

A LITERARY REVIEW ON VIRUDDHA AAHAAR

Dr. Iqbal Khan¹, Prof. Ashok Kumar Sharma², Dr. K. L. Sharma³, Dr. Rekhraj Meena⁴, Dr. Ruhi Zahir⁵

¹P.G. Scholar, P.G. Dept. Of Kriya Sharir, M.M.M. Govt. Ayurveda College, Udaipur.

²Professor and H.O.D., P.G. Dept. of Kriya Sharir, M.M.M. Govt. Ayurveda College, Udaipur.

³Associate Professor, P.G. Dept. of Kriya Sharir, M.M.M. Govt. Ayurveda College, Udaipur.

⁴Assistant Professor, P.G. Dept. of Kriya Sharir, M.M.M. Govt. Ayurveda College, Udaipur.

⁵Assistant Professor, P.G. Dept. of Kaya Chikitsa, M.M.M. Govt. Ayurveda College, Udaipur.

ABSTRACT

Viruddha Ahara is a unique concept described in Ayurveda. The present article deals with the critical review of *Viruddha Ahara* referred in terms of food-food interactions, food processing interactions. Ayurveda clearly defines that certain diet and its combinations, which interrupts the metabolism of tissue, which inhibits the process of formation of tissue and which have the opposite property to the tissue are called as *Viruddha Anna* or incompatible diet. The food which is wrong in combination, which has undergone wrong processing, which is consumed in incorrect dose, which is consumed in incorrect time of day and in wrong season, can lead to *Viruddha*

Ahara. The article narrates the modern perspective of *Sanskaar Viruddha*, *Veerya Viruddha*, *Samyoga Viruddha*, and so on. It also enlists a variety of incompatible dietary articles consumed in today's day-to-day life and its hazardous effects on health. As per the definition explained by *Charaka Samhita* those food substances and combinations, which induce deteriorating action on the body tissues, that is, *Dhatus* can be called as *Viruddha Ahara*.

KEYWORDS: Ayurveda, food-food interactions, incompatible diet, processing, *Viruddha Ahara*.

Article Received on
20 Jan. 2021,

Revised on 10 Feb. 2021,
Accepted on 02 March 2021

DOI: 10.20959/wjpr20214-20011

***Corresponding Author**

Dr. Iqbal Khan

P.G. Scholar, P.G. Dept. Of
Kriya Sharir, M.M.M. Govt.
Ayurveda College, Udaipur.

INTRODUCTION

Viruddha Anna or incompatible diet is very important issue discussed by ancient Ayurveda workers. All food articles possess their own *Rasa* (taste), *Guna* (characteristics), *Virya* (potency), and *Vipaka* (post digestion effect). Some food stuffs also possess *Prabhava* (effect) an unexplained effect. The fate of food articles within our body depends on the state of our digestive fire. When two or more food articles having different taste, energy and post digestion effect are combined the digestive fire can become overloaded, inhibiting enzyme system and result in the production of toxins.

It is said to be the cause of many systemic disorders as per *Ayurveda* literature. Persons who consume *Viruddha Ahara* are prone to many disorders. It is very important to correlate the mechanism as to how *Viruddha Ahara* is a cause of many metabolic disorders. It is also essential to know how certain food combinations interact with each other and create a disease. *Viruddha Ahara* is defined by *Charaka*.

Poor combining can produce indigestion, fermentation, putrefaction and gas formation and, if prolonged, can lead to toxemia and other diseases. For example, eating bananas with milk can diminish digestive fire, change the intestinal flora, produce toxins and cause sinus congestion, cold, cough and allergies. He clearly says that certain diet and its combinations, which interrupts the metabolism of tissue, which inhibits the process of formation of tissue and which have the opposite property to the tissue are called as *Viruddha Anna* or incompatible diet. The food which is wrong in combination, has undergone wrong processing, consumed in incorrect dose, and/or consumed in incorrect time of the day and in wrong season can lead to *Viruddha Ahara*.

With the help of modern technology and biochemistry aspects, it becomes easy to elaborate the effect of *Viruddha Ahara*. Food-food interaction is a serious issue but not much alerted one. Most of these food-food interactions are harmless but it is always better to know about some of them.

18 TYPES OF VIRUDDHA AHARA

Ayurveda literature has described various types of *Viruddha Ahara*, which can be summarized as follows with some examples:

1. ***Desha Viruddha* (place incompatibility)** –Dry and pungent substance in desert area on the other hand oily and cold substance in wet or forest land.

2. **Kala Viruddha (time incompatibility)** - Pungent substance in summer and cold substances in winter.
3. **Agni Viruddha (Digestive fire incompatibility)** – Not taken food according to individual's digestive fire.
4. **Matra Viruddha (quantity/dose incompatibility)** - honey + cow's ghee mixed in equal proportion.
5. **Satmya Viruddha (wholesome incompatibility)** – Not taken food according to individual's daily food type i.e. daily taken hot and pungent diet and suddenly changes to cold and sweet one.
6. **Dosha Viruddha (Humor incompatibility)** - Taken substance according to his/her *Prakriti* for long time.
7. **Sanskaar Viruddha (Mode of preparation/Processing incompatibility)** - Heated honey, heated curd or buttermilk.
8. **Veerya Viruddha (Potency incompatibility)** - Fish + Milk as both have different *Veerya* i.e. *Ushana* and *Sheeta*.
9. **Koshtha Viruddha (Bowel habit incompatibility)** – Food or medicine not given according to their bowel habits.
10. **Avastha Viruddha (State of health incompatibility)** – Any opposite substance given to one's state of health i.e. greasy and sweet food to obese person on the other hand dry and pungent food to malnourished person.
11. **Kram Viruddha (Sequence incompatibility)** - Hot water after taking honey, consuming curd at night. Taking *Madhura Rasa* food or *Dravya* at the end of meals and *Tikta* and *Katu Rasa Dravyas* (food substances) at the starting of meals.
12. **Parihar Viruddha (Contraindication incompatibility)** - Consuming hot tea or coffee immediately after taking non-vegetarian diet.
13. **Upachar Viruddha (Treatment incompatibility)** – Consuming cold water immediately after taking *Ghee* or oily food.
14. **Paak Viruddha (Cooking incompatibility)** – Uncooked or over cooked food.
15. **Samyoga Viruddha (Combination incompatibility)** – Sour food items with milk, fruits with milk.
16. **Hriday Viruddha (Likely incompatibility)** – Food items that individuals don't like.
17. **Sampad Viruddha (Quality incompatibility)** - Food that is not up to the quality.
18. **Vidhi Viruddha (Rules for eating incompatibility)** – Diet not taken according to *Aahaar Vidhi Vishesh aayatan* and *Aahaar Vidhi-vidhaan*.

The literal meaning of word *Viruddha* is opposite. It sounds that the food combination of certain type of food may have -

- Opposite properties
- Opposite activities on the tissues
- May exert some unwanted effect on the body when processed in a particular form
- May exert undesirable effects, when combined in certain proportion
- May have unwanted effect if consumed at wrong time.

Some of the incompatible food combinations are:

Don't Eat	With
Beans	Fruits, Cheese, Eggs, Fish, Milk, Meat, Curd
Eggs	Fruits especially melons, Beans, cheese, fish, milk, meat, curd.
Fruits	As a rule shouldn't be taken along milk, Curd
Grains	Fruit, tapioca
Honey	With equal amount of Ghee by weight, boiled or cooked honey
Hot drinks	Mangoes, cheese, fish, meat, starch, curd
Lemon	Cucumber, milk, tomato, curd
Melon	Everything especially dairy products, eggs, fried food, grains, starch. Melons more than other fruits should be eaten alone or left alone.
Milk	Bananas, cherries, melons, sour fruits, bread containing yeast, fish, meat, curd, tea, green tea and coffee
Nightshades e.g. potato, tomato	Melon, cucumber, dairy products, alcohol
Radishes	Bananas, raisins, milk
Tapioca	Fruit specially banana and mango; beans, raisins, jaggery
Curd	Fruit cheese, eggs, fish, hot drinks, meat, milk, nightshades. More than this curd should never be cooked and should be taken in night, summer, rains and spring season. Curd should always be taken with sugar, soup of green beans, ghee or the Amalaki powder.
Oil	Repeated fried oil

Diseases Due to *Viruddha Ahara*

From the above list it can be understood that any procedure, combinations, dose, amount of food, opposite properties of food if consumed in a regular fashion can lead to number of disorders. Charaka has mentioned that such types of wrong combinations can lead to even death. If above-said rules for the diet are not followed then the diseases occurring due to *Viruddha Aahaara* can occur, which are mentioned below.

1. *Visarpa* (erysipelas)
2. Blindness
3. Ascitis

4. Bullus
5. Insanity
6. Fistula in ano
7. Coma or fainting
8. Intoxication
9. Abdominal distention
10. Stiffness in neck
11. Anemia
12. Indigestions
13. Various skin diseases
14. Diseases of intestines
15. Swelling
16. Gastritis
17. Fever
18. Rhinitis
19. Infertility
20. Impotency

Viruddha Anna can lead to disorders up to impotency and infertility, thus it has an impact up to *Shukra Dhatu Dushti*. If the above list of diseases is classified as per the body system, it can be said that, immune system, endocrine system, digestive system, nervous system, and circulatory systems are affected by continuous consumption of *Viruddha Ahara*.

Food Incompatibilities in Today's Perspective

Viruddha Ahara can lead to inflammation at a molecular level. Numbers of food incompatibilities are mentioned in old Ayurved literature, such as *Charaka* and *Sushruta Samhitas*. This type of food combinations are not in use in today's era. We have to identify new food incompatibilities, which are used today in day-to-day life as per Ayurvedic perspective.

Mode of Action of *Viruddha Ahara*

Viruddha Ahara taken regularly could induce inflammation at a molecular level, disturbing the eicosanoid pathway creating more arachidonic acid leading to increased prostaglandin-2 and thromboxane. This inflammatory effect is an important effect as these are all the basic pathologies that create *Agni Mandya*, *Ama* and number of metabolic disorders.

Such food combinations can prove harmful, which may be imparting its untoward effects on immune system, cellular metabolism, growth hormone, and Dehydroepiandrosterone sulfate (DHEAS).

A new branch called topography (a science related to combination of food) is emerging, which tells about the combination of basic categories of the food. As per this science proteins must not get combined with starch and carbohydrates and may be consumed differently. This is because starches require an alkali medium and the amylase in saliva contains ptyalin, an enzyme that breaks down starch into maltose. The process continues in the small intestine, where more amylase further breaks down the maltose into simple glucose, fructose, and galactose. These are absorbed into the bloodstream, and taken to the liver, which dispenses the energy to whatever cells in the body need it. If there is no immediate requirement, glucose will be converted to glycogen and stored in the liver, or into fat to be stored in adipose tissue.

Consuming proteins and starches together will result in absorption of one being delayed by the other. Similarly, eating sugars and acid fruits hinder the action of ptyalin and pepsin, reducing the secretion of saliva, and delaying digestion. If insufficient amylase is present in the mouth, starch will not be digested at all in the stomach, instead clogging up the works until amylase in the small intestine can get to work on it. Fats impede the secretion of digestive juices, and reduce the amount of pepsin and hydrochloric acid, so they should be avoided or used sparingly with protein-rich foods. The unwanted effect of wrong combinations of food is not limited up to gastrointestinal tract only but may hamper the major systems of the body.

It must be studied that whether such type of *Kala Viruddha* diet would accelerate antigen and antibody reactions and exhibit an impact on WBCs. These types of studies would also suggest that regular consumption of *Viruddha Ahara* would also lead to immuno senescence.

Certain food combinations are capable of switching on or off little epigenetic tags on genes that tell other genes what to do to be healthy, repair, reproduce, and fix anything that goes wrong with the gene's ability to do the healthy thing to make sure the person is healthy, doesn't age too rapidly, and stays energetic.

The unwanted side effects can emerge inside the body when two or more types of foods are consumed together. Such reactions can be less important but on long term, it can be fatal upon precipitating serious side effects.

EXAMPLES WITH EXPLANATIONS

1) Tea and milk

Tea contains flavonoids called catechins, which have many beneficial effects on the heart. When milk is added to tea, then a group of proteins in milk, called caseins, interact with the tea to reduce the concentration of catechins. So avoid tea and milk together.

2) Milk and yoghurt interaction

As you know consuming both together can precipitate milk inside the stomach that may irritate and induce vomiting. So avoid milk and yoghurt together.

3) Tea and garlic

Tea contains anticoagulant compounds called coumarins. When combined with garlic (that also has anticlotting properties), they may increase the risk of bleeding. So it's better to avoid tea and garlic together.

4) Pomegranate juice and grapefruit juice

Pomegranate juice and grapefruit juice, are both known to block the cytochrome P450 3A4 enzyme systems in the intestines and increase blood levels of many medications you are taking. Taking these two juices together may synergize the above action.

5) Unripe (green) tomatoes or potatoes and alcohol

The unripe green tomatoes contain huge amount of solanine, which may interact with alcohol. You may feel more sedation if the intake is more.

6) Heated Honey

It is also mentioned in Ayurved text that heating honey is *Sanskar Viruddha*. Honey that is available in the market is Agmark honey and this honey is strongly heated before packaging. It is very important to find the relevance about why we must not heat honey

7) Deep frying of potatoes

Deep frying of potatoes can develop toxic substances, such as acrylamide, which can prove to be carcinogenic. It has been clearly mentioned in Ayurveda text that oil and food must not be

reheated. Reheating of oil creates more oxidation and if consumed may create more oxidative stress creating more free radicals. Oxidative rancidity occurs when fatty acids are exposed to oxygen in the presence of heat or light, resulting in the formation of hydroperoxide compounds. These hydroperoxides in turn form aldehyde molecules. Oxygenated aldehydes are toxic compounds that cause oxidative stress in the cells of body and may increase the risk of degenerative illness and arteriosclerotic disease. A recent study found that a toxin called 4-hydroxy-trans-2-nonenal (HNE) forms when such oils as corn, soyabean, and sunflower oils are reheated. Consumption of foods containing HNE from cooking oils has been associated with increased risks of cardiovascular disease, stroke, Parkinson's disease, Alzheimer's disease, Huntington's disease, various liver disorders, and cancer.

8) High-temperature cooking

Foods typically cooked at high temperatures, like meats, may contribute to the risk and exacerbation of chronic diseases linked with inflammation. When proteins are cooked with sugars in the absence of water, AGEs are formed. Water, however, prevents these sugars from binding to the protein molecules. Thus, combination of proteins with sugar and cooking it in absence of water is *Viruddha*. Grains, vegetables, fruits, and all such have protein in them as well, with browning being an indication of AGEs. AGEs are the end products of glycation reactions, in which a sugar molecule bonds to either a protein or lipid molecule without an enzyme to control the reaction. Glycation, on the other hand, "Advanced Glycation endproduct is a random process that damages the functioning of biomolecules." Thus being implicated in various types of age related disorders, such as diabetic vascular complications, neurodegenerative diseases, and cancers.

9) Certain type of food combinations

Certain type of food combinations and the unwanted substance released by certain incompatible food *in vivo* may have a bad impact on immune system. Milk which contains lactogen and certain fruits, such as bananas, which also contain common allergen may aggravate an asthmatic attack. Milk with eggs, reheated cow's milk, consuming too much sugar along with saturated fats, can lead to number of immunologic disorders.

10) Fast food

Fast food is high in energy density and low in essential micronutrient density, especially zinc (Zn), of which antioxidant processes are dependent. A severe decrease in antioxidant vitamins and Zn, with concomitant iron accumulation was found. Zinc deficiency correlated

positively with SOD, GSH, antioxidant vitamins, and testosterone, and negatively with TBARS, LOS, CRP, and TNF- α , demonstrating a state of oxidative stress and inflammation thus leading to underdevelopment of testis and decreased testosterone levels.

11) Gene Expression

The process of creating a new protein in cells is referred to as gene expression. Gene expression is highly regulated by the body to ensure that the correct protein is produced in the correct amount, and at the appropriate time. Errors in gene expression have the potential to lead to illnesses. Epigenetic modifications are changes made to the genome without changing the nucleotide sequence. A common type of epigenetic modification is the addition of methyl groups to DNA. A methyl group is simply a carbon with three hydrogen atoms attached to it. The epigenetic addition or removal of methyl groups to DNA physically alters the structure of the DNA.

CONCLUSION

From the above discussion, it is clear that *Viruddha Ahara* is an important aspect of today's improper dietary habits. This can lead to several hazardous diseases unknowingly to the patients. Therefore, it is important to enlist the causative incompatible dietary factors and train the patients to avoid such etiologic factors. The article also opens a new research window in the field of Ayurvedic dietetics to research upon a variety of incompatible factors to observe the effect.

Acharya Charaka has also mentioned that those people who are able to digest *Viruddha Ahara* properly, who exercise very regularly, who are young and have a very good status of *Agni* can consume *Viruddha Ahara*.

REFERENCES

1. Adam O, Beringer C, Kless T, Lemmen C, Adam A, Wiseman M, *et al.* Anti-inflammatory effects of a low arachidonic acid diet and fish oil in patients with rheumatoid arthritis. *Rheumatol Int*, 2003; 23: 27-36.
2. Agnivesha, Charaka, Dridhabala, Charaka Samhita, Sutra Sthana, 26/81, Vaidya Jadavaji Trikamaji Acharya editor, Reprint. Krishnadas Academy, Varanasi, 2000; 149.
3. Available from: http://pvhs.org/documents/Pharmacy_Services/Food_and_Drug_Interaction. [Last accessed on 2012 Jul 02].

4. Bhatnagar A. Electrophysiological effects of 4-hydroxynonenal, an aldehydic product of lipid peroxidation, on isolated rat ventricular myocytes. *Circ Res.*, 1995; 76: 293-304.
5. Blasig IF, Grune T, Schonheit K, Rohde E, Jakstadt M, Hseloff RF, *et al.* 4-Hydroxynonenal, a novel indicator of lipid peroxidation for reperfusion injury of the myocardium. *Am J Physiol*, 1995; 269: 14-22.
6. Brown PJ, Wright WB. An Investigation of the interactions between milk proteins and tea polyphenols. *J Chromatogr*, 1963; 11: 504-14. [PUBMED]
7. El-Seweidy MM, Hashem RM, Abo-El-matty DM. Frequent inadequate supply of micronutrients in fast food induces oxidative stress and inflammation in testicular tissues of weanling rats. *J Pharm Pharmacol*, 2008; 60: 1237-42.
8. Engdal S, Nilsen OG. *In vitro* inhibition of CYP3A4 by herbal remedies frequently used by cancer patients. *Phytother Res.*, 2009; 23: 906-12. [PUBMED]
9. Esterbauer H, Schaur RJ, Zollner H. Chemistry and biochemistry of 4-hydroxynonenal, malonaldehyde and related aldehydes. *Free Radic Biol Med.*, 1991; 11: 81-128.
10. Hidaka M, Okumura M, Fujita K, Ogikubo T, Yamasaki K, Iwakiri T, *et al.* Effects of pomegranate juice on human cytochrome p450 3A (CYP3A) and carbamazepine pharmacokinetics in rats. *Drug Metab Dispos*, 2005; 33: 644-8. [PUBMED]
11. *Ibid*, Charaka Samhita, Sutra Sthana, 26/84; 150.
12. *Ibid*, Charaka Samhita, Sutra Sthana., 26/103; 151.
13. Kaneda M, Okano M, Hata K, Sado T, Tsujimoto N, Li E, *et al.* Essential role for de novo DNA methyltransferase Dnmt3a in paternal and maternal imprinting. *Nature*, 2004; 429: 900-3.
14. Luo X, Everovsky Y, Cole D, Trines J, Benson LN, Lehotay DC. Doxorubicin-induced acute changes in cytotoxic aldehydes, antioxidant status and cardiac function in the rat. *Biochim Biophys Acta*, 1997; 1360: 45-52.
15. Shelton HM. The hygienic system: Orthotrophy, Chap. 26. Dr. Shelton's Health School, 1935.
16. Tareke E, Rydberg P, Karlsson P, Eriksson S, Törnqvist M. Acrylamide: A cooking carcinogen? *Chem Res Toxicol*, 2000; 13: 517-22.
17. Vladykovskaya E, Sithu SD, Haberzettl P, Wickramasinghe NS, Merchant ML, Hill BG, *et al.* Lipid peroxidation product 4-hydroxy-trans-2-nonenal cause's endothelial activation by inducing endoplasmic reticulum stress. *J Biol Chem.*, 2012; 87: 11398-409.
18. Wsowicz E, Gramza A, Hes M, Jelen HH, Korczak J, Malecka M, *et al.* Oxidation of lipids in food. *Pol J Food Nutr Sci.*, 2004; 13: 87-100.

19. Wu SC, Yen GC. Effects of cooking oil fumes on the genotoxicity and oxidative stress in human lung carcinoma (A-549) cells. *Toxicol in Vitro.*, 2004; 18: 571-80. [PUBMED]