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Practical approach of nutrition, diet and dietetics according to ancient system of medicine and contemporary science

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Abstract

In the present scenario of fast changing lifestyle and food behavior people are rushing towards the processed food and ready to eat food preparations, untimely meal intake and they are ignorant about harmful effects of agents used in cooking, food adulterations etc. Selection of right food on the basis of proper combination, according to body need, nutritional supplement has become a tedious task. Adding to this unlawful dietary and behavioral regimen has made the scenario worsen. All these circumstances have lead to dietary and lifestyle disorders. *Ayurvedic* concept of food and nutrition is based on holistic principle and in harmony with the individual as well as with environment in contrast to modern concept that considers food elemental and generalized. Now a days these concepts needs to be addressed and followed.

Keywords: Nutrition and dietetics, ayurvedic ahaar vidhi vidhan

1. Introduction

From the time of commencement to disease, diet is the prime source of nourishment for the living being. Out of all the factors for maintenance of positive health, proper food intake occupies the most important position because diet or *Ahara* is the basic medicament than other any substance. In today's fast paced life, many norms regarding diet and regimen have been compromised which is showing the overall declining status of health in the society. Nowadays, we are neglecting the digestive capacity, nutritional value of food products, sense of food intake and are more interested in eating tasty, ready to eat food materials. Diet and its related codes and conducts have been forgotten by the humans. All these factors have lead to manifestation of the different metabolic diseases. Today whole world is facing double burden of nutrition that is malnutrition and overweight. Malnutrition in any form presents significant threats to human beings. Poor nutrition usually leads to decreased immunity, increased susceptibility to various disorders, impaired physical and mental development while overweight may result in hypertension, cardiac disorders and other complications. So a balanced view regarding diet and dietetics is needed to stay healthy.

2. Material and Methods

Comprehensive literature from Ancient literature and contemporary modern science was collected. In context to collected information relevant research articles were searched. Finally all the relevant information was then critically analyzed, discussed and concluded.

3. Historical framework of nutrition and diet in ancient Indian treatises

Any material which is taken by mouth, follows gastrointestinal tract, gets properly digested, transformed and assimilated into the tissue elements to perform the functions such as the promotion of health, revival of loss, protection from diseases etc is termed as diet or *Ahara*. One of the most ancient hindu treatise *Rigveda*^[1] states that *Amaratva* i.e. immortality can be governed by *Purusha* that is evident by *Anna* (diet). In *Shukla Yajurveda*^[1] milk, ghrta, ripen fruits, etc are offered to God considering it as most important that a human can offer to almighty. In *Atharva Veda Soma* has been considered as best food material. *Krishna Yajurveda*^[1] implies importance of dietetic regimen in primeval society while *Taittiriyanopanishada*^[1] opines that all creatures are borne, maintained by *Anna* and at end unify in *Anna*. *Chhandogyanopanishada* states about importance of wholesome diet that if one practices the pure and wholesome diet regularly, his *antahkarana* will become pure and

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delighted [2]. In *Yagyavalkya smriti* food is considered as the nectar of life that should be given prime importance [3]. In *Bhagavata Geeta Anna* [4] has been accepted as source of the creation of life. In *Mahabharata* new guidelines regarding dietetics has been established by king *Nala* as *Nalapaakvidhi* [4]. In *Ayurvedic* [5] compendium is full of dietary principles and theories. *Ahaar* is considered as one of the three *Upasthambha* (supporting pillars). All these descriptions show that food was having same importance in ancient era.

4. Concept of nutrition and balanced diet

Nutrition is considered as the critical part of health and development. According to WHO, nutrition is the intake of food in accord to the body needs. Good nutrition, a cornerstone of good health is an adequate, well balanced diet combined with regular physical activity.

Balanced diet contains the proper proportions of carbohydrate, fat, proteins, vitamins, minerals, and water necessary to maintain good health. Balanced food also include one food from each group i.e. dairy, vegetables, fruits, grains, and proteins. An unhealthy diet is considered one of the major risk factors for causing various chronic diseases, including cardiovascular diseases, cancer, diabetes, and other conditions linked to obesity. According to WHO healthy diet includes more fruits, vegetables, legumes, nuts and grains, cutting down on salt, sugar, and fats particularly saturated fats. Under healthy diet energy intake in form of calories should be in balance with energy expenditure. Total fat should not exceed 30% of total energy intake to avoid unhealthy weight gain and free sugars to less than 10% of total energy intake. Along with such proportions some dietary supplementation is also required in form of daily doses of vitamins and minerals. Now a day's concept inclusion of nutraceuticals in diet has emerged as an important notion. Nutraceuticals and functional foods are the terms often used interchangeably by health professionals. Nutraceuticals are defined as naturally extracted bioactive compounds from food, dietary supplements and herbal combinations having health benefitting, disease preventing and medicinal [6] properties. Nutraceuticals are categorized on the basis of food sources as dietary fibers, probiotics, prebiotics, PUFA, antioxidants, polyphenols, spices etc.

Ayurveda defines concept of balanced diet as wholesome diet or sometimes *Pathya* diet. *Ayurveda* first time conceptualized that there is no medicine like food and only food can cure the diseases. *Ayurveda* classifies foods more scientifically into two, four, six, twenty and innumerable on the basis of intake, their source, method of ingestion, types of *Rasa* (Taste), their properties and multiplicity of substances, combinations as well as preparations respectively. *Acharya Charak* opines that *Pathya* diet or food does not cause any harm to person, nourishes the body, and results in cheerful mind [7]. *Charak* further opines that ideal diet must have the properties of *Balvriddhikara* (Strength promoting food), *Ruchikara* (tasty or palatable), *Urjaskara* (Energy provider), *Sharir-dharaka* (Maintains body), *Triptikara* (Satisfying in nature), *Snigdha* and *Ushna* at the time of eating, *Matrashi* (Adequate quantity) and *Aviruddha Ahara* (Food items should not have the properties contrary to each others). The balanced healthy diet is a *satmya* diet that must be *Hitakara* and *Pathya* consisting all six *Rasas*.

In modern medical sciences, calculation of daily requirement of different nutrients like carbohydrate, proteins, fats, vitamins, minerals etc. are based on age, body weight, and

surface area etc. while in *Ayurveda* each food has been described according to their *Doshika* configuration, *Rasa-Guna- Veerya-Vipaka- Prabhav* etc. So concept of both should be integrated judiciously, then response of integrated well planned diet for purpose to maintain health, prevention of recurrence of disease and treatment of existing disease will be more fruitful and beyond the expectation.

5. Diseases due to faulty nutrition and diet

The healthy bodies as well as the diseases are nothing but the outcome of diet and dietetics. Unhealthy diet and lacunae of proper balanced and nutritive diet has resulted into outcome of many problems. Lifestyle of a person is a cumulative product of his/her physical capacity coordinated with psychological functioning, displayed in form of conducts, dietary and living patterns based on his own training sought from childhood, and mimics he gained from his immediate companions including parents, siblings etc. When this coordination is disturbed it leads to the derangement of lifestyle which results in lifestyle disorders. Lifestyle factors include diet, cigarette smoking, alcohol, stress, physical inactivity, obesity, etc.

Food is an integral part of the daily life but less attention is being paid for same. Type of food and manner it is consumed has made humans more susceptible for various gastric disorders. *Ayurveda* opines that untimely eating habits and eating unwholesome diet has been a causative factor for upper gastrointestinal tract disorder while intake of food before digestion of previous meal is a causative factor of lower gastrointestinal tract disease. Dietary factors have been observed to play a major role in the etiology of gastrointestinal disorders [8]. A positive correlation of increased fast food consumption, skipped breakfast and increased body mass index was found among adolescents [9, 10]. Heavy consumption of red meat is a risk factor for several cancers especially colorectal [11] and pancreatic.

Animal proteins have emerged as the strongest independent risk factor. Main culprit in this story is hydrogen sulphide produced by meat in colon that increases level of oxidative stress largely leading to malignancy. Reduced intake of dietary fibers, flavonoids, antioxidants make conditions more susceptible for same.

6. Qualitative and quantitative dietetics

In the present scenario, regarding health and nutrition only gross components like carbohydrate, protein, fat etc. come into discussion. The focus on caloric requirement is another branch of this tree. Other aspects of dietetics like combination of different food articles, method of processing, external factors, psychological aspect of consumer etc. variables have not been highlighted that much. But in *Ayurvedic* compendium the later aspects were given greater importance and on the basis of this *Ayurveda* scrutinized its own principles of diet, rules to take diet and diet therapy.

6.1 Quantitative dietetics

Quantity is one of the important facets apart from the component of food. It does not only vary among individuals according to age, sex, BMI, area but also vary in same individual in accordance to season as well. It depends on so many factors. One should take food in appropriate quantity. *Ayurveda* opines that quantity of food depends upon the digestive strength of an individual and the amount which does not disturb the equilibrium of *Dosha* and *Dhatu*, gets properly

digested and gets metabolized in proper time is regarded as an appropriate quantity. Stomach capacity is also a major factor to decide the quantity of food. *Ayurveda* opines that if we divide stomach in three equal part then one part should be filled with solid food, one part with liquid diet and third part should be left empty for proper functioning of *Dosha*. Food article that is Guru in nature i.e. heavy in digestion should be taken with caution and according to digestive strength.

6.2 Qualitative dietetics

Qualitative dietetics means how food should be taken. *Ayurveda* describes such rules under *Ahara Vidhi Vidhana*. It describes that food should be *Ushna* means warm in nature. Warm food provokes secretion of enzymes and helps in digestion. Ingested diet should be unctuous (*Snigdha*) in nature. It also facilitates proper digestion. One should take food only when previous meal is completely digested. If one takes food prior to the digestion of the previous food, the partially digested product of previous meal gets mixed up with the product of meal taken afterwards resulting in aggravation of all three *Dosha* instantaneously leading to indigestion, nausea, vomiting, purgation, abdominal colic etc. So one should take food only after proper digestion of previous food only. One should take food at proper place outfitted with all the garnishes. By doing so one does not get distressed with such of factors as would result in psychological strain which occurs when one takes food at improper place or without the required accessories. One should not take food in hurry as it may enter to the wrong pathway e.g. respiratory pathway and in the same way one should not consume food very slowly because he will consume more food than required. One should not talk or laugh or be unmindful while taking food. Talking, laughing during eating may result in similar symptoms as eating food in hurry. One who has desire of spending healthy life should eat food at proper time. Food should not be taken either before usual time or after lapse of time. So *Ayurveda* has long list of dietetic behavior to be followed to keep body healthy.

7. Outcome of wrong dietetics and life style

Although modern medical science do not describe dietetics too much but still a lot of scientific studies in contemporary science proves principles of *Ayurveda*. A systematic review shows that slower eating rate is associated with reduction in food intake. Another study shows that faster eating is associated with high BMI^[12] and eating quickly in Japanese adolescent is close connection with increased waist to hip ratio^[13, 14]. Eating quickly in a hurry manner has emerged as a main cause of obesity among children^[15]. It might be possible that fast or quick eating may result in consumption of big amount of food leading to excessive intake of calorie that results in conversion in fat ultimately getting deposited on belly and back^[16]. Attentive eating has its own drawback. Reduced attention via distraction during eating may increase immediate intake, although the size of this effect is smaller than the effect that distraction produces on later consumption. Incorporation of attentive eating principles into interventions provides a novel approach to aid weight loss and maintenance without the need for conscious calorie eating.

Not only foods but faulty habits also make humans to fall in zone of danger. Obesity, hypertension etc are some concerns. Obesity has emerged as an epidemic. A sharp decline in use of leafy items along with high consumption of saturated fats has resulted in accumulation of the bad lipids in body

resulting in obesity. Ethnic cuisine and unique traditional food habits are being replaced by westernized, fast food and soft drinks. It has increased energy density leading to the risk of both obesity and micronutrient deficiency. Habits of consuming foods high in saturated fatty acids, sodium and sugar are red alarming signal to public health concerns. It has been observed that Indians consume twice salt than recommended by WHO. High salt intake habit increases risk of hypertension^[17], cardiac diseases and myocardial infarction up to 25 percent. Untreated hypertension may lead to renal disorder, heart failure and lungs congestion etc. So wrong dietary habits have contributed to emergence of new health concerns.

8. Discussion and Conclusion

The pursuit of health is becoming a leading quest in this present age of globalization. Each and every individual wants to be in a good physical and mental state, and this aspiration is also prime need of this time. Malnutrition and obesity has emerged as main culprits in area of health sector. Diet and health consciousness according to individual calorific need has emerged as new concept. One's nourishment, quality of life, mood, appearance, intellect, longevity etc all are accustomed to balanced and healthy diet. Selection of food is very important factor to ascertain the health of the individual because not only eating but healthy eating is essential for state of well being. *Ayurveda* holds its own theories and doctrines of diet and dietary habits. Along with the natural quality of food, quantity, combination, food choices, as per body constitution, climate, disease etc. are given great importance. Along with selection of proper diet, due importance should be given to dietetics as well because rules of taking diet is having same importance as well. For this one has to pay attention to the preventive measures by adopting the remedial modification of in their lifestyle and dietary habits.

9. References

1. Shastri JL. editor. Upanishada Sangraha. Varanasi: Motilal Banarasidas, 1984.
2. Chhandogya Upanishada with Shankar Bahsya, Geeta Press, Gorakhpur, 2008.
3. Pandey UG (editor). Yagvalkyasmriti with hindi commentary, Varanasi. Chowkhambha Sanskrit Sansthana, 1997.
4. Saraswati Madhusudana, editor, (1st edition). Shrimadbhagawatgeeta Delhi: Chaukhambha Sanskrita Pratishthana, 1996.
5. Dwivedi BK. Vedo me Ayurveda. Gyanpur: Viswabharati Anusandhan Parishad. 1993.
6. Chouhan B, Kumar G, Kalam N, Ansari SH. Current concepts and prospects of herbal nutraceutical: A review. Journal of Adv Pharma Technology Res. 2013; 4:4-8.
7. Sharma RK, Das B, editor (Reprint ed.) Charak samhita of Agnivesha, Sutrasthana, Matrashitiya, Chapter 5. Varanasi Chowkhambha Sanskrit Series, 2016.
8. Levin B. The role of dietary factors and chemoprevention in gastrointestinal malignancy. Current Opinion in Oncology, 1995; 7:377-380.
9. Niemeier HM, Raynor HA, Lloyd R, Rogers ML, Wing RR. Fast food consumption and breakfast skipping: Predictors of weight gain from adolescent to adulthood in a nationally representative sample. Journal of Adolescent Health. 2006; 39:842-9.
10. Vijayapushpam T, Menon KK, Rao RD, Maria Antony

- G. A qualitative assessment of nutrition knowledge levels and dietary intake of school children in Hyderabad. *Public Health Nutrition*. 2003; 6:683-8.
11. Chao MJ, Thun MJ, Conndl CJ *et al*. Meat consumption and risk of colorectal cancer. *JAMA*. 2005; 293:172-182.
 12. Robinson E, Paul A, Daley A, Jolly K *et al*. Eating attentively: a systematic review and meta- analysis of the effect of food intake memory and awareness on eating. *American Journal of Clinical Nutrition*. 2013; PMID 23446890.
 13. Hirotaka O, Shirsawa T, Nanri H, Nishimura R, Matoba M *et al*. The impact of eating quickly on Anthropometric variables among schoolgirls: a prospective cohort study in Japan. *European Journal of Public Health*. 2014; 24(1):691-695.
 14. Hirotaka O, Shirsawa T, Nanri H, Kokaze A, Hoshino H *et al*. Eating quickly is associated with waist to hip ratio among Japanese adolescents: a cross sectional survey. *Arch. Public Health*. 2016; 74:18.
 15. Leong SL, Madden C, Gray A, Waters D. Faster self reported speed of eating is related to higher body mass index in a nation wide survey of middle aged women. *J. Am. Diet. Association*. 2011; 111(80):1192-1197.
 16. Zhu B, Haruyama Y, Musto T, Yamazaki T. Association between eating speed and metabolic syndrome in a three year population based cohort study. *Journal of Epidemiolog*. 2015; 25:332-336.
 17. He FJ, Li J, Macgregor GA. Effect of longer term modest salt reduction on blood pressure. *Cochrane systematic review and meta-analysis of randomized trials*. *BMJ*. 2013; 346:5.