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A Pinch of Salt - Its effect on health

Komal Gawali, Mahesh Vyas,¹ H.A.Vyas.²

PhD Scholar, ¹Professor. and HOD, ²Associate Professor, Department of Basic Principles, IPGT and RA, GAU, Jamnagar, Gujarat, India.

ABSTRACT

Ayurveda is an ancient science having its roots in Vedic literature which describes certain rules and regulations as a way of living. Over the ages with the advancement of technology, there have been tremendous changes in the lifestyle patterns of the individuals. The Principles of Ayurveda science are the same but it is imperative to match up and draw an analogy with the modern evidences and discover the innovation in them. *Gramya Aahara* is one such type of diet that is prevalent in the society and is the cause of various diseases. *Ati Lavana* (excessive consumption of salt) is one of the components mentioned in it. The challenge lies in understanding the dogmas of Ayurveda science thoroughly and also to implement them in this modern era. The harmful effects of salt are propounded by the Ayurveda classics as well as the modern science. This is an attempt to discuss about the excessive consumption of salt from the Ayurveda as well as modern view. This will provide succor in adopting the right manner of consumption of salt pertaining to the requirements of the body.

Key words: *AtiLavana*, Ayurveda, *Gramyahaar*, Salt.

INTRODUCTION

There has been a drastic evolution in every walks of life from the early man to the modern age man. The one thing that has been constant is the hunger for food. Food has always been the prime need of the entire mankind to survive and to lead a healthy life. What has changed is the type of food and its qualities. *Acharya Charaka* and *Acharya Vagbhata* have mentioned *Aahara* as one of the pillars in the *Traya Upasthambha*.^[1] *Aahara* forms the basis of life.^[2] *Aahara* and its qualities have been mentioned in the *Ayurveda* classics. There are two aspects of consuming food. The first in which food is eaten just

to overcome hunger and the second in which food is consumed to overcome hunger as well as to prevent the initiation of any new disease process. The food world has experienced a rollercoaster ride in the last few decades. Nowadays, we even have to think about the safety of food, leave alone its qualities and other things. On these grounds, the WHO had formed a health slogan 'from farm to plate, make food safe'.^[3] These two aspects are of utmost importance to inculcate healthy food habits.

Gramya Ahara (Substandard diet) is a type of *Ahara* that has been mentioned in *Pranakamiya Rasayana*.^[4] The etymology of the word *Gramya* is '*Gramma Bhaavarthe Vaa Yat*'. This means that which is originated from *Gramma* (village) is called as *Gramya*. The *Nirukti* of the word *Gramma* is '*Gramam Janapadasyarthe*'.^[5] *Gramma* is called as a group of people. It comprises of the consumption of sour, saline, pungent, alkaline, dried vegetables, meat, sesamum, sesamum paste and preparations of flour; germinated or fresh, leguminous cereals, antagonistic, unsuitable, rough, alkaline and channel blocking substances; decomposed, heavy, putrefied and stale food items, indulging in irregular diet or eating while the previous food is undigested. This *Gramya Ahara*

Address for correspondence:

Dr. Komal Vilas Gawali

PhD Scholar, Basic Principles Department

IPGT & RA, Gujarat Ayurved University, Jamnagar-361008

E-mail: komalgawali64@gmail.com

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causes vitiation of all the *Dosha*. Due to this type of food items, the muscles get relaxed, joints get loosened, blood gets burnt, fat becomes abundant and liquified, marrow does not mature in bones, semen does not manifest and *Ojas* deteriorates. The person suffers from malaise, depression, sleep, drowsiness, lassitude, lack of enthusiasm, dyspnoea, incapability in physical and mental activities, loss of memory, intellect and lustre, becomes resort of illness and thus does not enjoy the normal life span.^[6] The word *Gramya* has been described in the dictionary as *Lokasamuha* i.e. a group of people. The food consumed by a group of people living together comes under *Gramya Ahara*. On reverting back to the stone age, the lifestyle patterns witnessed tremendous changes. The formation of civilizations had a great impact in influencing the lives of the people. The faulty and unhealthy dietary habits are included in the *Gramya Ahara* that are prevalent in the society.

Civilization is the process by which a society or place reaches an advanced stage of social development and organization. It is also defined as the society, culture and way of life of a particular area.^[7] The modern era has witnessed the development of various new civilizations. The propagation of new ideologies and theories based on the grounds of technology has accentuated an entirely new lifestyle. These lifestyle changes are apparent through the manifestation of various diseases. The acceptance of a certain way of living at the expense of health is a predicament to the entire society. The newer advances in the field of technology has added to the intricacy of several issues. One of the serious problems that is tormenting the health of the masses is faulty dietary habits. The various trends and beliefs in the food world are a grave impediment to the maintenance of health of an individual. These trends are detrimental to the health of an individual to a large extent. *Ayurveda* provides us with the knack of understanding these trends and advocating a healthy way of living.

The concept of *Gramya Ahara* and the components involved in it are crucial to understand the lifestyle modifications. The society has undergone a

metamorphosis in the way of living. Earlier it used to be the *Ashrama* System of living. Religion had a great impact and was the foundation of living. The food habits that were followed were also in sync with the requirements of the body. The *Astha Ahara Vidhi Visheshayatana* (eight factors determining the utility of food)^[8] and the *Ahara Vidhi Vidhana* (the rules prescribed while consuming food)^[9] were followed strictly by our forefathers. Consequently, the so called lifestyle diseases were rare among the masses. With the advent of technology, the food habits of the individuals deteriorated according to time leading to the emergence of many new diseases. In the ancient age, the dietary patterns followed by sages was completely different than that consumed in the modern era. As we enter into a new millenium, there has been an outcast of the ancient dietary habits, adopting an altogether different trends in the food world.

The consumption of excessive amount of salt has been mentioned in the *Gramya Ahara*. The consumption of salt in excess causes vitiation of *Pitta*, aggravation of *Rakta*, thirst, fainting, heating sensation, erosion, depletion of muscle tissue, sloughing in the parts of the body, gets afflicted with obstinate skin diseases including leprosy, aggravation of poisonous symptoms, bursting of inflamed parts, dislodgement of teeth, reduction of manhood, obstruction of the function of senses and production of premature wrinkling, graying and baldness. They also cause diseases like *Raktapitta* (a condition characterized by bleeding from different parts of the body), *Amlapitta* (acid dyspepsia), *Visarpa* (an acute spreading disease of the skin), *Vatarakta* (gout), *Vicharchika* (a type of skin eruption), Alopecia etc.^[10]

Acharya Charaka has mentioned in *Vimanasthana* about the harmful effects of consumption of excessive salt. It produces fatigueness, lassitude and accumulation of *Doshas*. People of villages, towns and cities where it is continuously used in large quantities are mostly languid and of loose flesh and body and are unable to face hardships. Even in the localities having saline soil, herbs, creepers,

Vanaspatis (trees having fruits without flowers) and *Vanaspatyas* (trees having fruits from flowers) do not grow at all or grow sluggishly because of the inhibiting effect of the salt in the soil. Therefore salt should not be used in excess. People who are accustomed to the excessive consumption of salt suffer from premature baldness, grey hair and wrinkles on the skin.^[11]

Ayurveda Classics have mentioned about excessive salt but to know about what level exactly is to be considered as excess, we should first understand about the normal level of salt. It is mentioned in *Kautilya Arthashastra*, that the quantity of salt is 1/6th part of *Kudava*.^[12] It is approximately around 10g. According to many Hindu scholars, this work belongs to 4th century.^[13] Religious duties and qualities of living beings got reduced in quarters gradually by the passage of each *Yuga*. This is how the entire universe has to face dissolution. After the passage of 1/100th of the *Yuga*, the life span of living beings gets reduced by one year from the actual span of life specific to that age. Thus time factor influences the physiological processes of the body as also the nutritional requirements of the body. The requirement of salt in this century needs to be understood and correlated with the present scenario.^[14]

A recent study authored by researchers at the Centers for Disease Control and Prevention and published in *Mortality and Morbidity report* weekly vital Signs noted that 90% of Americans consume too much salt: an average of 3,266mg of sodium daily when the recommendation is 2,300 mg for healthy individuals younger than 50 and 1,500mg daily for adults older than 50 and people who have high blood pressure, diabetes or chronic kidney disease.^[15] Scientists from Deakin University, Burwood, Australia found that kids who consume salty foods tends to seek out an accompanying sugary drink. The researches added that fluid intake was also linked to salt consumption-the more salt children ate, the more fluids they drank. Sugary drinks also tend to raise fluid intake.^[16] Researchers from the Massachusetts institute of Technology reported in the *Journal Nature* that excessive consumption of salt might increase our risk

of developing multiple sclerosis, allergies and other autoimmune diseases.^[17] According to a report, Indians consume about 3.7g of sodium, corresponding to about 9.3 gm of salt per day. This is nearly twice the amount recommended but the World Health Organization (WHO).^[18] A national salt reduction programme in India is set to target reductions in blood pressure, heart disease and stroke.^[19]

The salt in the diet leads to cramps in the muscle, dizziness or electrolyte imbalance. This also causes neurological problems or death.^[20] The chemical composition of salt is sodium chloride. This is approximately 40 percent of sodium by weight. About 90% of Americans sodium intake comes from sodium chloride. Understanding how much sodium in salt can help you take measures to control how much you are taking in.^[21] The assessment of the consumption of salt in the diet can be done on the basis of the sodium content in the salt.

According to the American Heart association (AHA), the sodium consumption should not exceed 1.5g per day (3.75g of salt) and that even includes healthy people without high blood pressure, diabetes or cardiovascular diseases.^[22] The salt is not only used in the daily diet but it is also used as a preservative and a flavor enhancer.^[23] In case of readymade food items, we must understand the significance of food labeling on the packets. There are general rules to understand about the sodium content of the food items. If sodium is listed on the label's nutritional information instead of salt, we have to multiply the amount by 2.5 to get the equivalent salt content.

For example, if a portion of food contains 1g of sodium per 100g, than it contains 2.5g of salt per 100g. If the label says 1g of salt per 100g and you consume 500g, you will get 5g. If the label specifies sodium, multiply the amount by 2.5. If a food label has more than 1.5g of salt (0.6g of sodium) per 100g, it is a high salt content food. If it has 0.3g of salt (0.1g of sodium) per 100g then it is a low salt content food.^[24] The sodium content of some of the food items that are gulped often is given below:

Table 1: Sodium content of the food items^[25-32]

SN	Food item	Servings	Sodium content
1.	Cheese Pizza	1 slice of 12 inch	462 mg
2.	Cheese burger with condiments	1	616 mg
3.	White bread	1 slice	170 mg
4.	Potato chips	1 single serving bag	150 mg
5.	Pickles	1 medium	833 mg
6.	Dhokla	1 piece	136 mg
7.	Potato French fries	1 order	171 mg
8.	Cola	240 ml	10 mg

If these food items are consumed on a daily basis, they tend to increase the sodium content in the body making the body vulnerable to the harmful effects of salt. For example, if a person tends to consume 4 slices of pizza at a time, the sodium content will become 1848mg, which alone exceeds the normal requirement of salt in a day which is 1500mg. The individuals who consume such food for two to three days in a week may be subjected to the effects of the excessive consumption of food. This is also applicable to the other food items mentioned above. Hence every food item should be consumed in moderation and should match up with the requirements of the body.

CONCLUSION

Gramya Ahara is a type of diet practiced by the society. The consumption of *Ati Lavana* (excessive salt) is one of the components in it. The awareness about the consumption of the right kind of food needs to be emphasized in the society. Be it the cooking methods or the purchasing of the readymade food

items. The society needs to understand the basics of everything about food. Food has been mentioned as *Mahabhaishajya* (greatest medicine) according to *Acharya Kashyapa*. Such is the importance that is bestowed upon food. The need of the hour is to add the right thought and ideas while consuming food. This can help to prevent and treat various diseases. The merging of the concepts of food in *Ayurveda* classics and with the available evidences procured from different kinds of researches and technology can serve as a very useful guideline to the entire mankind.

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