

Nutritional and health impacts of religious and vegetarian food



Ahasanul Haque*, Nurhazirah Hashim[†], Farzana Yasmin[‡]

*International Islamic University Malaysia, Kuala Lumpur, Malaysia, [†]Universiti Teknologi Mara (UiTM), Puncak Alam, Malaysia, [‡]Lincoln University College, Kelana Jaya, Malaysia

5.1 Definition of religious and vegetarian food

5.1.1 Religious food

There are various types of religious food, and the definition of religious food varies according to ethnic groups, regions, cultures, and religion. Religious food contain cultural aspects such as food items or ritualistic processes followed by certain religious groups. They are also sometimes developed to avoid food taboos. Every community has a distinct dietary culture that symbolizes its heritage and socio-cultural aspects of its ethnicity. Food prepared by different ethnic groups of people is unique and distinct due to the differences in geographical location, environmental factors, food preference, and availability of plant or animal sources. Customary beliefs, food rules and laws, religions, and social groupings are some of the characteristics contributing to the description of a culture, while ethnicity is the affiliation with a race, people, or cultural group (Marsh et al., 2012). Furthermore, religions and customary beliefs exert a strong influence on food habits, particularly through food laws such as taboos imposed on consumption of certain food items. Some religious food have been mentioned in holy books such as the Bible, the Quran, and the Bhagavad Gita, as well as in Buddhist texts/scriptures. As a result, most of the ethnic food are influenced by religion and taboo.

5.1.2 Vegetarian food

The term vegetarian generally means a person who does not consume animal products; this includes land and sea animals. Most vegetarians generally do consume eggs and dairy products (milk products). Some people call themselves vegetarians, but they consume fish. According to the National Library of Medicine, if you follow a vegetarian diet you should be able to get all the nutrients you need. However, you need to be careful that you eat a wide variety of food to make sure you meet your nutritional requirements. In all these cases, vegetarianism was closely linked to a desire not to harm animals. In India, this caring treatment towards animals was called *ahimsa* and was a common lifestyle among religious people and philosophers (Marsh et al., 2012).

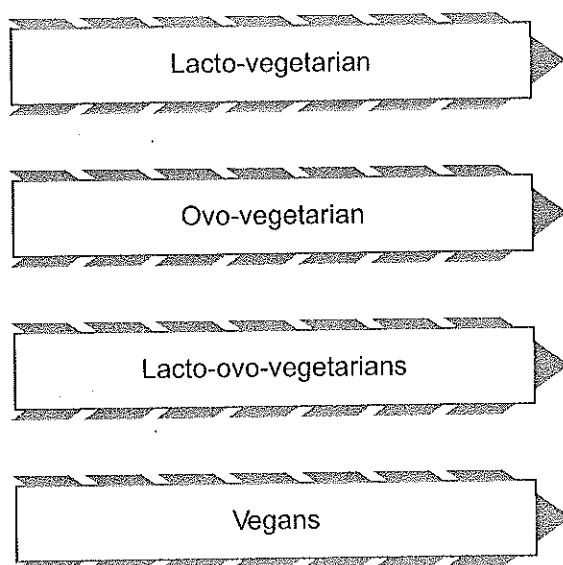


Fig. 5.1 Types of vegetarian food.

On the other hand, the conversion to Christianity of the Roman Empire virtually eliminated all traces of vegetarianism from Europe. Many orders of monks in medieval Europe either banned or limited meat consumption as a gesture of personal sacrifice or abstinence; however, none of them shunned fish. It was not until the 19th and 20th centuries that vegetarianism started to get a foothold again in Western society. During the 20th century, vegetarianism caught on swiftly throughout Western society. People's motivations were for ethical, environmental, or economic reasons, and sometimes a combination of two or three reasons (Marsh et al., 2012). Approximately 70% of the world's lacto-vegetarians as estimated are in India. Approximately 20%–42% of India's population is vegetarian. The types of vegetarian food are as the following (Fig. 5.1):

- Lacto-vegetarians: They consume dairy products, but no eggs. Most do consume honey.
- Ovo-vegetarians: They consume eggs, but no dairy. Most do consume honey.
- Lacto-ovo-vegetarians: They consume eggs and dairy. Most do consume honey.
- Vegans: Only consume plant-based food (no dairy, eggs, or honey).

5.2 Differences between religious and vegetarian food

A vegetarian is someone who takes an eating regimen comprising mostly of plant-based food, including organic products, vegetables, nuts, seeds, and grains. A few veggie lovers likewise take eggs and dairy food. There are four primary sorts of vegetarian diets: (1) a lacto-ovo-veggie lover takes dairy items and eggs, yet no meat, poultry, or fish; (2) a lacto-vegetarian eats dairy items; however, not eggs, meat, poultry, or fish; (3) an ovo-veggie lover eats eggs, yet no dairy items, meat, poultry, or fish; and (4) a vegetarian does not eat any livestock items, including meat, angle, poultry, eggs, and dairy items; numerous vegetarians will likewise maintain a strategic distance from

nectar. The nation survey led by the Vegetarian Resource Group evaluated that roughly 3% of US grown-ups are veggie lover (showing that they never eat meat, poultry, or fish), and around 1% are vegetarian (they likewise never eat dairy, eggs, and nectar) (Key et al., 2006).

In contrast, religious food are associated with religious laws and followers who follow the practice of a particular religion and consume these types of food as their faith in God. Sometimes the food are associated with socio-cultural and ethnic beliefs that have been passed on from generation to generation. The types of religious food mostly depend on the particular religion.

There is currently a lot of research that exhibits the medical advantages of vegan and plant-based eating patterns, which have been related to a diminished danger of beefiness, diabetes, coronary illness, and a few sorts of tumor and additionally expanded life span. Vegan eating regimens are ordinarily lower in fat, especially immersed fat, and higher in dietary fiber. They are additionally prone to incorporate all the more entire grains, vegetables, nuts, and soy protein, and together with the non-attendance of red meat, this kind of eating arrangement may give many advantages to the anticipation and treatment of weight and incessant medical issues, including diabetes and cardiovascular infection. In spite of the fact that an all-around arranged veggie lover or vegetarian eating regimen can meet all the dietary needs of an individual, it might be important to give careful consideration to a few supplements to guarantee a satisfactory admission, especially if the individual is on vegetarian count calories.

5.3 The benefit of nutrition in food

5.3.1 The nutritional impact of religious food

Most religious food are believed to have its own benefit especially when dealing with nutrition and health. For instance, the use of caffeine is prohibited or restricted by many religions because of its addictive properties and harmful physical effects. Many also restrict spices and certain condiments, such as pepper, pickles, or food with preservatives, because they change the natural taste of food.

Besides, the use of wine in religious ceremonies is regarded as acceptable by certain groups. For example, Roman Catholics, Eastern Orthodox Christians, and certain Protestant denominations use wine as a sacramental product to represent the blood of Christ in communion services. According to the writings of the apostle Paul, wine used in moderation may be consumed for the soothing effect it has upon an upset stomach. Mormons, however, specifically forbid wine or any alcoholic drinks because of their stimulant properties. Jews regard grapes as a fruit of idolatry, and therefore, forbid the use of wine or products made from grapes except under special conditions.

Many religious leaders and healthcare experts regard tobacco, another stimulant, as a malignant poison that affects the health of its users. Research continues to support the harmful and deleterious effects of the use of cigarettes and tobacco products. Cancer, high blood pressure, and heart disease have all been linked to tobacco use. Although marijuana has been shown to control pain in advanced diseases such as

cancer, it has been considered a restricted drug by all but those practicing Rastafarianism. Rastafarians introduced marijuana into their religious rites because they consider it the “weed of wisdom” and because they believe it contains healing ingredients.

Furthermore, it is compulsory in Islam to slaughter animals before eating their flesh. There are evidences to prove that the Islamic method of slaughtering animals is scientific and not inhumane (Azizi, 2010). The following are the conditions to slaughter animals based on Islamic method:

- The animal has to be slaughtered with a sharp object (knife) as fast as possible in order to reduce the pain of slaughter.
- The “slaughtering” is to be done by cutting the throat, windpipe, and the blood vessels in the neck causing the animal’s death without cutting the spinal cord.
- The blood has to be drained completely before the head is removed. The purpose is drain out most of the blood which would serve as a good culture medium for micro-organisms. The spinal cord must not be cut because the nerve fibers to the heart could be damaged during the process causing cardiac arrest, stagnating the blood in the blood vessels.
- Blood is a good media of germs, bacteria, toxins, and so forth. Thus, the Muslim way of slaughtering is more hygienic as most of the blood containing germs, bacteria, toxins, and others that cause several diseases are eliminated.
- Meat slaughtered by Islamic way remains fresh for a longer time due to absence of blood in the meat as compared to other methods of slaughtering.
- Besides, the swift cutting of vessels of the neck disconnects the flow of blood to the nerve of the brain responsible for pain. Thus, the animal does not feel pain. While dying, the animal struggles, writhes, shakes, and kicks, not due to pain but due to the contraction and relaxation of the muscles deficient in blood and due to the flow of blood out of the body.
- The animal has to be lawful to eat, alive, healthy, and has to be slaughtered only for the name of Allah (s.w.t.), The Creator, and not for any other reasons. The slaughter must comply himself as a true Muslim.

5.3.2 The nutritional impact of vegetarian food

Similarly, vegetarian food also contribute to the benefit of nutrition to the people. Until a few years ago, the benefits of vegetarianism were more anecdotal than clinically proven. However, over the last couple of decades, several studies have indicated that a person who adopts a vegetarian diet will be having the following impacts (Fig. 5.2) (Craig, 2009):

- *Have a lower body weight*—a study carried out by Cancer Research, UK, found that those who continue eating meat will continue putting on more weight over a five-year period, compared to those who switched over to vegetarianism. The study found that vegans put on even less weight as they get older, compared to vegetarians and meat eaters.
- *Have better cholesterol levels*—scientists at the University of Toronto and St. Michael’s Hospital demonstrated that a vegetarian diet made up of specific plant food can lower cholesterol as effectively as a drug treatment. The diet reduced levels of LDL—the “bad” cholesterol known to cause clogging in coronary arteries—in participants by almost 29%, compared to a 30.9% decrease in the lovastatin participants. The diet consisted of a combination of nuts (almonds), soy proteins, viscous fiber (high-fiber) food such as oats and barley, and a special margarine with plant sterols (found in leafy green vegetables and vegetable oils).

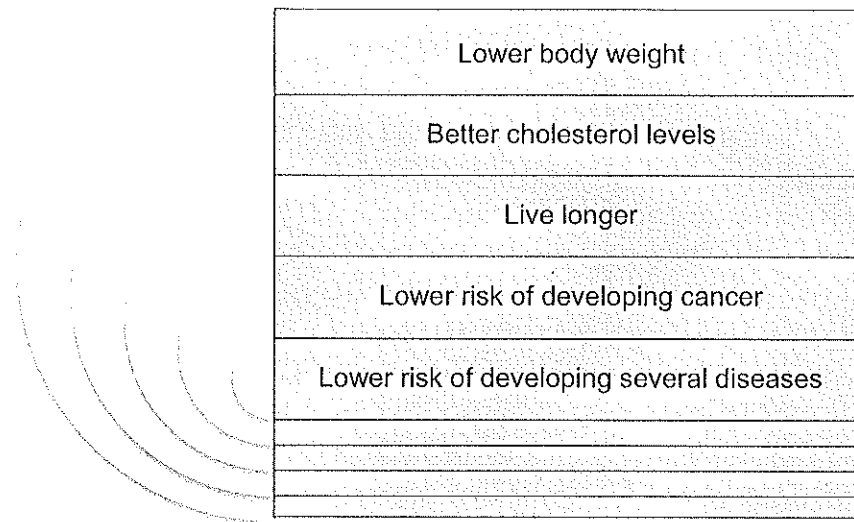


Fig. 5.2 The Impact of Nutrition on Vegetarian Food.

- *Live longer*—several studies have shown that vegetarians have a much lower risk of becoming obese, developing diabetes, cancer, and cardiovascular diseases. All these conditions and diseases reduce one's life expectancy.
- *Have a lower risk of developing cancer*—several studies have shown a reduced risk of developing many different types of cancer among vegetarians, compared to meat eaters. A recent study carried out by UK researchers, working on the European Prospective Investigation into Cancer and Nutrition-Oxford (EPIC-Oxford), found that vegetarians had a significantly lower overall risk of developing cancer, compared to meat eaters. On the other hand, the study also found that vegetarians have a higher risk of developing cancer of the colon.
- *Have a lower risk of developing several diseases*—meat guzzlers and penchants are mentioned in numerous researches to have a tendency of developing several diseases and conditions when compared to a vegetarian adherence.

Vegetarian food is generally lower in fat, especially saturated fats, and much higher in fiber, than animal-based food. However, a vegetarian, like a meat eater, has to watch his/her intake of calories, snack food, refined carbohydrates, whole milk dairy products, and nonmeat junk food (Nordqvist, 2014).

5.4 The importance of food to the health

5.4.1 The health impacts of religious food

Certain groups of people must necessarily be excused from fasting and restrictive practices. These groups include pregnant or nursing women; individuals with diabetes or other chronic disorders; those engaged in very strenuous work; malnourished individuals; young children; and frail elderly or disabled persons. Recognition of these exceptions has been addressed by each religious group. Most fasting practices allow certain intakes of liquid, particularly *water*. In fasting regimes where water is restricted, a danger of *dehydration* exists, and those fasting should be monitored.

In addition, Leiper and Molla (2003) found that those who fast without liquids increase their risk of a number of health problems. Symptoms of dehydration include headache, dry mouth, nausea, fever, sleepiness and, in extreme cases, coma. When these symptoms occur, it is important to end the fast or add water to the fast. Depending on the extent of the symptoms, ending the fast may be the only alternative. In severe dehydration cases, medical care should be sought as soon as possible to restore proper health. Some negative health consequences have been observed as a result of fasting practices; however, especially those carried out over longer periods. For example, excess acids can build up in the digestive system during a prolonged fast. This gastric acidity results in a sour taste in the mouth, a burning in the stomach, and other symptoms of illness.

The structure and outward appearance of each person's body is, in part, a reflection of the food and drink he or she consumes. All the organs of the body, as well as the skin, bones, muscles, and nerves, need nutrition to survive, regenerate, maintain function, and develop structural foundations. The vital organs, such as the liver, heart, brain, and kidneys, depend upon essential nutrients from food and drink to sustain life, increase strength, and improve health. Throughout life, the body constantly breaks down the food products that are ingested, using some components to rebuild the tissues that contribute to good health. Similarly, the body also disposes of the waste products of food through excretory processes or in storage centers (fat deposits, for instance) in the body.

For the fasting in Ramadan, glucose homeostasis is maintained by meals taken before dawn and by liver glycogen stores. Serum lipids and body weight are changing variably which depend on the quality and quantity of food consumption. Compliant, well-controlled type 2 diabetics may observe Ramadan fasting, but fasting is not recommended for type 1 diabetics. Heart, lung, liver, kidney, eyes, hematologic profile, endocrine, and neuropsychiatric functions are found normal in the fasting of Ramadan. Although Ramadan fasting is safe for all healthy individuals, those with various diseases should consult their physicians and follow scientific recommendations (Azizi, 2010). Leiper and Molla (2003) found that there are no detrimental effects on health, yet directly attributed to negative water balance at the levels that may be produced during Ramadan. There are no adverse effects of Ramadan fasting on respiratory and cardiovascular systems, hematologic profile, endocrine, and neuropsychiatric functions (Alkandari et al., 2012). Despite diverse findings regarding the physiological impact of Ramadan on diabetics, researchers have not yet found, in the diabetics who fast, any pathological changes in body weight, blood glucose, HbA_{1c}, C-peptide, insulin, fructosamine, cholesterol, or triglycerides (Azizi et al., 2003).

5.4.2 The health impacts of vegetarian food

In contrast, the food intakes of vegetarians and nonvegetarians show that vegetarian diets generally provide relatively large amounts of cereals, pulses, nuts, fruits, and vegetables. Together with the differences in intakes of animal food, these differences in food intake result in several characteristic differences in nutrient intake. Vegetarian

diets are usually rich in carbohydrates, *n*-6 fatty acids, dietary fiber, carotenoids, folic acid, vitamin C, vitamin E and Mg, and relatively low in protein, saturated fat, long-chain *n*-3 fatty acids, retinol, vitamin B12, and zinc; vegans can have particularly low intakes of vitamin B12 and so forth (Craig, 2009). These differences in nutrient intake might have favorable or unfavorable effects on the nutritional status and health of vegetarians.

Current knowledge of nutrition suggests that the relatively high intakes of dietary fiber, folic acid, vitamin C, vitamin E and Mg and low intake of saturated fat might all have benefits. The impact on health of the relatively high intakes of carbohydrates and *n*-6 fatty acids and relatively low intakes of protein, retinol, and zinc in vegetarians is unclear, meaning intakes of these nutrients in vegetarians are probably close to or above the recommended intakes, where applicable, and these nutrients are not discussed further in the present review. More data are needed to know the impact of taking low intakes of *n*-3 fatty acids and vitamin B12 on the health of vegans (Key et al., 2006).

Vegetarian diets are usually rich in linoleic acid, which may reduce the conversion of α -linoleic acid to EPA and DHA, but there is no direct evidence that plasma levels of EPA and DHA in vegetarians can be substantially increased by following a diet low in linoleic acid and high in α -linoleic acid. It is unknown whether the low levels of EPA and DHA in the plasma of vegetarians have effects on health. In a small uncontrolled trial in which supplements of EPA and DHA were given to 10 vegetarians, an increase in the plasma levels of these fatty acids and a reduction in platelet aggregation were observed, a possible risk factor for CVD, but more research is needed to explore this possible effect. Food plants do not contain vitamin B12; therefore, the only reliable sources of vitamin B12 for vegetarians are dairy products and eggs, fortified food, and dietary supplements. It has been claimed that some plant food such as seaweed and tempeh might provide true vitamin B12, but this claim has not been established and much or all the material in these food that is detected by assays for vitamin B12 may be vitamin B12 analogues that are either inactive or may antagonize true vitamin B12 (Craig, 2009). On the other hand, studies found that low standardized mortality ratios are normally seen in cohort studies of volunteers, but these low values for vegetarians do demonstrate that in general terms their health is good.

5.5 Conclusion

Although there are many differences between the benefit of religious food and vegetarian food; but in conclusion about the health effects, both food share similar advantages on nutrition and health. Likewise, in western countries, the health of vegetarians appears to be good compared with national averages and similar to that of nonvegetarians with a comparable background and lifestyle. This outcome is partly because vegetarians tend to be more health conscious than average and partly because vegetarians have reasonably healthy diets in relation to factors such as fat composition. Vegetarians have consistently been observed to have a lower mean BMI than nonvegetarians. In the available studies, vegetarians have been shown to have lower mortality

from IHD than nonvegetarians, probably because they have lower blood cholesterol. However, no clear differences have been shown for taking religious food. Overall, the health of vegetarians and religious food takers appears to be good, but as with all dietary patterns care is needed to ensure that the diet is as nutritious and well-balanced as possible according to current understanding. Well-planned vegetarian diets are not only nutritionally adequate, but also provide many health benefits, particularly in the prevention and treatment of many chronic diseases. Although potentially lower in some nutrients, careful planning can help ensure that both food takers meet all the current recommended intakes for essential nutrients as well as maximize the intake of protective components present widely in plant food. In fact, both vegetarian and religious food diet may well be one of the best ways to meet population dietary guidelines.

References

- Alkandari, J.R., Maughan, R.J., Roky, R., Aziz, A.R., Karli, U., 2012. The implications of Ramadan fasting for human health and well-being. *J. Sports Sci.* 30 (suppl. 1), S9–S19.
- Azizi, F., 2010. Islamic fasting and health. *Ann. Nutr. Metab.* 56 (4), 273–282.
- Azizi, F., Siahkolah, B., Shahraz, S., Sherafat-Kazemzadeh, R., Zali, M., Beheshti, S., 2003. Ramadan fasting and diabetes mellitus. *Arch. Iran. Med.* 6 (4), 237–242.
- Craig, W.J., 2009. Health effects of vegan diets. *Am. Clin. Nutr.* 89, 1625–1633.
- Key, T., Appleby, P.N., Rosell, M.S., 2006. Health effects of vegetarian and vegan diets. *Proc. Nutr. Soc.* 65, 35–41.
- Leiper, J.B., Molla, A.M., 2003. Effects on health of fluid restriction during fasting in Ramadan. *Eur. J. Clin. Nutr.* 57 (S2), S30.
- Marsh, K., Zeuschner, C., Sandders, A., 2012. Health implication of a vegetarian diet: a review. *Am. J. Lifestyle Med.* 6 (3), 250–267.
- Nordqvist, C., 2014. What is the vegetarian diet? What are the benefits of a vegetarian diet? *Food Technol.* 22 (5), 89–95.

Further reading

- Food Culture and Religion, The Better Health Channel. Available from: www.betterhealth.vic.gov.au.
- Religion and Food Choices, Food—A Fact of Life. Power-Point Presentation. Available from: www.foodafactoflife.org.uk.