin from stomach), *rasa pradosha vyadhi* (diseases from vitiation of *rasa dhatu* )

Mostly in *kaphaj pittaj* type and also sometimes in *vataj* as per the patient strength.

#### DISCUSSION :

*In the management of ama Upavasa is the ideal line of treatment . Bhava Prakasha in the context of jwara considers langhana as upavasa*<sup>38</sup>. As in all *amashaya samutha* diseases , *Upavasa* can be considered as the ideal method of *langhana*<sup>39</sup> . This is also because of unsuitability of the other methods of *langhana*, four kinds of purifications cannot be employed in many diseased conditions because *samsodhana* is contraindicated in the *samavastha* of a many diseases<sup>40</sup> . *Pipasa* cannot be employed because in morbid patients *jala* is *pranadharaka*<sup>41</sup>. *Maruta* and *atapa sevana* are less efficient for *jatharagni* impairment when compared to *upavasa*. Here *Maruta* is the *vayu*(wind) outside the body. Certain types of *maruta* from particular direction is told to be diseases causing and some *maruta* from other directions has been told to be healthy

, also though exposure to the wind causes lightness but if it is cold wind , it is not so effective .*Maruta* (wind) does not always exist . *Atapa* can aggravate *pitta* in *pitta prakriti*. Also *Maruta* and *Atapa Sevana* are been advised in *balvan rogi*( patient) and *madhyam bala roga* (diseases ). *Deepana pachana* cannot be employed as *agni* affected by *ama* is incapable of *dosha, ahaara and oushadha pachana*<sup>42</sup>. *Vyayama* is incompatible in *alpa bala* patients<sup>43</sup>. For these reasons *upavasa* is the ideal method of achieving *langhana* which can be achieved by *anashana* or *alpabhojana* . The *langhana* thus achieved will have *amapachana* effects at the *koshta* level as well as *sarvadehika* level<sup>44</sup>.Mode of action of the *Upavasa* can be understood in the following manner, if *Agni* does not get fuel in the form of food, it starts digesting *Dosha*<sup>45</sup> . *Agni* for its existence needs a constant feed of fuel. As a routine the food serves as the fuel. In the absence of food in preliminary stage *Agni* uses *Dosha* as fuel .This special property of *Agni* is used as treatment modality .The mode of action of *Upavasa* can also be understood with the help of modern science. If the consumption of the glucose is decreased, the glycogen, then fat , and in the last stage , protein ,is broken down for the supply of glucose to the tissue ,which is similar to the view of *Ayurveda* .

*Acharya Vaghbata* has mentioned that *Langhana*, Decreases the *Dosha*, Increases the *Agni* Hence it increases the *Swasthya* ,*Kshudha* , *Trishna* ,*Ruchi* ,*Agnibala* and *Ojas*.

**CONCLUSION:** In these recent years modern scientists have discovered the

importance of fasting and autophagy. But Acharyas had already mentioned the importance of *Upavasa, langhana* in many diseases and as preventive measure and has aptly suggested “*langhanam Paramaushadam.*” It can be considered as costless therapy of Ayurveda.

Due to fast paced life ,unhealthy eating habits and defective lifestyle many *amajanya* diseases are on rise where in fasting *upavasa* becomes the main treatment modality in initial stage because in *samavasta* if oral medicines are given it only increases the pathogenicity of the disease instead of curing it.

This overview suggests that fasting in diseased state as well as intermittent fasting have been proven efficacious and offer promising non pharmacological approaches for improving health at the population level with multiple public health benefit.

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