



VIRUDDHAHARA - A CRITICAL REVIEW

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ABSTRACT

Ahara is one among the *Trayopastambha*. It is the primary need of every individual which helps him to sustain his life. *Viruddhahara* (Incompatible food) is a unique concept described in *Ayurveda*. *Ayurveda* clearly defines that certain diet and their combinations that interrupt the metabolism of tissue inhibits the process of formation of tissue and have the opposite property to the tissue are called *Viruddhahara*. The food, which is wrong in combination, undergoes wrong processing, consumed in the incorrect dose, consumed at the incorrect time of day, and in the wrong season can lead to *Viruddhahara*. In today's era, there are drastic changes in lifestyle and food habits because of which our body gets exposed to various toxins. Various junk foods like soft drinks, pizza, white bread, potato chips, etc. are also the results of the modern lifestyle which is responsible for the formation of toxins within the body. These types of foods can correlate with *Viruddhahara*.

Keywords: *Ayurveda*, *Viruddhahara*, Incompatible food, Junk food, Lifestyle, Food habits.

INTRODUCTION

The literal meaning of the word '*Viruddha*' is opposite or antagonistic, '*Ahara*' means food. So *Viruddhahara* stands for food that is antagonistic to the

body¹. It sounds that the food combination of a certain type May have² - 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 a certain proportion, may have unwanted effect if consumed at the wrong time. According to *Acharya Charaka*, the drugs and diet that provoke *Doshas* to dislodge from their normal biorhythm and not eliminated are called *Viruddhahara*³. According to *Vrid-dha Vagbhata*, *Viruddhahara* is the substances that when consumed cause aggravations of *Doshas* but do not expel them out of the body and bring about abnormalities in *Dhatus* (tissues of the body)⁴. *Viruddhahara* is said to be one of the causes of many systemic disorders as per *Ayurvedic* literature. People who consume *Viruddhahara* are prone to many disorders. It is very important to correlate the mechanism as to how *Viruddhahara* is a leading cause of many metabolic disorders. It is also essential to know how some of the food combinations interact with each other and form a disease. *Acharya Charaka* clearly says that certain diet and their combinations, which interrupts the metabolism of tissue, which inhibits the process of formation of tissue, and have the opposite property to the tissue are called *Viruddhahara* or incompatible diet. The food, which is wrong in combination, has undergone wrong processing, consumed in incorrect dose, and/or consumed at the incorrect time of the day as well as in the wrong season can lead to *Viruddhahara*².

Acharya Charaka has described 18 types of *Viruddhahara*⁵,

1. *Desha* (place) *Viruddha*
2. *Kala* (time) *Viruddha*
3. *Agni* *Viruddha*
4. *Matra* (quantity) *Viruddha*
5. *Satmya* (wholesome) *Viruddha*
6. *Dosha* *Viruddha*
7. *Samskara* (mode of preparation) *Viruddha*
8. *Veerya* (potency) *Viruddha*
9. *Koshta* *Viruddha*
10. *Avastha* (state of health) *Viruddha*
11. *Krama* (sequence) *Viruddha*
12. *Parihar* *Viruddha*
13. *Upachara* (treatment) *Viruddha*
14. *Paka* (cooking) *Viruddha*

15. *Samyoga* (combination) *Viruddha*
16. *Hrid* *Viruddha*
17. *Sampad* (richness of quality) *Viruddha*
18. *Vidhi* (rules for eating) *Viruddha*

Acharya Sushruta has mentioned 4 types of *Viruddha*⁶,

1. *Samyoga* *Viruddha* (Unsalutary combinations)
2. *Karma* (Functionally) *Viruddha*
3. *Maana* (Quantitative) *Viruddha*
4. *Rasa* *Viruddha* (Incompatibilities amongst two tastes)

Diseases due to *Viruddhahara*:

According to *Acharya Charaka*, *Viruddhahara* is responsible for the cause of many diseases such as *Shandi* (infertility), *Visarpa* (Herpes), *Bhagandara* (fistula), *Moorcha* (fainting), *Pandu* (anemia), *Amavisha* (acid eructation), *Shotha* (Inflammation), *Grahani roga* (malabsorption syndrome), *Jwara* (fever), *Santana dosha* (genetic disturbances) and even *Mrityu* (death)⁷.

Food incompatibilities in today's perspective:

With the help of modern technology and biochemistry, it is easy to elaborate on the effect of *Viruddhahara*. Most of these food-food interactions are harmless but it is always better to know about some of them. *Viruddhahara* can lead to inflammation at a molecular level. A number of food incompatibilities are mentioned in old *Ayurvedic* literature by *Acharya Charaka* and *Sushruta*. These types 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 the *Ayurvedic* perspective. These food incompatibilities can also be categorized into *Karma* *Viruddha*, *Krama* *Viruddha*, *Veerya* *Viruddha*, and so on. Such food combinations can prove harmful, which may be imparting its untoward effects on the immune system, cellular metabolism, growth hormone, and Dehydroepiandrosterone sulfate (DHEAS). A new branch called topography (a science related to a combination of food) is emerging, which tells about the combination of basic categories of food⁸. As per this science, proteins must not get combined with starch and carbohydrates. This is because starch requires an alkali medium and the amyl-

ase 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 protein and starch together will result in absorption of one being delayed by the other⁸. 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 to the gastrointestinal tract only but may hamper the major systems of the body. 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 in long term, they can be fatal upon precipitating serious side effects.

For example,

1. Milk and yoghurt interaction - Consuming both together can precipitate milk inside the stomach which may irritate and induce vomiting. So, avoid milk and yoghurt together.
2. Tea and garlic - Tea contains anticoagulant compounds called coumarins. When combined with garlic (which also has anticlotting properties), they may increase the risk of bleeding. So, better to avoid tea and garlic together⁹.
3. Green tea or black 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 together¹⁰.
4. Deep frying of potatoes - Can develop toxic substances such as acrylamide, which can prove to be carcinogenic¹¹.
5. Milk and Banana - Increase in SGOT and urea. Decrease in Creatinine level¹²
6. *Madhu* and *Gritha* in equal quantity- Increased oxidative stress generation, decreased albumin cobalt binding, increased Amadori product formation, advance glycation end-product formation, glucose, and DPP-4 augmentations which relate to GLP-1 and GIP attenuation, liver function test enzyme elevation, liver tissue inflammation, inflammatory cell infiltration, bile duct dilation, rise in TG, cholesterol, and lipases level are the evidence which can say that equal ratio of honey and ghee intake could be the possible cause of toxicity¹³
7. Heating Honey - Rise in Hydroxymethyl furfuraldehyde, increased cash value, pH, antioxidant, browning¹⁴
8. Pomegranate juice and grapefruit juice - Pomegranate juice and grapefruit juice, are both known to block the cytochrome P450 3A4 enzyme systems in the intestines. Taking these two juices together may synergize the above action¹⁵
9. Unripe (green) tomatoes or potatoes and alcohol - The unripe green tomatoes contain a huge amount of solanine, which may interact with alcohol. You may feel more sedation if the intake is more¹⁶.

Mode of action of Viruddhahara:

Viruddhahara taken regularly could induce inflammation at a molecular level, disturbing the eicosanoid pathway and creating more arachidonic acid leading to increased prostaglandin-2 and thromboxane. This inflammatory effect is important as these are all the basic pathologies that create *Agnimandhya*, *Ama*, and a number of metabolic disorders. It has been clearly mentioned in the *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 the body and may increase the risk of degenerative illness and atherosclerotic disease¹⁷. Hydroperoxide fatty acids may also have a detrimental effect on the fat-soluble vitamins A and E. Thermally oxidized fat generates toxic lipid peroxidation products that would induce oxidative stress in animals. The degree of saturation of oil is an important factor in determining the quality of cooking oils. Unsaturated fatty acids are more susceptible to lipid oxidation than saturated fatty acids and for this reason, they are a good source of free radicals¹⁸. In a recent study, it is found that a toxin called 4-Hydroxy-trans-2-Nonenal (HNE) forms when 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 cancer¹⁹. High-temperature cooking can also be called *Samskara Viruddha*. Foods typically cooked at high temperatures like meat 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 (Advanced Glycation End products) are formed. Water however prevents these sugars from binding to the protein molecules. Thus, a combination of proteins with sugar and cooking it in absence of water is *Viruddha*. 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. A similar reaction, known as glycosylation, uses an enzyme to control the reaction by targeting specific receptor sites on cells.

Milk which contains lactogen and certain fruits such as bananas, which also contain common allergens may aggravate an asthmatic attack. Milk with eggs, reheated cow's milk, and consuming too much sugar along with saturated fats, can lead to a number of immunologic disorders. It has been regularly ob-

served in the clinics that rheumatoid arthritis patients who consume curd and sour food at night complain of more morning stiffness. Thus, the regular consumption of *Viruddhahara* may also lead to immune senescence.

Treatment:

Diseases produced by intake of *Viruddhahara* can be treated by *Panchakarma*, especially *Vamana* (emesis) and *Virechana* (purgation), and also by *Shamana* (palliative therapy) and a wholesome diet. Prophylactic measures counteract the disorders born from *Viruddhahara*, but *Nidanaparivarjana* (Avoiding the causative factors) is the best way to live a healthy life. The person who consumes contradictory food regularly in small quantities will lead to *Okasatmya* (Habitual by regular intake). *Viruddhahara* generally does not have any effect in those who are young, whose *Agni* (digestive fire) is strong, doing oleation & exercise regularly²⁰.

DISCUSSION

The changing lifestyle along with the increased peer pressure is attracting people to change their food habits, which are most probably a taste shifting toward junk food. Junk food is explained under the term *Viruddhahara* by our *Acharyas*. In our *Ayurvedic* classics, there are so many terms that are related to *Viruddhahara* i.e., *Mithyahara* (Unwholesome diet), *Adhyashana* (Intake of food before the previous meal is digested), *Vishamashana* (Irregular food habits). *Acharya Charaka* has enlisted 18 types of *Viruddhahara*, while *Sushruta* has enumerated 4 types. Considering the proverb "Prevention is better than cure", our responsibility should be more toward the prevention of these toxicities in the community.

Pathological effects of *Viruddhahara* may be sudden or gradual. This may cause several diseases of acute nature and results in a fatality like that of *Visha*. Sometimes *Viruddhahara* does not bring about harmful effects but can provoke the dosha by disturbing the stability of the *Dhatu* in the body. We have a reference of *Viruddhahara* acting like *Garavisha* (Slow poison) in *Ayurveda*²¹. Here disease will develop in due course of time. *Viruddhahara* can directly result

in *Dhatudushti* without the involvement of *Dosha*. Deranged *Dhatu* is incapable of performing their function thus resulting in various diseases. The majority of the disease has inflammation as a part of its pathology. Even if anti-inflammatory drugs can effectively block COX (Cyclo-oxygenase) and LOX (Lipoxygenase) enzyme systems. But consumption of such food articles that can directly cause a certain amount of inflammation in the body will never solve the problem. Consumption of repeatedly heated food articles is an ideal example of the same. Consuming omega-6-rich oil that is rancid by repeated heating aggravates the inflammatory pathology²². The fast-food industry is growing very fast, and it is rich in energy and very less in micronutrients which are essential for the body. Recent studies showed that micronutrient deficiency, especially Zinc can increase oxidative stress and inflammation in testicular tissue leading to underdevelopment of testis and decreased testosterone levels²³. As per *Ayurveda*, diseases caused by incompatible diets are treated by purificatory measures and pacification therapy. Maintenance of *Agni* (digestive power) is very important for health as per *Ayurveda*. After *Shodhana* (Purificatory procedures) certain *Shamana* (pacification procedure) is used for minute corrections at the level of *Agni* which is followed by *Rasayana chikitsa* (Rejuvenation therapies) for the proper repair and maintenance of the tissue system²⁴.

CONCLUSION

Viruddhahara is a type of *Ahita ahara*. Current food patterns, dietary habits, and a few street foods are silently leading to a few chronic lifestyle disorders. These trendy food habits without any proper nutrition are deteriorating the health of the young generation. *Ayurveda* since long back, advocates to implement certain healthy lifestyle patterns, thereby preventing many diseases and can have a vigorous long life. Hence it is needed for an hour to educate society about these antagonistic food habits, to have a virtuous life.

REFERENCES

1. National institute of Indian medical heritage (NIIMH). Amarakosha. [Online]. Available from: <https://niimh.nic.in/ebooks/e-Nighantu/amarakosha/?mod=search>
2. Charaka. Sutrasthana; Atreyabhadrakapiya Adhyaya: Chapter 26, Verse 81. In: Acharya, J.T (ed.) Charaka samhitha by Agnivesha with the Ayurveda-Dipika Commentary of Chakrapanidatta. Varanasi: Chaukhambha Orientalia; c2014. p.149.
3. Charaka. Sutrasthana; Atreyabhadrakapiya Adhyaya: Chapter 26, Verse 85. In: Acharya, J.T (ed.) Charaka samhitha by Agnivesha with the Ayurveda-Dipika Commentary of Chakrapanidatta. Varanasi: Chaukhambha Orientalia; c2014. p. 150.
4. Vagbhata. Sutrasthana; Viruddhanna Vijnaniyam: Chapter 9, Verse 17. In: Dr. Shivprasad Sharma (ed.) Ashtanga Sangraha of Vriddha Vagbhata with the Sasilekha Sanskrit commentary by Indu. Varanasi: Choukhamba Sanskrit Series Office; c2012. p. 89.
5. Charaka. Sutrasthana; Atreyabhadrakapiya Adhyaya: Chapter 26, Verse 84. In: Acharya, J.T (ed.) Charaka samhitha by Agnivesha with the Ayurveda-Dipika Commentary of Chakrapanidatta. Varanasi: Chaukhambha Orientalia; c2014. p. 150.
6. Sushruta. Sutrasthana; Hithahithiya Adhyaya: Chapter 20, Verse 13-16. In: Acharya, J.T (ed.) Sushruta samhitha of Sushruta with the Nibandhasangraha Commentary. Varanasi: Chaukhambha Orientalia; c2014.p. 96.
7. Charaka. Sutrasthana; Atreyabhadra Kapiya Adhyaya: Chapter 26, Verse 102-103. In: Acharya, J.T (ed.) Charaka samhitha by Agnivesha with the Ayurveda-Dipika Commentary of Chakrapanidatta. Varanasi: Chaukhambha Orientalia; c2014. p. 151.
8. Shelton HM. The hygienic system: Orthotropy, Chap. 26. Dr. Shelton's Health School. 1935
9. Engdal S, Nilsen OG. In vitro inhibition of CYP3A4 by herbal remedies frequently used by cancer patients. *Phytother Res* 2009; 23:906-12.
10. Brown PJ, Wright WB. An Investigation of the interactions between milk proteins and tea polyphenols. *J Chromatogr* 1963; 11:504-14.
11. Tareke E, Rydberg P, Karlsson P, Eriksson S, Törnqvist M. Acrylamide: A cooking carcinogen? *Chem Res Toxicol* 2000; 13:517-22.
12. Shweta K, Sudhakar and Shobha Bhat K. Toxicological evaluation of banana and milk combination as incompat-

- ible diet - An experimental exploration of *Samyoga viruddha* concept 2021 Jul-Sep; 12(3): 427-434.
13. Prerana Aditi Shivani Srivastava, Harsh Pandey, Tripathi. Toxicity profile of honey and ghee, when taken together in equal ratio 2020 Apr 22; 7:624-636.
 14. An Annapurna, K R Anilakumar, Farhat Khanum, N Anjaneya Murthy, A S Bawa. Studies on the physico-chemical characteristics of heated honey, honey mixed with ghee and their food consumption pattern by rats 2010 Apr; 31(2):141-6.
 15. 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
 16. Available from: [http://pvhs.org/documents/Pharmacy Services/Food and Drug Interaction](http://pvhs.org/documents/Pharmacy_Services/Food_and_Drug_Interaction).
 17. Wc SC, Yen GC. Effect of cooking oil fumes on the genotoxicity and oxidative stress in Human lung carcinoma(A-549) cells. *Toxicol In Vitro*. 2004. 18:571-80.
 18. Wąsowicz 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. Vladykovskaya E, Sithu SD, Haberzettl P, Wickramasinghe NS, Merchant ML, Hill BG, et al. Lipid peroxidation product 4-hydroxy-trans-2-nonenal causes endothelial activation by inducing endoplasmic reticulum stress. *J Biol Chem* 2012; 87:11398-409.
 20. Charaka. Sutrasthana; Atreyabhadrakapiya Adhyaya: Chapter 26, Verse 104. In: Acharya, J T (ed.) Charaka samhitha by Agnivesha with the Ayurveda-Dipika Commentary of Chakrapanidatta. Varanasi: Chaukhambha Orientalia; c2014. p. 151.
 21. Saumi Datta, Abhichal Chattopadhyay. Physiological concept of hapten-carrier adducts vis-à-vis Garavisha. *Ayu* 2017,38. 3-6
 22. Jacqueline K, Innes, Philip C Calder. Omega- 6 fatty acids and Inflammation. *PLEFA Volume 132*, May 2018. 41-48
 23. 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*.
 24. Charaka. Sutrasthana; Atreyabhadrakapiya Adhyaya: Chapter 26, Verse 106. In: Acharya, J.T (ed.) Charaka samhitha by Agnivesha with the Ayurveda-Dipika Commentary of Chakrapanidatta. Varanasi: Chaukhambha Orientalia; c2014. p. 151

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