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GUT HOMEOSTASIS–BY DIET AND AGNI

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Abstract: A healthy body is important to get success in life and to get healthy body, healthy food is important. When we think about healthy food, a the first picture come in our mind is food rich in nutrient, but food rich of vitamin and mineral in not sufficient for good health.

Food rich in micronutrient is healthy, but on individual basis it is not healthy all time, for the person at particular time food should be properly digested and acciimulated in body to give nutrition. In nut shell it can be said that to get optimal nutrition, the food should be according to person, with its proper digestion and assimilation.

In Ayurveda, role of selection of food according to (1) Property of food (2) According to the place and condition of persons (body type, physical and mental condition) (3) According to digestive power of person are explained very well in the form of Ashta Ahara vidhi visheshayatan along with code and conduct to be followed while taking food and known as Ahara vidhi vidhan and advised to for proper digestion and assimilation of food. By following these rules of food selection and code and conduct of eating one can get proper nutrition from particular food.

Ashta Ahara vidh Visheshayatan (अष्ट आहार विधि विशेषायतन) along with code and conduct to be followed while taking food i.e. known as Ahara vidhi Vidhana (आहार विधि विधान), are advised for proper digestion and assimilation of food to maintain gut homeostasis.

Key words: Ayurveda, Digestion, Ashta, Ahara vidhi visheshayata (अष्ट आहार विधि विशेषायतन) Ashta Ahara Vidhi Vidhana (आहार विधि विधान)

Introduction: Health depends on proper balance of agni and ahara. During intake of food, certain factor should be kept in consideration to obtain its all benefit i.e. ashta ahara vidhi visheshayatan and ashta ahara vidhi vidhana. These factors are complementary to each other and denote wholesomeness of diet ^[1]. Their consideration is essential like.

Prakriti : Nature of food articles

Karana: Method involved in the processing of the food articles.

Samyoga : Combination of food article

Raasi : Quantity of food article

Desha : Habitat or climate

Kala : Time i.e. state of disease and or state of an individual.

Upayoga samstha : Rules governing the intake of food

Upayokta : Wholesomeness of individual who takes it.

These factors giving rise to good as well as bad effects and at the same time are helpful to one another. It is essential to know this factor in order to intake the right diet. There are the dietetic rules and procedure for healthy as well as for certain types of patients, concerning the intake of food that is most wholesome. One should eat food which is ^[2] -

- Hot
- Unctuous
- In due measure
- After full digestion of the previous meal
- Non antagonistic in potency
- In the congenial place.
- Provided with all the favorite accessories
- Neither too hurriedly not too leisurely
- Without talking and laughing.
- With full concentration
- Have proper regard to one.

Hot Unctuous	In due measure	After full digestion of the previous meal	Non antagonistic in potency	Without talking, laughing and not in hurry With full concentration	In the congenial place.	Have proper regard to one
Benefits						
<ul style="list-style-type: none"> • Relished • Excites the gastric fire • Digested soon • Stimulates peristaltic movement • Alleviates <i>Kapha</i>. • Lightens complexion (for unctuous food) 	<p>Balances doshas</p> <ul style="list-style-type: none"> • exclusively promotes life • Easily assimilated • Power of digestion even of a single individual varies from times to time and so there is bound to be some variation in standard measurement of food to be taken by him. 	<p>doshas return to their normal place</p> <ul style="list-style-type: none"> • Gastric fire is kindled • Hunger is stimulated • <i>Strotasas</i> are clear and open. • Clear eructation • Stomach is clear. • Peristaltic movement in normal • Natural urges are normal • Does not vitiate <i>dhatu</i>s • Promotes life. 	Will not be affected by disorder born of incompatible dietary (like, impotency, blindness, <i>kustha</i>)	<ul style="list-style-type: none"> • It will not go in proper place or injure health for appreciation of good and bad quality of food taken. • Not too leisurely • Get cold • not give satisfaction • get digested irregularly 	Does not get depressed by the emotions produced in unpleasant environment	<ul style="list-style-type: none"> • One should eat taking consideration • This food will agree with me, this will not agree.

Ahara that has been consumed after considering code and conducts of *ahara vidhi visheshayatan and vidhan* goes in body and is being properly processed by *agni*. There are four functional state of *agni* according to predominance of *dosha* and *dushya* ^[3] i.e.

- *Samagni* due to influence of normally equilibrated *dosha*.
- *Visamagni* due to influence of predominance of *vata dosha*.
- *Tikshnagni* due to influence of predominance of *pitta dosha*.
- *Mandagni* due to influence of predominance of *kapha dosha*.

Samagni it ensures complete digestion of food ingested at proper time without any irregularity leads to proper functioning of *dhatu*s. *Visamagni* In this state function of *agni* is irregular and fitful. It sometime helps the process of complete digestion and other time improper digestion. Thus leads to improper formation of *dhatu*s. *Tikshnagni* In this condition *agni* is excessively excited, it easily digests even a very heavy meal, in very short span of time and when it get no food to digest it starts digesting *dhatu*s and thus cause *dhatu*s *shosha*. *Mandagni* In this state *agni* is unable to digest even a small quantity or otherwise even easily digested food leads to *vidaha*. In nutshell all changes occurring at macroscopic, microscopic, inorganic and

organic level are due to *paka karma of agni*. *Agni* that is present in body, termed as *kayagni* is divided into three as ^[4]

- *Jatharagni*—which look after digestion and absorption of food.
- *Bhootagni*—it converts all *vijateeya panchabhautic dravyas* to *sajateeya dravyas*.
- *Dhatvagni*—for the purpose of synthesis and breakdown of tissues.

Function of Jatharagi Include

- Digestion of food
- *Saarakitta vibhajana* (Absorption)

After function of *jatharagni ahara rasa* get form, and then *bhootagni and dhatvagni* comes into play so *vijateeya ahara rasa* get converted into *sajateeya* to different *mahabhutas* of body and after functioning of *dhatu paka* gives nourishment to body tissue. But when proper functioning of *agni* get disturbed, *ama* get formed at various level in body that leads to different pathological conditions.

- *Apakva ahara in amashaya*
- *Apakva ahara rasa in amashaya*
- *Ama at dhatu level*.

When food gets properly digested it forms *sara and kitta bhaga*. *Sara bhaga* get absorb and after digestion with *dhatvagni*, forms *sthayi and asthayi poshaka dhatu*. *Sthayi poshaka dhatu*s gives nutrition to permanent *dhatu* i.e. *sthayi rasa dhatu* gives nutrition to

rasa dhatu proper and *asthaya rasa dhatu* after functioning of *raktagni* forms *sthayi* and *asthaya rakta dhatus*, in the same manner other *dhatus* get form and get their nutrition from their previous *dhatus*.

Disturbance in function of *agni* at any level i.e. *jatharagni*, *bhutagni* and *dhatuvagni* leads to formation of *ama* that is causative factor of different pathological conditions. But gross digestion takes place in *amashaya*, that's why *acharya* has described formation of *ama*, primarily in *amashaya*. Due to disfunctioning of *agni*, food remain undigested and form *ama* which is foul in smell, very slimy and vitiates *doshas* and *dhatus* when get absorbed.^[5]

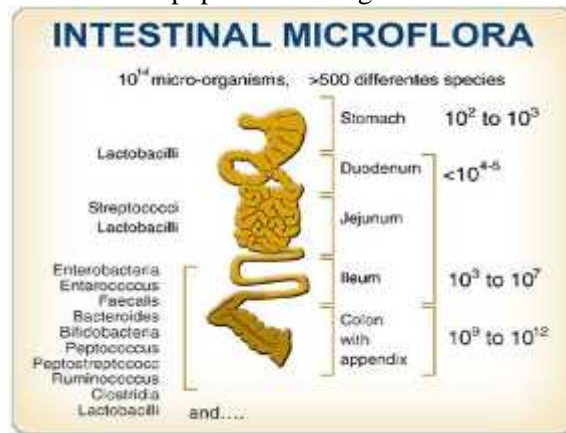
Symptoms of Ama^[6]: *Srotarodha*—obstruction—this can occur in any large, small or minute channel, when it is indicated by stagnation and disturbance in transport and metabolism in gross as well as at cellular level. Weakness or reduced working power in any part of body or organ is due to obstruction in their nutrition caused by *Ama*.

- Heaviness and lethargy
- Coated tongue
- Improper digestion and evacuation

This *Ama* is responsible for vitiation of all the *doshas* and *dhatus*. Concept of *agni* is very different concept then that of modern concept of digestion. In modern gastroenterology digestion takes place in body by the help of various types of enzymes. There is no direct evidence about the longevity, health, cheerfulness, plumpness, luster vitality etc. having relation with proper digestion as *Ayurvedic* concept about function of *agni* is. But new researches has shown and giving glimpse that has been well elaborated in *samhitas* in relation to concept of *agni* and *ama*.

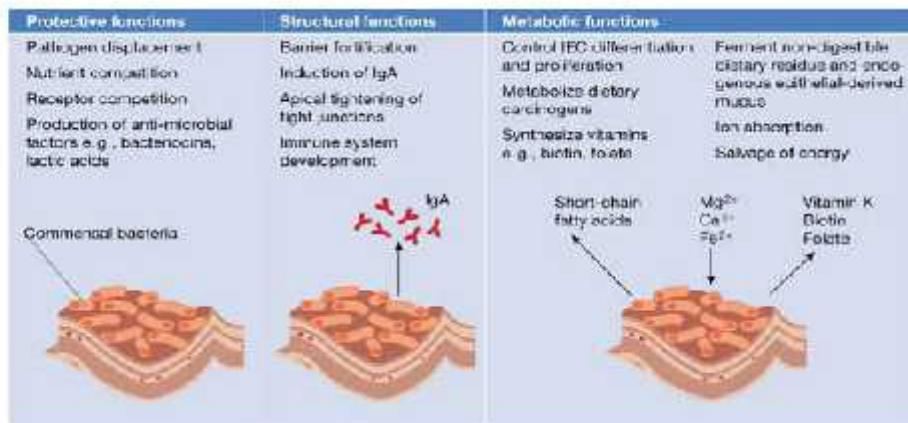
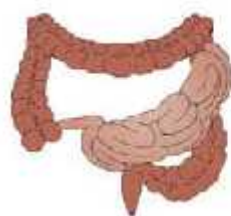
A research has shown that apart from

digestion digestive system has control on immunity, brain and hormonal secretion. New concept of gut flora is also responsible for the function other than digestion. Gut flora^[7, 8] are the microbial population living in intestine.



Human body carries about 100 trillion of microorganisms in intestine, a number ten times greater than the total number of human cell in the body. Metabolic activity performed by these bacteria resembles those of an organ, leading some to liken gut bacteria to a forgotten organ. Relationship between gut flora and human is mutualistic relationship. They perform function i.e. 1. Fermenting unused energy substrate. 2. Training the immune system. 3. Preventing growth of harmful pathogenic bacteria. 4. Regulating the development of gut. 5. Producing vitamin for the host such as biotin and vit. K. 6. Producing hormone to direct the host to store fat.

Population of species are founding vary widely among different individual but stay fairly constant within an individual over time, even though some alteration may occur with changing life style, diet and age. Microbes are mostly composed by three entero types.



Prevotella, Bacteroids and ruminococcus, having, association between concentration of each microbial community and dietary component i.e. Prevotella is associated with carbohydrate and simple sugar diet and Bacteroids is associated with animal protein, amino acid and saturated fats. Gut flora however can also be changed by following a long term diet. These microbes digest certain food that the stomach and small intestine has not been able to digest and helps the production of vitamin B and K. It helps to maintain wholeness of the intestinal mucosa. It plays important role in immune system, performing barrier effect.

According to modern science enzymes and gut flora plays major role in digestion. Along with this, intact epithelial lining of digestive tract is also important for proper absorption of food along with it, it also prevent access of external agent that can initiate or perpetuate mucosal inflammation by secreting immunoglobulin, mucous, difencine and antimicrobial products.

Discussion: Ayurvedic concept of *ahar vidhi visheshayatan* and *ahar vidhi vidhan* is great concept, modern diatitions giving only consideration about caloric, value of food there in no concept about -

- Nature of place of origin of food and person who is consuming it,
- About habitat, about method of preparation and combination of food article
- About state of disease and state of individual
- About quantity of food article
- Rules to be followed during taking food.

These concepts are very scientific concept, the food that is consumed considering all these rules and regulation get property digested and giving *dhatu poshana*. It is very clear concept by Ayurvedic view. Consumption of food after digestion of previous meal and giving consideration to rules of *ahara vidhi visheshayatan* and *ahara vidhi vidhan* may have their specific neuro hormonal effect by which enzymatic secretions and gut permeability can be regulated and controlled.

State of *agni* is also very peculiar concept, only properly digested food gives proper nutrition to body, so choice of food should be according to status of *agni* because if *agni* is not proper, food which is consumed after giving consideration to *ahar vidhi vidhan* and *visheshayatan* will not give optimal result. *Ama* forms due to improper function of *agni* in different level of digestion but it primarily forms

in *amashaya* and *pakvashaya* level. *Ama* in rout cause of all most all disease. In modern physiology new concept that is gut flora is new area of research in maintaining health and initiation of disease process i.e. if balance in gut flora get disturbed various pathological condition like depression, anxiety, mood swing, psychological disorder, autoimmune diseases, obesity, cancer, decrease immunity can occur.

Researchers are trying to find out how to regulate gut flora. Concept of *agni* and *ama* will helps in these two research area. Proper function of *agni* is responsible for maintenance of local environment of gut, because properly digested food get properly absorbed and it will help to maintain population of good gut flora in gut and the food that is not taken at proper time, during anxiety or contaminated with various antigen will not digest properly and will alter absorption and opening of tight junction and form immune complex that causes various type of allergies, autoimmunity and inflammation. These concepts are very similar concept like *ama*. So to prevent and treat these conditions, concept of treatment of *ama* and *agni* are very important.

Conclusion: *Agni* has been considered as cause of life and body (*deha dharan*) and *ama* as rout cause of all disease (*sarva dosha prakopana*). So by giving consideration to concepts related to *agni* and *ama* in researches related to gut microbiota; pathogenesis and mode of disease management can be better understand. Thus concept of *agni* and *ama* can give new vision in field of maintenance of gut homeostasis and thus maintenance of health and cure of disease.

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