VOLUME - 7 | ISSUE - 7 | APRIL-2018
VEGETARIAN DIET: COUNTLESS HEALTH BENEFITS

Mr. Kshitij N. Shah<br>Assistant Professor in Food Science , Arts, Science \& commerce College, Chikhaldara, Distt. Amravati (MS)




#### Abstract

There are various myths popular among people, supporting the non-vegetarian diet and its nutritional advantages. The consumption of non-vegetarian food is growing fast in India. These myths are the main driving forces for increasing the numbers of meat eaters. Eating a non-vegetarian food has become a fashion and status symbol now. Conversely the developed countries are now getting more and more attracted to the vegetarian diet. The researchers came to know that, vegetarian diet is found to be more healthy, natural, environment friendly and ethical diet on Earth. The aim of this article is for enumerating the countless benefits of vegetarian diet. The study shows that, an appropriately planned vegetarian diet can provide all the essential nutrients adequately. The ample phytochemicals, antioxidants, flavonoids, fibers, vitamins and minerals found in vegetarian food make it not only healthier but also delicious. These micronutrients mostly found in vegetarian food only proved to be more useful in the prevention as well as treatment of various diseases. The purpose of this article is for studying and highlighting the benefits of vegetarian food and not for opposing the non-vegetarian food. The facts supporting the healthiness of vegetarian food are searched and mentioned in the article. Thus in conclusion it can be said that, the consumption of vegetarian diet containing cereals, pulses, nuts, fruits and vegetables with variety of colors is highly nutritious and most healthy in all stages of life.


KEYWORDS: Vegetarianism, Vegetarian, Healthy diet.

## OBJECTIVES OF THE PAPER:

- To enlight the benefits of vegetarian diet
- To make the reader aware about the myths common about vegetarian diet
- To aware reader about the bad effects of non-vegetarian food


## The purpose of this study

According to an observation, in Indian society we come across many people who are basically vegetarian but only due to misguiding from some nescience experts of the society, they started eating nonvegetarian food. Many vegetarians, who are follower of a vegetarian culture and belong to a vegetarian family, are now thinking to consume meat for getting strong bones. It is observed that almost all people are vegetarian basically, since for anybody it is hard to think of consuming a dead body of an animal. But without much thinking or because of ignorance people eat flesh under the impact of the various external forces thinking it as modernity or due to the fear of health.

The purpose of this article is not to oppose the non-vegetarian diet but to find out the facts about the ideal diets for us, make comparisons, and trace out the reasons of the prevalent myths about vegetarian and non-vegetarian diets.

This paper will help people for avoiding unwanted flesh eating with strong arguments. It is also for those who are still on the boundary and about to cross, who are under the doubt about the adequacy and healthiness of vegetarian diet and who are under the influence of some illogical myths.

## INTRODUCTION:

If we go to the uncivilized era of mankind, it will be noticed that, in the early age of mankind, consumption of non-vegetarian diet was very common. As there were few options available for a man to meet both ends. Thus he used to eat naturally available food without processing or even cooking, as the process of cooking was not known to him. Earning a sufficient food was his only aim, thus he had nothing to do with taste or nutrition. Moreover it was a type of compulsion for him to eat whatever he got.

In the course of human evolution man started to think about human values, morality and ethics. He started to live with minimum violence. The thinking power made him realize that he is different from other animals and just filling up the stomach anyhow was not his aim. 'Ahimsa', the crux of Indian thought and culture, was a driving force for his psychological change. If we look back to our civilized history it is found that, India had a very proud era of ethical vegetarianism. Maximum all the religions originated in India have a commitment to 'Ahimsa', non violence and compassion. Eating flesh is like committing a sin, as per the belief of all the Indian religions. I feel sorry to say that we cannot proudly claim that we are a non-violent country. According to the survey numbers reported by a New York based public policy action tank, 'brighten green', only $40 \%$ Indian people are now vegetarian. ${ }^{1}$ Due to many misinterpreted myths common in India about non-vegetarian and vegetarian diets the number of non-vegetarians is increasing rapidly. We Indians consider a non-vegetarian diet as healthier, nutritious and think that it is essential for a strong and stout body.

## REVIEW OF LITERATURE

In early research the articles concerning with diet commonly dealt with the adequacy and deficiency of nutrients. But in the mid period emphasis was given to the health effects of food on the body. Sabate, in 2003 reported about a new paradigm which emerged to give emphasis on health effects of diet. ${ }^{2}$ It was found that well-balanced vegetarian diets were more healthy, improving as well as equally nutritious than non-vegetarian diet which caused diseases. Very few research articles by Indian authors are found despite the great cultural and ethical background of our country about vegetarianism. We are now aware enough about the health benefits of vegetarian food.

Though our country has a great cultural and ethical background, supporting vegetarianism, the awareness about the vegetarian food is still very thin. We are still sticking to the nutrition related issues of vegetarian diet, the diet which is undoubtedly nutritional.

## CONCEPT OF VEGETARIANISM

Consumption of the food obtained from plant sources is termed as vegetarianism. In 2013, Tuso PJ explains the various categories of vegetarians. According to him, vegans are the people who consume the food originated only from plants, thus they exclude all types of meats, fish and sea foods, eggs and dairy products. Lacto vegetarians are the people who consume the plant foods with inclusion of milk \& dairy products in their diets. Another category of vegetarians is Lacto-ovo-vegetarians, the people who consume plant foods with inclusion of eggs and milk in their diet. ${ }^{3}$

While thinking about India, it is found that non-violence is the basis for deciding the vegetarian and non-vegetarian food. Thus milk and milk products are included in vegetarian diet as it is obtained from animals without killing and violence. Though there are various types of vegetarians throughout the world, in India 'the people who consume only plant based diet with milk and milk products are termed as vegetarian'. Here in this article I have followed the same definition for vegetarians.

## Common Myths about Vegetarian Food

- Vegetarians diet cannot provide enough proteins
- The vegetarian diet is deficient in some minerals like calcium \& iron as well as vitamin $B_{12}$, vitamin $D$ and n-3 fatty acids
- Vegetarian food cannot build strong bones, muscles and good health.
- For pregnant women, sportsmen vegetarian food is not found appropriate
- Just because of non-vegetarians, vegetarians can get enough grains.

I strongly propose vegetarian food which is most natural diet for human being. I try to advocate the vegetarian diet as it is more ethical and spiritual, nutritionally adequate and economical. Most importantly vegetarian diet is found to be the most eco-friendly \& healthier

## Nutritional Adequacy of Vegetarian Diet

According to the position statement of American Dietetic Association (ADA), published in 2009, 'an appropriately planned vegetarian diet is healthful, nutritionally adequate \& may provide health benefits in the prevention and treatment of certain diseases'. ${ }^{4}$ The paper further added that, 'vegetarian diets are also appropriate in all stages of lifecycle including pregnancy, lactation, infancy, childhood and adolescence; it is well and good for athletes too'.

Gary Fraser mentioned in his paper that, the vegetarians have lower rate of the coronary heart disease as well as lower rate of suffering from hypertension, diabetes and obesity. ${ }^{5}$ Tuso (2013), Sanders (1999) also support this fact in their respective papers. ${ }^{6}$ It is found that the composition of the breast milk of vegetarian and non-vegetarian mother is nutritionally same. ${ }^{4}$ None of the studies according to ADA, report a protein deficiency in pregnant vegetarians.

Anna-Liisa Rauma concluded in his paper that the vegetarian diets are very rich in antioxidants, thus useful in avoidance of overweight, low blood pressure, low serum glucose and cholesterol levels, and increase positive microflora in colon. Thus the vegetarians have lower morbidity and mortality rate from several diseases than nonvegetarains. ${ }^{7}$

Thus it is found that the vegetarian food is highly nutritious, as the cereals and legumes provides carbohydrates and proteins, the fruits \& vegetables are the largest and richest sources of several vitamins and minerals. Variety of phytochemicals, flavonoides and fibers are richly found in nuts, fruits and vegetables which are very essential for the regulation of body functions, as antioxidants, for strengthening the immunity system useful in the treatment of many diseases. Almost all the fruits, vegetables, spice and condiments have a medicinal value.

The vegetarian diet provides all the essential and non-essential amino acids, provided that the variety should be maintained. As an example it is found that the cereals are low in lysine, but the requirement can be completed by incorporating the beans or legumes.

Many researchers raise a doubt for deficiency of some nutrients, specially proteins, calcium, iron, vitamin D, and vitamin B-12. ADA (American Dietetic Association) added that, a vegetarian diet can meet current recommendations for all the nutrients, and specially the nutrients which are supposed to be lack in vegetarians like proteins, $n-3$ fatty acids, iron, zinc, iodine, calcium, vitamin $D$ and vitamin $B_{12}$. No difference was found in the bone mineral density (BMD) of vegetarians and non-vegetarians.

Many authors mentioned the unavailability of the above said nutrients for a vegetarian, but no strong evidences in support were given by them. For example, many of them reported about unavailability of vitamin $\mathrm{B}-12$ in vegetarians, but there is not a single incident reporting about a disease due to deficiency symptoms of vitamin B-12. This means that vegetarians are getting enough vitamin B-12 from their diet or it may be synthesized in the body. More research is needed in this area. Some articles recommend that the vegetarians, especially vegans (consuming only plant foods), should take some dietary supplements for vitamin B-12.

Many packed food available in market like breakfast cereals, health drink powders, milk powders, chocolates, biscuits, readymade atta (whole wheat flour), butter etc. are fortified with essential nutrients. The deficiency if any can be overcome by these foods; no one has to go for meat for fulfillment of any doubtful nutrients.

## Health benefits of Vegetarian Food:

The President of Physicians Committee for Responsible Medicine, Washington (D C), Mr. Neal D. Barnard has quoted that "The beef industry has contributed to more American deaths than all the wars of this century, all natural disasters, and all automobile accidents combined. If beef is your idea of 'real food for real people,' you'd better live real close to a real good hospital." ${ }^{8}$

A cohort study was carried out to find out the relation between IQ in childhood and vegetarianism at adulthood. The conclusion of this study shows that, the persons having higher score of IQ in their childhood have chosen vegetarianism in their adulthood. ${ }^{9}$

As mentioned earlier, it can be said that vegetarian diet is rich source of fibers, flavonoids and phytochemicals. Phytochemicals are of two types, carotenoids and anthocyanins. All the orange and richyellow fruits and vegetables such as mangos, carrots, pumpkins, papaya, oranges, sweet potatoes and green leafy vegetables have the color due to the carotenoids. The Red, blue and purple color in plums, cherries and mangoes etc. contain anthocyanins. These compounds work for reducing aggregation \& blood clotting. They act as anti inflammatory agents and improve endothelial functions. These substances are responsible to boost immunity power which prevents many diseases, they are also important for the regulated body functions and for providing antioxidants (ADA).

Dr. William Clifford Roberts, a famous MD of America, and he also has been the editor in chief of 'The American Journal of Cardiology', for 25 years, told in the interview, "When we kill the animals to eat them, they end up killing us because of their flesh, which contains cholesterol and saturated fat, was never intended for human beings." ${ }^{10}$

The director of a study that found a close co-relation between red meat consumption and colon cancer and an MD of Brigham and Women's Hospital also spoke on flesh that, "If you step back and look at the data, the optimum amount of red meat you eat should be zero."

A physicians committee for responsible medicine, of America suggested a strict vegan diet for better health of children. They mentioned some long term advantages of vegetarian diet as

- The possibility of suffering from hypertension is about two to three times greater in non-vegetarians than vegetarians. Vegetarian diet helps to reduce blood pressure.
- Level of cholesterols always low in vegetarians
- The rates of all types of cancer like lungs, breast, colon, bladder, stomach, mouth, larynx, esophagus or pancreas, found much greater in meat eaters than the people who avoid meat
- Vegetarians are averagely leaner than non-vegetarians
- The antioxidants, phytochemicals and carotenoids always help in keeping good health of vegetarians. ${ }^{11}$

After identifying and analyzing 2939 incident cancer cases, the conclusion was drawn through study that, vegan diet seems to confer lower risk for overall and female-specific cancer than other dietary patterns. ${ }^{12}$ An another study carried out on men and women living in England and Scotland, the conclusion is drawn about low risk of ischemic heart diseases in vegetarians as compared to non-vegetarians. Vegetarians were on $32 \%$ lower risk of IHD than non-vegetarians. ${ }^{13}$ In one study carried out on Taiwanese vegetarians and omnivores, it is concluded that, the vegetarians had lower glucose and insulin levels and higher insulin sensitivity than that of the omnivores. The insulin sensitivity was found to be high in young Taiwanese vegetarians due to the lower $\mathrm{BMI}{ }^{14}{ }^{14}$

According to Dwayer, the vegetarians are at lower risk to atonic constipation, alcoholism, lung cancer, calcium kidney stone, dental erosion and obesity. The risks for coronary artery disease, gallstones, type-2 diabetes and hypertension are also found less in vegetarians. ${ }^{15}$ In addition to the above, many
authors have supported vegetarianism in their articles. Some common conclusions can be drawn from these articles which show the benefits of vegetarian diet.

- The vegetarians have found lower Low Density Lipoprotein (LDL) level.
- The BMI of vegetarians is found lower than non-vegetarians, thus the obesity is also lower.
- Vegetarians are less suffering from hypertension. The blood pressure of vegetarians is found lower.
- The risk of all types of cancers found very low in Vegetarians.
- Vegetarians are associated with a lower risk of death from ischemic heart diseases and cholesterol levels are also low.
- The incidents of type 2 diabetes are higher in non-vegetarians than vegetarians
- The lower intake of fats especially saturated fats and cholesterols, higher consumption of fibers, antioxidants and other phytochemicals through fruits and vegetables, keep the vegetarians leaner and healthy.
- Vegetarian diet offers protection from various cardiovascular diseases.
- Vegetarian diets are found to be cardio protective.
- Vegetarians have overall lower morbidity and mortality rates from several chronic degenerative diseases.
- Vegetarian diet have medicinal properties thus it help in reduction of the medications needed to treat certain chronic diseases, thus they suggest that the physicians should recommend a plant based diet to all their patients, especially suffering from high BP, diabetes, CVD's or obesity. ${ }^{16}$


## CONCLUSION:

The above study states that the well planned vegetarian diet is extremely sufficient in providing the entire essential nutrients. But no significant evidences were reported showing deficiency about vitamin D and vitamin B-12 in some papers. The vegetarian diet seems to be most natural, economical and healthy. The vegetarians are on lower risk of all types of cancers, type-2 diabetes, hypertension, obesity, blood pressure, lung cancer and many other diseases compare to non-vegetarians. Even the vegetarian diet is helpful in the prevention and treatment of many diseases. So at the conclusion it can be said that, following vegetarianism is always good for health.

## REFERENCES:

1. MacDonald M, Iyer S. "Veg or Non-Veg? India at the Crossroads", Brighter Green's Food Policy and Equity Program, 2012, p 1-45. www.brightergreen.org
2. Sabate J. "The contribution of vegetarian diets to health and disease: a paradigm shift?", American J Clin Nutr, 2003, 78(suppl), p 502S-507S
3. Tuso PJ, Ismail MH, Benjamin PH, Bartolotto C. "Nutritional Update for physicians: plant-based diets", The Permanente Journal, 2013, 17(2), p 61-66.
4. American dietetic association. "Position of the American dietetic association: vegetarian diet", J. of American dietetic association, 2009, 109 (7), p 1266-1282.
5. Fraser Gary E. "Vegetarian diets: what do we know of their effects on common chronic diseases?", Am J Clin. Nutr., 2009, 89 (suppl), p 1607S-1612S.
6. Sanders T A B. "The nutritional adequacy of plant-based diets", Meat or wheat for the next millennium? -A debate proceedings of the Nutri. Soc., 1999, 58, p 265-269.
7. Rauma Anna. "Vegetarianism and vegan diet", Physiology and Maintenance, vol 2.
8. http://blog.gaiam.com/quotes/authors/neal-d-barnard-md
9. Gale CR, Deary IJ, Batty GD, Schoon I, Richards."IQ in Childhood and Vegetarianism in Adulthood: 1970 British Cohort Study Author", British Medical Journal, Feb 2007, 334 (7587), p 245-248.
10. Roberts WC, Fye WB."William Clifford Roberts, MD: an interview by W. Bruce Fye, MD", Proceeding, Bayl Univ Med Cent, July 2007, 20(3), p 269-292.
11. "Vegetarian Diets: Advantages for Children", Physicians Committee for Responsible Medicine, www.pcrm.org, 102798.
12. Bartley YT, Siegl KJ, Fan J, Fraser G. "Vegetarian Diets and the Incidence of Cancer in a Low-risk Population", Cancer epidemiol Biomarkers Prev, Feb 2013, 22(2), p 286-294.
13. Crowe FL, Appleby PN, Travis RC, Key TJ. "Risk of ischaemic heart disease among British vegetarians and non-vegetarians: results from the EPIC-Oxford cohort study", Proceedings of the Nutrition Society, 2012, 71 (OCE2), E203
14. Chien-Jung H, Po-Chao H, Yi-Hwei L, Shao-Chun L, Low-Tone H and Hsu-Fang C. "Taiwanese vegetarians have higher insulin sensitivity than omnivores", British J of Nutrition, 2006, 95, p129-135.
15. Dwayer JT. "Health Aspects of Vegetarian Diets", The American Journal of Clinical Nutrition, 1988,48, p 712-738.
16. Shah K N. "Vegetarianism Health, Environment and Satisfaction Through a Natural Human Diet", Indian Streams Research Journal, 2015, V(III),
17. Bellows L. "Vegetarian Diets", Colorado State University Extension, Jan 2012, Fact Sheet No. 9.324, www.ext.colostate.edu
18. Mann J. "Vegetarian diets", British Medical Journal, Sept 2009, 339, 7720 (5), p 525-526.
19. Lanou AJ, Svenson B. "Reduced cancer risk in vegetarians: an analysis of recent reports", Cancer Management and Research, 2011, 3, p 1-8.
20. Joyce A, Dixon S, Comfort J, Halett J. "Reducing the environmental impact of dietary choice: perspectives from a behavioural and social change approach", Journal of environmental and public health, 2012, p 17.
21. Pettersen BJ, Ramtin A, Jing F, Siegl KJ and Fraser GE. "Vegetarian diets and blood pressure among white subjects: results from the Adventist Health Study-2 (AHS-2)", Public Health Nutrition, 15(10), p 19091916.
22. Lanou AJ, Svenson B. "Reduced cancer risk in vegetarians: an analysis of recent reports", Cancer Management and Research, Dec 2010, p 1-8.


Mr. Kshitij N. Shah
Assistant Professor in Food Science , Arts, Science \& commerce College, Chikhaldara, Distt. Amravati (MS)

