

# STUDY TO DETERMINE WHETHER VEGETARIANS ARE HEALTHIER THAN NON-VEGETARIANS

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## ABSTRACT

*In order to determine if a vegetarian diet is healthier than a nonvegetarian one, the study looked at how this lifestyle varies considerably among generations.*

*Both the moral and the environmental reasons were much more supported by younger individuals. Significantly more individuals in the older age group believed that eating a vegetarian diet is more practical for health reasons. The reasons for choosing to live a vegetarian lifestyle vary greatly between generations. The sort of diet that people eat has a significant impact on their lifestyle and the prevention of disease. The purpose of this investigation was to evaluate the daily food intake of individuals from two different geographic regions with their BMI, blood pressure, and calorie intake in order to find variations between vegetarians and non-vegetarians (BMI, blood pressure)*

*The plain region's non-vegetarian participants consume more calories than the hill region does, which is reflected in their higher BMI and blood pressure. We infer from the results that a vegetarian diet might serve as a disease-prevention measure.*

*Goals of the study included assess the health of the general vegetarian and non-vegetarian populations. Nutritional variations are reflected in the nutrient profiles of vegetarian and nonvegetarian diets. Our goal was to assess the nutritional intakes of dietary patterns that included and excluded meat and plant-based products*

**Keyword :** *vegetarian diet, lifestyle habits on diet, nutrient content of vegetarian and non-vegetarian, diet impact on health, etc.....*

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## 1. INTRODUCTION:

An entirely vegetarian diet excludes red meat, poultry, or fish. Personal health concerns appear to be the second most typical justification, followed by environmental concerns (Herrmann & Geisel, 2002).

Other prevalent factors that persuade people to eat a diet that is more vegetarian include the psychological effects of meat intake, a desire for spiritual purity, and aversion to the sensory meat qualities (McGrath-Hanna et al., 2003). In comparison to plant protein, consuming animal protein and especially meat—has been linked to sustainability problems like poor animal welfare, increased risk of diseases that aren't communicable (such as colon cancer and

cardiovascular disease)(**Lattimer & Haub, 2010**), and a worsening of the environment and the outcomes of climate change. The vegetarian way of life is associated with the effects of lower energy vegetarian diets as well as their percentage of energy derived from fat and cholesterol on the renal hemodynamic response (**Wu et al., 2022**), with more fiber and folate than a typical mixed diet. This leads to a reduction in body mass index and blood pressure(**Gili et al., 2019**) and plasma lipid levels than in omnivores. Vegetarian diets have gained popularity linked to a number of health advantages, such as lower rates of ischemic heart disease-related death and diabetes (**Barr & Rideout, 2004**), and also certain types of cancer, as well as lower dyslipidemia risks (**de Gavelle et al., 2019**), hypertension, and obesity. Compared to non-vegetarians, Most vegetarians eat more fruits and vegetables, as well as dietary fibre, antioxidant nutrients, and phytochemicals (**Bodnar & Wisner, 2005**), addition to folic acid while eating a lower incidence of chronic disease, less cholesterol and saturated fat, all of which have been associated(**Gili et al., 2019**). The relationship between becoming a vegetarian and having better health outcomes is explained by health awareness, giving up meat(**de Gavelle et al., 2019**), and eating wholesome meals. It has been challenging to pinpoint the mechanism because the majority of research looking at the relationship between vegetarianism and health outcomes (**Bissoli et al., 2002**) so far do not take food quality into account as a confounding or mediating variable(**Gibson et al., 1998**). Assessing a growing number of young adults, especially women, are converting to vegetarian diets for the sake of their health and the environment, and animal protection and evaluating vegetarian and non-vegetarian dietary nutritional value (**JANELLE & BARR, 1995**).

## 2. LITERATURE REVIEW

### 2.1 Vegetarian and non-vegetarian diets' implications on health

Athletes training for endurance sports have different training and nutrition requirements than those training for strength and power sports. (**Segasothy & Phillips, 1999**). As a result, these athletes may have varying performance outcomes when they adopt a vegetarian diet (**Lynch et al., 2018**). The evidence does not support either a positive or negative impact effects of a vegetarian diet athletic performance potential, particularly when consumption of carbohydrates restricted (**Arenas-Jal et al., 2020**). There have been worries voiced about putting too much a focus on plant-based foods in order to increase carbohydrate consumption and maximise body glycogen reserves may result in higher dietary fibre and phytic acid intake, which may reduce the bioavailability of certain nutrient sets, such as iron, zinc, and a few other trace minerals (**Clarys et al., 2004**). However, there is no conclusive evidence that plant based athletes suffer. nutritional status decreased as a result of the interplay between their excessive exercise and eating habits based primarily on plant foods, compromising performance, health, or both. (**Nieman, 1999**).

Despite the fact that vegetarians frequently have better health than meat eaters, with decreases in diabetes and blood pressure rates, obesity, and several types of cancer (**Herrmann & Geisel, 2002**), There are still some concerns that vegetarians may engage in less physical exercise and perform physically worse, which would impair their capacity to carry out everyday tasks and maybe limit their output(**Mariotti & Gardner, 2019**). While inadequate physical ability has been associated with significant issues in elderly people, including cognitive deterioration, a high risk of falling, and a poor quality of life, as well as being low physical activity has been employed as one of the diagnostic criteria for potential sarcopenia identified as one of the most significant risk factors for 35 long-term illnesses, including sarcopenia (early manifestation sarcopenia)(**Le et al., 2018**).

The eliminating The consumption of meat and other animal products could affect health, particularly in adolescents whose development is still incomplete. Although eating a vegetarian diet has been linked to a number of health advantages, such as a lower risk of cardiovascular disease (**Sergentanis et al., 2021**). It has much reduced rates of cardiovascular disease and is rich in low-fat dairy foods, fruits, and vegetables (**Fraser et al., 2015**). An increase in antioxidant status, increased immunological function, decrease blood, decreased symptoms of fibromyalgia and rheumatoid arthritis, and self-reported improvements in health and quality of life are all associated with a raw food diet rich in plant foods (**Craig, 2010**).

A lower risk of acquiring and dying from a range of serious diseases, including as stroke, diabetes, hypertension, obesity, and numerous malignancies, has been associated with eating fruit and vegetables (**Robinson, 2008**). Many American subgroups (such as Mormons and Seventy-Day Adventists [SDAJ]) have low rates of hormone-dependent

cancer (**Mendoza, 2000**). Diet seems to be the main distinguishing lifestyle trait of the SDA people. The percentage of SDAs who consume a lacto-ovo-vegetarian diet is estimated to be 50%. They substitute entire grains, nuts, and a lot of fruits, vegetables, and legumes for meat. (**Howie & Shultz, 1985**). Although animal protein consumption has also the hypothesis that dietary fat contributes to the production of possible faecal carcinogens has received the most attention in studies on the association between colon cancer and total fat consumption. (**Eynard & Lopez, 2003**).

Even though A lower risk of several non-communicable diseases is generally associated with vegetarian diets, their primary impact on health appears to be the reduction of obesity (**Veronese & Reginster, 2019**). Overweight adults account for more than one billion people globally, with at least 300 million of them obese (**Berkow & Barnard, 2006**). Studies of western vegetarians show that vegetarians have a lower BMI than non-vegetarians who are otherwise comparable. Semi-vegetarians, vegans and lacto-ovo-vegetarians had a lower risk of self-reported diabetes than non-vegetarians., according to Tonstad and colleagues. After accounting for BMI, the risks in the vegetarian categories were nearly half those in the non-vegetarian categories overall. (**Appleby & Key, 2016**).

In comparison to non-vegetarians, vegetarians are more likely to acquire Iron depletion, low iron storage, and accompanying iron deficiency anaemia (**Hunt, 2003**). Serum ferritin concentrations in vegetarian adults, adolescents, and children were shown in infants, adolescents, and adults who are vegetarians than in nonvegetarians and Vegetarian adults, adolescents, and children had higher serum ferritin concentrations than nonvegetarians (**Gregg et al., 2008**). In all studies, with the exception of one involving female Adventist vegans, vegetarian women showed a considerably higher rate of anaemia (Hb 120 g/L). Vegetarians exhibit greater orthorexia tendencies than omnivores (**Fraser et al., 2015**).

Menstrual irregularity was less common among nonvegetarians than among vegetarians. The vegetarians consumed an increase in, carbs, dietary fibre and vitamin B-6, while nonvegetarians ingested increased cholesterol, protein, and saturated fat, coffee, and liquor (**Pedersen et al., 1991**). To get levels high enough to offer protection from disease, it has been recommended that each person 400g of fruit and vegetables per day. (**Pollard et al., 2001**).

## 2.2 Nutritional considerations for vegetarian and non-vegetarian diets

Specific dietary treatments before, during, and after pregnancy improve diet quality and adjust the adequate macro- and micronutrient intake could help to protect maternal health, mental illnesses while pregnant, and therefore, neurological and physical defects in the foetus. (**Marlow et al., 2009**). Plasma levels of selenium, -carotene, and -tocopherol, as well as vitamin B12, vitamin D (25-hydroxyvitamin D2 and D3), total cholesterol, and LDL cholesterol were all measured (**Elorinne et al., 2016**).

According to research, vital vitamins, minerals, and nutrition are consumed in eating habits characterised by a variety of eating, with a preference for plant-based products over nonvegetarian diets (**Rizzo et al., 2013**). Compared to non-vegetarians, vegetarians typically eat better-quality food. Advice for people wishing to adopt vegetarian diets must explicitly advocate healthy alternatives to animal products (such as plant-based protein sources include produce, whole grains, and fruits), as certain alternatives may degrade (Dakin et al., 2021) the level of nutrition and reduce the observed (refined grains and other processed foods ,for example) (**Torna et al., 2021**).

Given that plant proteins may be lacking in sulfur-containing amino acids or lysine, threonine, tryptophan, or other essential amino acids, protein quality has been noted as a People who avoid all animal protein sources may be concerned (such as vegans)(**Dunn et al., 2021**). According to the study, protein is far more abundant in animal-based products than in plant-based products (**Barr & Rideout, 2004**).

When compared to Vegetarians and non-vegetarians both consumed more vegetarians consumed less fat, protein, vitamin B12, and zinc, while non-vegetarians consumed more carbohydrates, vitamin C, and folate (**Shridhar et al., 2014**). Increased fruit and vegetable consumption has a favourable impact on indicators of bone metabolism and the calcium economy because of their high potassium and magnesium content (**Craig, 2010**).

According to a number of studies, vegetarians' diets differ from those of nonvegetarians' in that the former consume more fruits and vegetables and less protein on a daily basis (**Segasothy & Phillips, 1999**). Non-vegetarians Reduced overall energy intake, lower cholesterol less animal protein, more carbs, fibre, magnesium, potassium, and

antioxidants, and less animal protein just a few of the nutritional benefits that vegetarian diets may provide (Elorinne et al., 2016). That plant-based protein typically comes with a lot of animal protein and contains less potassium than it does potassium (Chai et al., 2019). Vegetarians often consume higher-quality foods than non-vegetarians. Advice for people wishing to adopt vegetarian diets must explicitly advocate healthy alternatives to animal products (such as plant-based protein sources, whole grains, and fruits), as certain alternatives may degrade (Dakin et al., 2021) the level of nutrition and reduce the observed health benefits (eg, refined grains and other processed foods) (Torna et al., 2021). A solid reason to get your protein from plants rather than animal sources. Usually alkaline foods rich in potassium as compared to protein, which raises blood pH. Strengthening the bone's resistance to dietary demands can protect the bone by increasing blood calcium release (Deriemaeker et al., 2010).

### 2.3 Beliefs and attitudes about vegetarian and non-vegetarian diets

Dieters that follow vegetarian and non-vegetarian diets exhibit different dietary behaviours and views depending on demographic, training, and competition factors (Wilson, 2016). The Vegetarian Resource Group performed a survey that found that interest in and acceptance of the vegetarian lifestyle have increased over time. The results showed that (Paul, 2009) In comparison to meat eaters, vegetarians were more likely to agree on specialty stores, the significance of product information, health and products of ecological, and social relationships. Vegetarians also had smaller households, higher levels of education and higher socioeconomic status, and they resided in more urbanised residential areas (de Gavelle et al., 2019). In comparison to meat eaters, vegetarians were more likely to agree on the value of speciality shops, health and ecological goods, and social interactions in addition to product information. Vegetarians also had local households, higher education levels better socioeconomic status and lived in more populated metropolitan regions (Tiffin & Salois, 2012). Younger adults were substantially more inclined to follow a vegetarian diet with moral and environmental justifications (Pribis et al., 2010). Even though they weren't sure whether the reasons for their disgust with meat were psychological or physical, several vegetarians reported feeling strongly repulsed by it. Participants specifically named as upsetting the sensory qualities red flesh in particular, blood, and other features that could not conceal the animal's genuine appearance, such as the smell of meat (Rothgerber, 2017).

While both vegetarians and nonvegetarians shared the belief that meat and dairy products contributed significantly to a diet's nutritional content (Gibson et al., 1998), many women, including significant portions of nonvegetarians, had reservations about the worth and quality of these foods. Concerns regarding these foods (Barr & Chapman, 2002).

Within vegetarianism, the degree to which a person may vary from avoiding animal products, ranging resulting from avoiding solely avoid all goods that can be shown to be made from animals, including red meat, fish, and eggs (vegetarian). Vegans, who abstain from using or consuming any animal products, are the strictest kind of vegetarians. (Povey et al., 2001).

### 2.4 The Influence of lifestyle habits on vegetarians and non-vegetarians

Diet and lifestyle choices have a major effect on a person's overall health. There are numerous diets, each with its own set of guidelines for what type and how much of a meal, or food group, should be consumed (Carrera-Bastos et al., 2011). This cross-sectional study looked at the possible advantages of a vegetarian diet for health in terms of body composition in non-vegetarians and vegetarians (Major & Tidwell, n.d.).

The Growing interest in a deeper comprehension of the relationships between lifestyle choices and health outcomes (Paul, 2009). In addition to promoting balanced, healthy lifestyles, dietary guidelines have also taken into account other aspects of lifestyle, such water consumption, exposure to sunlight, and daily exercise. Despite having generally healthier living choices than non-vegetarians, vegetarians tend to avoid the consumption eliminating animal based foods does not always result in the establishment of additional nutritious eating or living practises (Gili et al., 2019).

A growing number of young adults, particularly women, are switching to vegetarian diets for health, environmental, and animal rights reasons (Sharma, 2010). However, several investigations on vegetarian nutrient intakes have

provided data on groups that adopted vegetarian diets for religious reasons and who varied from nonvegetarians in lifestyle factors other than food (JANELLE & BARR, 1995).

Cultural lifestyles influencing attitudes toward Depending on the society, several factors may influence vegetarians' motivations to eat vegetarianism. (López-Costas et al., 2015). Although the mainstream model in the Western world remains One in which the consumption of meat is correlated with wealth, power, and dominance; these factors may be more or less important depending on the nation, a person's socioeconomic situation, or their age. (van der Weele & Driessen, 2019).

People see common challenges to becoming vegetarians as well as common motives for becoming vegetarians. During the study, it was discovered that enjoying meat is a pleasure was the main perceived barrier for both men and women, followed by a refusal the inability to alter one's eating patterns, the belief that humans are created to eat meat, the fact that one's family consumes meat (Ruby, 2012).

### 3. METHODOLOGY:

The period covered by the literature search was 1991 to 2022. Using the search terms "vegetarian diet, lifestyle habits on diet, nutrient content of vegetarian and non-vegetarian, diet impact on health" in the title and keywords, researchers looked for articles online in the databases at mdpi.com, Emerald Insight, Cambridge Core, Oxford Academics, Elsevier, UEF REPOSITORY, Taylor & Francis, Springer, Proquest, and Frontiers.

### 4. ANALYSIS:

The ideal reporting method for systematic item is (PRISMA) technique is the one that is employed. Following the review and summarization of every article that made it through the selection process, consideration was given to the objectives, the year the article was published, the amount of citations, and any recommendations for additional research.

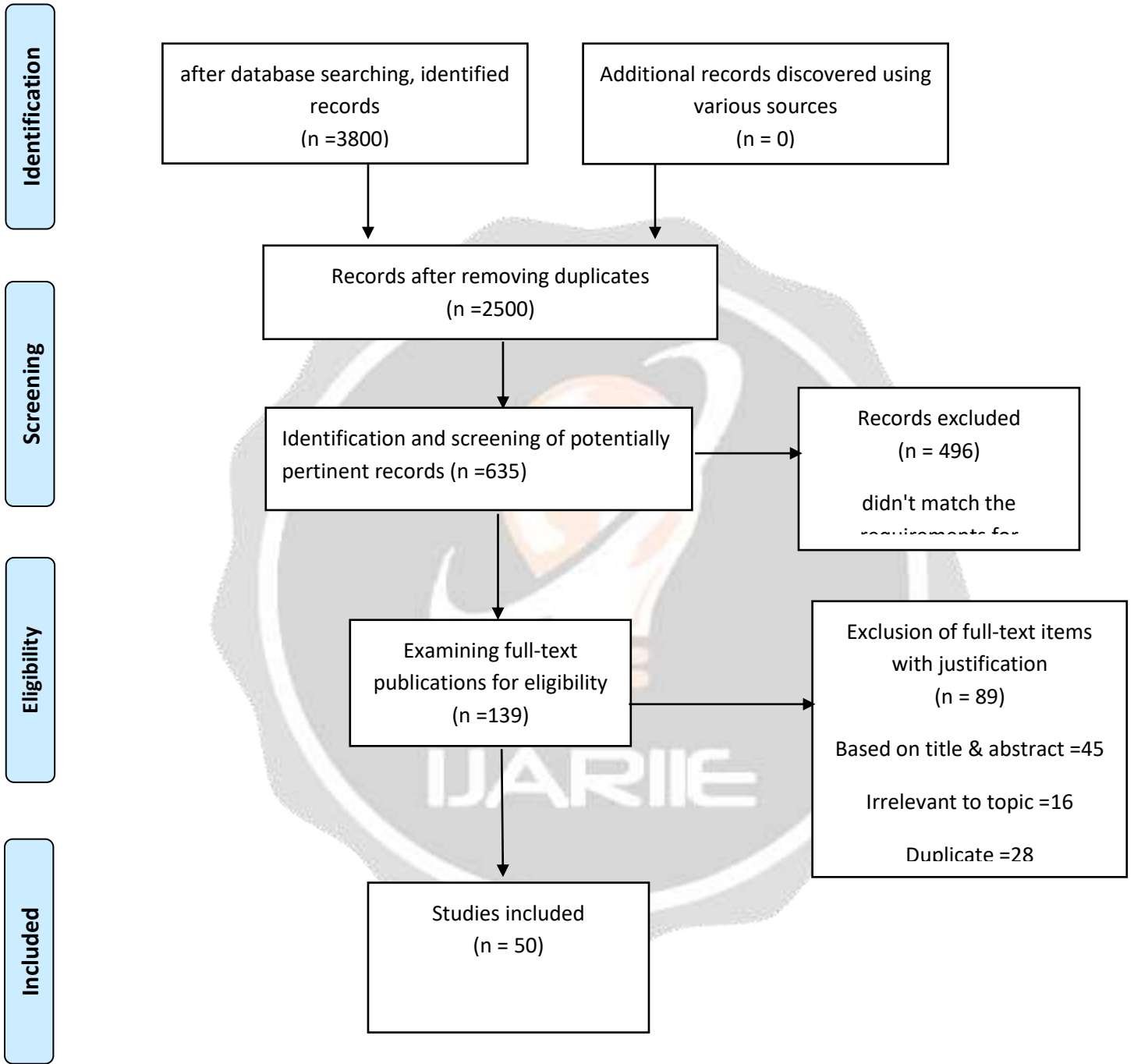
#### 4.1 Inclusion & Exclusion criteria:

The be included in current study, studies have to meet some criteria

(a) Studies have included some kind of selection criteria (Diet implication on health and Vegetarian and nonvegetarian diet nutrient profiles). These criteria limited the number of studies

(b) Accordingly excluded the studies in which it based on irrelevant information there is no proper Title, Abstract & Review.

### PRISMA Flow Diagram



## 5. FINAL DATA SET:

3800 research articles were found in the research database after conducting a full keyword search. After looking at the title, I discovered that the article was present in two distinct databases. After removing the duplicates, the results are articles. 635 papers in all were reviewed. 496 articles were disqualified because they didn't match the requirements.

Articles accessed for eligibility are 139 articles. A Total number of 89 articles excluded based on title and abstract (45) Irrelevant to topic (16) Duplicate (28).

The final data set consists of 50 articles.

The oldest included study was published in the year 1991 and the most recent study was conducted on 2022. The Entire process is shown in figure

## 6. DISCUSSION

When comparing dietary patterns and nutrient intake, we discovered that a vegetarian diet has advantages over a non-vegetarian one. Compared to non-vegetarians, vegetarians consumed more vegetables, grains, fruits, herbs and spices, salt, fats and oils, legumes, roots and tubers, dairy products, and sugar. Less protein, zinc, vitamin B12, and were taken by vegetarians against non-vegetarians, whereas more carbs, vitamin C, and folate were. More vegetarians were consuming enough the amount of total energy they consumed was lower than that of In addition, you need micronutrients and protein like iron, calcium, vitamin C, and folate. Despite the fact that both groups consumed less fibre, non-vegetarians. Because zinc derived from plants is less bioavailable than zinc from animal sources, vegetarians' diets in our study include much less zinc than non-vegetarian diets, in both urban and local areas, Vegetarians lived longer and had better health than non-vegetarians, which lifestyle may affect the nutrition intake. This presents another possible constraint.

## 7. CONCLUSION:

In the light of the analysis the researchers have drawn the following conclusions

Comparing vegetarians and non-vegetarians with comparable backgrounds and lifestyles, vegetarian diets seem to be the healthier choice. This result is partially attributable to the fact that vegetarians tend to have diets that are generally healthy in relation to elements like the composition of fat, and partially to the fact that totally nonvegetarians tend to be fully nonvegetarian Vegetarians are consistently compared to identical non-vegetarians, shown to have a lower mean BMI. Despite the possibility of inadequate iron, zinc, or trace elements, A carefully thought-out A vegetarian diet can give athletes enough of every nutrient known. Diets that are vegetarian are more nutritious and healthier nonvegetarian diets, and they are also better at preventing and treating a number of chronic diseases.

In general, vegetarians have higher-quality diets than non-vegetarians. However, for people who want to adopt a vegetarian diet, recommendations must explicitly point out healthy alternatives (such as plant-based sources of protein, fruits, vegetables, and wholegrains) to animal based products because some alternatives may compromise reduce the health benefits of a healthy diet that have already been noticed.

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