A CRITICAL ANALYSIS OF BHOJANOTTARA VIDHI (POST-PRANDIAL REGIMEN) - A CLASSICAL REVIEW

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ABSTRACT

Ayurveda, a life science is also being considered as Food Science as it deals on all corners of healing techniques using medicines, food and regimens. Food is basic need of all living beings. It is the main reason for life existence. Not only the food we consume accounts the health but even activities which we perform before, during, and after the consumption of food will alter the action of food on health, so food should be consumed in proper methods. Regimen which should be done after food is called Post-Prandial activities and it also plays a vital role, as it eases the digestion of ingested food. In concern to this concept, our Acharyas explained well with their great intelligence and proper reasoning. After food, Bhojanottara vidhi’s must be considered with great importance and must be practiced to obtain good health. So, here is an effort made to analyze and propagate the importance of bhojanottara vidhi to motivate fast growing generation with fast food

Keyword: Ahara, Bhojanottara vidhi, Post-prandial regimen

INTRODUCTION

In Indian history, since from Vedic period Ahara is considered as God (i.e. Brahma¹) every Human being will worship food, as it is the basic need to sustain life. Ahara being a prime factor to get good health for every living being it is always given importance. And it is considered one among the Thravopastamba² i.e. Ahara, Nidra, Brahmacharya. Ahara is the main entity which always nourishes Doshas, Dhathus, Upadhathus and Malas. As ahara is considered as Prana³, so one should give utmost interest in choosing of ahara dravyas (food ingredients), sanskara of procured food articles (proper processing of food articles), Ahara vidhi’s (rules of food intake), mala visarjana (excretion of byproducts). Ahara should be consumed in proper manner and also after having ahara one should follow proper regimen. The regimen which should be followed after food every time is called Post-Prandial regimen (Bhojanottara vidhi). By following post-prandial regimen, one can get good health benefits. The main purpose of consumption of ahara is nourishment of shareera, so the ingested ahara must undergo proper pachana and the obtained ahara rasasara must aid proper nourishment to each and every srotas of shareera or else it will be eliminated out of shareera as kita then it will never serve the main purpose so dietetic principals mentioned in our classics like Ashta Ahara Vidhi Visheshayathana⁴,
Dwadasha Ashana Pravicharana\(^5\), Bhojana krama\(^6\), Bhojanottara Vidhi\(^7\) must be followed to obtain proper nourishment to the \textit{shareera} from ingested food. The food consumed by us in the suitable manner undergoes digestion properly. One simple way to describe the digestive process is Ingestion, Digestion, Absorption/Assimilation and Elimination/defecation\(^8\). Practice of \textit{Bhojanottara Vidhi} (post-prandial regimen) helps in all stages of digestive process from maintaining oral hygiene till proper elimination of byproducts. It will aid in proper release of digestive enzymes and also helps in proper movement of food in alimentary canal, so food ingested will get easily digested. And it also succors separation of byproducts after digestion like sara and kitta, sara part will be easily absorbed and kitta part also get eliminated out of body easily. By following \textit{Bhojanottara Vidhi} (mentioned in table 1) individuals can achieve \textit{swasthyata}.

\textbf{Aim and objectives:}
- To understand the concept of \textit{Bhojanottara viddhi} (post-prandial regimen)
- To create awareness and to propagate the importance of \textit{Bhojanottara vidhi} (post-prandial regimen) in fast growing generation with fast food system.

\textbf{Material and Methods:}
The present article is based on the review of classical text books of Ayurveda. Literary source: Materials related to \textit{Bhojanottara viddhi} (post-prandial regimen) and relevant topics have been collected from all \textit{samhitha, nighantu}, national and international journals, authentic websites and contemporary medicine textbooks.

\textbf{Table 1:} The \textit{Bhojanottara Vidhi} (postprandial regimen) which has been mentioned in our classics are as follow

<table>
<thead>
<tr>
<th>Sl.No</th>
<th>\textit{Bhojanottara vidhi}</th>
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The *Bhojanottara Vidhi* (Post-prandial regimens) is as follows

**Do’s**
- **Kavala/Achamana** (Gargling): Gargling must be done after meal with fresh water.
- **Swahastha parimarjanath / Panitala shodhana** (Hand wash): After meals, hands should be washed with water and the person should clean his hands well.
- **Chakshu sparshana** (Eye touch): After washing hands, eyes should be touched with the moist finger tips.
- **Danta anatara shodana** (Tooth cleaning): Particles of food remaining in between the teeth should be removed slowly using a tooth pick. If some of the particles are impossible to remove, those should be considered as teeth itself and much effort should not be made for their removal.
- **Panchadevatha smarana** (Worshiping five Gods): After taking meals the person should pray to Agastya etc daily for granting happiness. And Angaraka, Agastya, Pavaka, Surya and Ashwini dwaya these five gods should be invoked daily for proper and quick digestion.
- **Dhumapana** (Medicated smoking): Inhalation of medicated smoke should be done after meal.
- **Tambula sevana** (Betel/Paan chewing): Chewing things of astringent, pungent and bitter tastes after meal such as *Nagavalli* (Betel leaves), *puga* (Areca nut), *kankola* (*Piper cubeba*), *karpura* (*Cinnamomum camphora*), *lavanga* (*Syzygium aromaticum*) and *sumanahphala/ jatiphala* (*Myristica fragrans*) or fruits of pungent or astringent should be done. Selection of leaves (*Nagavalli*): *Nava avastha* (fresh leaves) are sweet in primary and astringent in secondary tastes, hard for digestion, produces *kapha* and posses the properties of leafy vegetables, Old leaves are slightly pungent small thin and white, this is considered good when compared to new as it is hard for digestion and increases *kapha*. Betel leaves growing in *Vanga desha* is very pungent, laxative, digestive, produces *pitta*, hot in potency and mitigates *kapha*\(^9\). Selection of Leaf part (*Nagavalli*): Life residence at the tip of the betel leaf, reputation at its root and wealth at its middle, hence tip, root and middle rib should be avoided before chewing. Selection of Nut (*Puga*): The nut which has its hard middle portion though steam cooked mitigates all *Tridosha*, which is with its juice (uncooked) is hard for digestion, *abhishyandi* (produces secretion of more moisture and blocks the tissues) and causes destruction of digestive fire greatly. Method of Chewing (*Tambula sevan*): The first juice, if swallowed will be similar to poison, the second is slightly purgative and hard for digestion these two should be spitted out, swallowing should be from the third onwards which is similar to nectar. *Tambula sevana* should be done daily with more *Puga* (Areca nut) in the morning, more of *Khadira* in the afternoon and more and *Churna* (slaked lime) at night. Contraindication: It should not be done in excess, not when having purgation’s, not when angry, dental diseases, weak eyes, poison, fainting, intoxication, phthisis and bleeding diseases Excessive usage: Too much of pan chewing causes loss of strength of the body, eyes, hairs, teeth, digestive fire and ears and complexion, emaciation, aggravation of *tridosha*\(^12\).
• Rajavathaseena (Sit like king): After partaking meal, the person should sit like a king comfortably\textsuperscript{13}.
• Chankramana/Shatapata (Short walk): The person after taking food should walk for a hundred (100) steps slowly\textsuperscript{14}.
• Shayana (Sleep): After meal one should recline comfortably on his left side. One may lie down for a period of eight (8) breathings with face up, for a period of twice (16) that number on right side, for double (36) that time on left side, afterwards as found convenient\textsuperscript{15}. Those who have taken more liquid foods should not make the use of bed for long\textsuperscript{16}.
• Manasapriya karya (Actions desirous to mind): He who has taken food should indulge in sound, sight, taste, smell and touch which are pleasing to the mind\textsuperscript{17}; important that oral hygiene be carried out on a regular basis to enable prevention of dental disease\textsuperscript{22}. Kavala after food have an important role in maintaining Mukhaswasthya and prevention of various diseases occurring in Mukha. The most common types of dental disease are tooth decay (cavities, dental caries) and gum diseases, including gingivitis, and periodontitis. According to American Dental Association, 50\% of the adult population has suffered from oral malodour disorder, while 25\% appear to have a chronic problem. In about 90\% of the genuine cases, origin of the odour is in the mouth itself.\textsuperscript{23} Hence oral hygiene plays a major role in controlling dental diseases. Probable mode of action: The action of kavala exerts increased mechanical pressure inside the oral cavity. So this increased pressure stimulates pressoreceptor (stretch reflex) that are present in the mouth. Once the pressoreceptor is stimulated, they send signals to salivary nuclei in the brain stem (pons and medulla). As a result, Parasympathetic nervous system activity increases and motor fibres in facial (VII) and glossopharyngeal (IX) nerve trigger dramatically increasing the output of saliva. An enzyme called lysozyme present in saliva is bacteriostatic in action. It prevents the growth of pathogenic microorganisms in the oral cavity. Antibody IgA present in saliva also provide protection against microorganisms. Thus kavala increases local defense mechanism and promotes oral hygiene. So by following kavala after food one can get rid of plenty of oral disorders and can get swasthya mukha.
Panitala shodhana/ Swahastha parimarjana (Hand wash): It helps to remove the remnants of food and maintains hygiene of hands. WHO Guidelines on Hand Hygiene in Health Care is to promote hand hygiene and became a First Global Patient Safety Challenge with slogan “Clean Care is Safer Care” is not a choice but a basic right. Clean hands prevent patient suffering and save lives by “My 5 Moments for Hand Hygiene” approach. Health care-associated infections affect hundreds of millions of patients worldwide every year. Infections lead to more serious illness, prolong hospital stays, induce long-term disabilities, add high costs to patients and their families, contribute to a massive, additional financial burden on the health-care system and critically, often result in tragic loss of life, so one should always wash hands thoroughly before and after food. Highest hand hygiene must be followed daily.

Chakshu sparshana (Eye touch): This will prevent Timira (Blindness).

Dantanatara shodhana (Tooth cleaning): It removes the remnants stuck in between the teeth; if it is not removed then it will lead to bad smell in the mouth and dental carries. While chewing food, some particles of food tend to get stuck between teeth. And when food remnants get stuck in the gums, it would be irritating. Firstly, it is very tough to remove and causes uncomfortable. It could also rot, decompose and pose several dental problems. Cleaning between the teeth is called inter-dental cleaning and is as important as tooth brushing. This is because a toothbrush cannot reach between the teeth and therefore only cleans 50% of the surfaces. Tooth brushing alone will not remove plaque from all surfaces of the tooth as 40% of the surfaces are interdental. There are many tools to clean between the teeth, including floss, flossettes, and interdental brushes. One technique that can be used to access these areas is dental floss. When the proper technique is used, flossing can remove plaque and food particles from between the teeth and below the gums. The American Dental Association (ADA) reports that up to 80% of plaque may be removed by this method. The ADA recommends cleaning between the teeth as part of one's daily oral hygiene regime.

There are different types of floss available, including:

- Unwaxed floss: Unbound nylon filaments that spread across the tooth. Plaque and debris get trapped for easy removal.
- Waxed floss: less susceptible to tearing or shredding when used between tight contacts or areas with overhanging restorations.
- Polytetrafluoroethylene (Teflon): Slides easily through tight contacts and does not fray.

The type of floss used is a personal preference; however without proper technique it may not be effective. The correct technique to ensure maximum plaque removal is as follows:

- Floss length: 15–25 cm wrapped around middle fingers.
- For upper teeth grasp the floss with thumb and index finger, for lower teeth with both index fingers. Ensure that a length of roughly an inch is left between the fingers.
- Ease the floss gently between the teeth using a back and forth motion.
- Position the floss in such a way that it becomes securely wrapped around the inter-dental surface of the tooth in a C shape.
- Ensure that the floss is taken below the gum margins using a back and forth up and down motion.

Some people even use sharp objects like pins to remove food particles from the gums which are a very dangerous practice. If debris is not cleared on time, it may lead to tooth decay. Tooth decay is the most common global disease. Over 80% of cavities occur inside fissures in teeth where brushing cannot reach food left trapped after eating and saliva and fluoride have no access to neutralize acid and remineralize...
deminerlized teeth, unlike easy-to-clean parts of the tooth, where fewer cavities occur so *dantanatara shodhana* must be followed.\(^{28}\)

- **Panchadevatha smaranam** (Worships five Gods): Vishnu is the *Atma* (soul) so also the *Anna* (food) and its *Parinama* (digestion). *Angaraka, Agasty, Pavaka, Surya* and *Ashwini dwaya* these five gods should be invoked daily for proper and quick digestion. *Agasty, Agni* and *Badavanala* will digest our food properly and as the result of it let our body, become free of diseases.\(^{29}\)

- **Dhumapana** (Medicated smoking): It will remove the accumulation of *kapha*. *Vata* increases before digestion, *pitta* increases during digestion and *kapha* increases immediately after consuming food. Hence the *kapha* increased due to food digestion should be mitigated by medicated smoke inhalation.\(^{30}\) Probable mode of action: The bioavailability of volatile and vaporous accurate and optimum and hence the medicaments used in *dhumpana* wick when ignited will release volatile substances which will pass through nostrils and the absorption of volatile medication will occur and it stimulates the vasodilators or nerves surrounding the areas of naso-pharynx and stimulates olfactory nerve that in turn stimulates endocrine system and nervous system. Similarly when the volatile substances are being inhaled through nostrils it will reach the lungs and it causes soothing effect and eases breathing difficulties as those volatile substances are having bronchodilator effect. Increases oxygen level in body and fulfills oxygen demand by the alimentary canal during digestion of food.\(^{31}\)

- **Tambula sevana** (Betel/ Paan chewing): It is penetrating, hot in potency, improves taste, astringent, bitter, alkali and pungent in taste, laxative, light for digestion, wards off *kapha, vata* and exhaustion, Astringent taste which cleanses the mouth, make the mouth pleasant, maintains good smell, complexion, removes the dirt/waste of the jaw and teeth, cleanses the tongue, mitigates excess of salivation and cures diseases of throat and act as rejuvenator. *Nagavalli* (Old betel leaves) are slightly pungent, digestive, small, thin and white, this is considered good. *Puga* (areca nuts) enhances digestive power and taste and wards off bad taste in the mouth and *tridoshahara*. *Khadira* (catechu) mitigates *kapha* and *pitta*. *Churna/Sudha* (Slaked lime) mitigates *vata* and *balasa*. Benefits of Betel leaves chewing are proved by the researches. The bacteria primarily responsible for dental decay in man are *Streptococcus mutans*. The stickiness of the plaque is caused by dextran, which is produced by the fermentation of dietary sucrose by *Streptococcus mutans*.\(^{32}\) The plaque bacteria, particularly *Streptococcus mutans*, act on dietary fructose to produce lactic acid, which causes enamel decalcification (at below or above 5.5pH).\(^{33}\) The aqueous extract of betel leaves inhibits the different acid-producing oral pathogens which changes in the ultra-structure of the enamel and its properties like *Streptococci, Lactobacilli, Staphylococci, Corynebacteria, Porphyromonas gingivalis and Treponema denticola*. So *Tambula sevana* provide best oral hygiene. Combination of all *Tambula dravya’s* mitigates all the *tridosha*, produces happiness, cleanliness and smell of the mouth, radiance and good complexion.

- **Rajavathaseena** (Sit like king): After having food sitting comfortably like king will help in relieving fatigue caused due to ingestion of *Ahara*.\(^{34}\) Activities after food cause the physiology of body to shift away from digestion to action. During action, the small blood vessels in the digestive system through which nutrients are absorbed constrict. This decreases absorption. Meanwhile, the blood vessels that bring blood to the muscles will dilate to allow them to receive more oxygen and nutrients. It causes the small vessels of the digestive system to constrict, reducing nutrient absorption. Thus, going back to work or onto another activity right after eating,
contributes to poor nutrient absorption. Stress also interferes with the secretion of digestive enzymes, decreasing the body’s ability to digest the food. So sitting comfortably after food is better for digestion.  

• **Shatapata** (Short walk): Walking slowly after food will reduce the heaviness of the food and helps to make easiness of the neck, ankles and waist. Simply sitting after food produces stupor and sleeping leads to plumpiness of the body but short and slow walking leads to long life. And one should avoid long running as it runs out life quickly (dies)  

A brief walk shortly after eating is a quick way to burn calories and aid digestion. Over the years, researchers have found that a post-meal walk, as short as 15 minutes, can in fact help with digestion and improve blood sugar levels. In one study in 2008, German researchers looked at what happened when people ate a large meal and then consumed either an espresso or an alcoholic digesters—like brandy or flavored liqueur—or walked at a slow pace on a treadmill. Walking, they found, sped the rate at which food moved through the stomach. The beverages had no effect. In a study published in 2009, researchers found that a 20-minute walk about 15 minutes after dinner led to lower post-meal blood sugar levels in people with Type 2 diabetes than either a walk before dinner or no walking at all. Another study, published recently in Diabetes Care, found that in older adults who were overweight and sedentary, walking for 15 minutes shortly after each meal improved daily blood sugar levels to a greater extent than a single 45-minute walk in the morning. In other studies, researchers have found that walking has a significant effect on blood sugar after meals. Blood sugar typically rises and then falls after eating, but large spikes and variations can raise cardiovascular risk and potentially signal diabetes.

• **Shayana** (Sleep): In living beings, Anala (digestive fire) is present on the left side, above the umbilicus; hence the person who has taken meals should lie down on his left side for better digestion. After eating, blood rushes to the stomach to supply stomach glands with fluids. The food will mixes with acids and slowly turns into a chyme. About fifteen minutes after eating, up to the food is fully hydrated and blood flow to the stomach finishes body needs relaxation. To ensure a proper supply of blood, rest at least fifteen minutes after eating is best. The best way to rest is to lie down on the left side to help food stay in the upper portion of the stomach. So shyana can be included later part of food after shatapata.  

• **Manasapriya karya** (Actions desirous to mind): The food ingested stays (inside the abdomen) without any trouble, if we do pleasant work after food.  

• Sounds, sights, tastes, smells and touch which are unpleasant, disliked, food which is dirty, too much of laughing after meal- these give rise to vomiting.  

• Excessive sleeping and Sitting causes kaphavridhi and stoutens the body.  

• Drinking more of liquids ceases Agni and food does not get digested well, drinking water before food gives rise to emaciation and causes weak digestive power, drinking water in between the meal kindles digestion and so is best, drinking after meal produces obesity and increases kapha.  

• Exposure to fire or sunlight, swimming, riding in vehicles or chariot or on animals, exercise, copulation, running, fighting, singing and study increases Vata.  

• When the food consumed early is half digested, eating again causes weakness of digestive fire and acts as poison.

**CONCLUSION**

By proper analyzing and implementation of bhojanottara vidhi can avoid many more prevalent
diseases of present Era. From this review we can conclude Bhojanottara vidhi can be adapted by each and every individual without any restriction to prevent the most common diseases. So, A little time to Bhojanottara vidhi can avert many oral disorders, digestive disorders and life-style disorders without any expenditure. Every individual can be benefitted from the above explained procedures. Ahara being a prime factor to nourish our shareera, it should be carefully handle even after entering it into our shareera, to acquire highest benefit from it. As Bhojanottara vidhi helps to account good effect on ingested ahara, one should always follow this to obtain positive health.

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