



JHE

JOURNAL OF HOME ECONOMICS, MENOUFIA UNIVERSITY

Website: <https://mkas.journals.ekb.eg>

Print ISSN Online ISSN

2735-5934 2735-590X

NUTRITION AND FOOD SCIENCES

Pescatarianism VS Vegetarianism: Which is Healthier?

Heba Althubaiti

Clinical Nutrition Department, College of Applied Medical Sciences, Umm-Alqura University, Makah, Saudi Arabia.

Article Type

Review Article

Corresponding author:

Heba Althubaiti

hathubaiti@uqu.edu.sa

Mobile: +Not available

DOI:10.21608/mkas.202
4.325644.1345

Cite as:

Althubaiti, 2024,
Pescatarianism VS
Vegetarianism: Which is
Healthier?
JHE, 34 (4), 153-167

Received: 02 Aug 2024

Accepted: 23 Sep 2024

Published: 1 Oct 2024

ABSTRACT:

Human health plays a crucial role in nutrition and dietetics, which now considers various new dietary practices, including vegetarianism and pescatarianism. A plant-based diet can be approached in multiple ways, ranging from veganism—which excludes all animal-derived products—to the Mediterranean diet, which includes some meat while prioritizing whole foods and a significant amount of plant-based options. The primary objective of this paper is to explore the implications and impacts of vegetarianism and pescatarianism on human health, including their effectiveness in nutrient supply. A comprehensive scan of all published scientific articles was conducted for two years, and relevant resources were compiled in an online database, utilizing platforms such as Google Scholar, Scopus, PubMed, Science Direct, and Web of Science. Terms such as "vegetarianism," "pescatarians," "vegan diet," and "pescatarian diet" were consistently employed across these online databases. Both dietary patterns fall within the framework of plant-based diets, with room for various approaches that extend beyond strict vegetarianism to include pescatarian options. A vegetarian diet entirely excludes meat, poultry, and fish, while a pescatarian diet eliminates meat and poultry but incorporates fish into the dietary regime. Although the pescatarian diet is more flexible and offers several beneficial nutrients from seafood, it also presents a heightened risk of mercury exposure. Vegetarian diets have numerous health benefits, including a reduced risk of chronic diseases due to their plant-based nature. Ultimately, selecting the appropriate diet to maintain a healthy and optimal life is essential and should be guided by individual preferences, health objectives, and food accessibility.

Keywords: Vegan, Fish, Sea Food, Plants, Meat

1. INTRODUCTION

Human health is an essential element of being alive, it is important to create good eating habits, with a focus on adopting a vegetarian or pescatarian diet. Some vegetarian recipes tend to incorporate animal products that include eggs, and

milk; nonetheless, these meals will not be derived from the animals themselves. Vegetarian diet focuses on excluding all types of meat, poultry, and fish [1]. Vegetarians are classified in a variety of ways, the most of which are defined by the types of foods that are and are not

included in a vegetarian's diet. Lacto vegetarians are said to consume various dairy products such as cheese, yogurt, and cottage cheese, [2] Yogurt and cottage cheese are examples of other dairy products. Lacto -Ovo vegetarians are said to focus on consuming eggs and different dairy byproducts. The pescatarian diet excludes any goods derived from meat or poultry, including gelatin, broths, and fat [3]. They also avoid items that include meat or poultry as an ingredient. The article aimed to explore the advantages and disadvantages of vegetarian and pescatarian diets for human health, and determine which is better for individuals.

2. METHODS

This review considered published scientific articles which is listed in an online database; e.g Google Scholar, Scopus, PubMed, Science Direct (Elsevier) and Web of Science from Jan 2020 until Dec 2022. The terms and text words that were used across all the online databases included: "vegetarianism" " Pescatarians" " vegan diet " " pescatarian diet " " healthy food" " vegans "; " Human Health and Dietary " " healthy food" " pescatarian vs vegetarianism " " Welfare".

Research articles and reviews were considered eligible for inclusion if they explored the meanings and differences between 'pescatarianism' and 'vegetarianism' and were written in English. The selection process was

transparent and systematic. Initially, we identified relevant papers using specific search terms. Next, we screened the titles and abstracts to ensure they were focused on the same topic. We then read the full texts to select the most pertinent literature reviews. Finally, we summarized the selected papers, detailing the year and country of publication, study objectives, a summary of results, key discussion points, and conclusions, thereby providing a clear overview of our selection criteria.

3. RESULTS AND DISCUSSION

3.1 UNDERSTANDING VEGETARIANISM

A vegan diet is said to be the most stringent form of vegetarianism since it forbids the consumption of any animal-derived products [4]. This includes eggs, dairy products, and everything associated with animals. As a way of life that excludes all types of meat, including but not limited to red meat, poultry, fish, insects, and animal flesh [5]. Another aspect of vegetarianism is to avoid consuming all goods derived from the torture or killing of animals. A vegetarian is said to be someone who does not consume meat and eats predominantly plants such as vegetables. Unlike the pescatarian, many vegetarians do not consume fish or poultry [6]. They have a higher chance of living healthier lives since vegetables include a significant amounts of the nutrients required by the body to reinforce the immune system and avoid illnesses [7].

In most cases, people choose to refrain from eating meat for several reasons. Many individuals think that eating meat is cruel because they respect the sentient life of animals [8]. This is because animals feel pain and suffering according to the sorts of moral arguments found in a variety of theological systems. It also adds that the animal rights movement, which campaigns for their preservation has high value for their welfare [9]. Other reasons for vegetarianism include; health problems, politics, the environment they are in, culture, economics, taste, or other personal preferences [10]. The most common vegetarian diet variants are as follows: an ovo-lacto vegetarian diet involves both eggs and some dairy foods; an ovo-vegetarian diet that includes eggs [11].

3.2. THE NUTRITIONAL VALUE OF VEGETARIAN DIET

A vegetarian diet is based on consuming plant-based foods and eliminates all forms of meat, such as beef, pork, poultry, lamb, and seafood. Animal products like dairy and egg can incorporate in this diet. Three different types of vegetarian diets these include; Lacto-vegetarian: Includes only dairy products such as cheese and milk; Ovo-vegetarian: Includes eggs and Lacto-ovo-vegetarian: Includes both dairy products and eggs [12]. The nutritional value of vegetarian diet. Maintaining a vegetarian diet daily may be difficult for some individuals even while avoiding animal products which is preferable for

health and ethical reasons [12]. It may need the use of dietary supplements, most notably vitamin B12, to combat nutritional deficits if all animal products are avoided. There is a possibility that foods that have been packaged include some trace amounts of animal byproducts or components [13]. While some vegetarians carefully read ingredient labels for these types of compounds, most vegetarians either have no issue with taking these chemicals or are ignorant of their existence [14].

3.3. UNDERSTANDING PISCATARIANS

Pescatarians entails individuals who follows a vegetarian diet out of personal preference but also consumes fish and other types of seafood [15]. It is mostly composed of plant-related products such as whole cereals, nuts, fruits, and some vegetables as well as healthy fats, with fish serving as the primary source of protein. Concerns about one's health may lead to a diet consisting only of marine items. The Pescatarians diet, which has been associated with some decreased risk of basic cardiovascular disease, includes seafood as well as plant-based meals [16]. This might explain why the Pescatarians diet has been connected to a reduced risk of various cardiovascular diseases [17]. Researchers reports from early research on pescetarian diets that Pescatarians helps determine the possible effects on diabetes, long-term weight gain, and overall mortality rates [18].

3.4 WELFARE CONCERNS ON PESCATARIANS

Pescetarianism is seen as a more ethical diet than other diets since fish and shellfish are not thought to sense fear, anguish, or suffering in the same way that mammals and other tetrapod do [14]. Even though this notion is still being debated, it is probable that pescetarianism is seen as a more ethical diet than other animal diets. Some pescatarians tend to see their diet as being a step toward vegetarianism, while others may regard it as being an ethical compromise [19]. This is often the case because a pescetarian diet is a practical requirement for obtaining nutrients that are either nonexistent in plants, difficult to locate in plants, or have a poor bioavailability [20]. It is possible that pescatarians perceive their diet as an ethical compromise.

3.5 ADVANCED CONSIDERATIONS

It is feasible to pick fish with little to no mercury and to limit the intake of fish with mercury, some individuals are worried about eating specific species of fish that contain toxins such as mercury and polychlorinated biphenyls [21]. Even if it is feasible to pick fish with little to no mercury and to limit the intake of fish with mercury, some individuals prefer fish with little to no mercury (PCB). The hazardous compounds have been linked to a variety of health problems [22].

In a worldwide consumer survey conducted in 2018, 87 percent of pescatarians, vegetarians, and vegans

were identified [18]. It reported that their decisions about the food products they consume are influenced by ideological considerations such as ethical concerns, environmental impact, or social responsibility [23]. The claim was discovered in a research done in 2018 which suggested that people who follow a pescetarian diet may be motivated by ethical considerations [12]. It may not be related to animal or environmental conservation, such as concerns for the well-being of people in poor nations. People who are at danger of becoming hungry are not squandering the chance to ingest protein sources absorbed by filter-feeding organisms and fish collected in their natural habitat [16]. From the research conducted by different scholars, it indicates that vegetarianism is beneficial to one's heart health and minimizes the likelihood of needing hospitalization due to heart disease [5]. A vegetarian diet, although not preventing all types of cancer, puts one in a better position to reduce their chance of developing the condition than a meat-based diet [22]. This is because a vegetarian diet excludes all animal products [16]. Milk products have significant quantities of cholesterol, which is very dangerous to one's health since it may cause a variety of maladies, the most prevalent of which is an increase in blood pressure [24]. Vegetarianism reduces the possibility of developing high blood pressure; academics who took part in a study some time ago said that individuals

who avoid eating meat, particularly Vegans, may have lower blood pressure [23]. A vegetable-rich diet has been shown to be beneficial for bone health and is associated with decreased occurrences of osteoporosis [20]. Additionally, consuming animal products may cause the body to excrete calcium, which may contribute to osteoporosis and brittle bones. Asthma symptoms are relieved and made less severe. Moreover, prior research conducted in Sweden revealed that following a vegetarian diet, particularly a vegan one, may help reduce the severity of asthma symptoms [25].

4. CONCLUSION

In conclusion, this does not imply that everyone should completely eliminate meat from their diet; however, individuals should aim to incorporate more vegetarian meals into their eating habits. Consuming excessive amounts of meat can lead to serious health issues, whereas doctors often recommend eating more vegetables to help strengthen the immune system [26].

This recommendation is partly due to the link between high meat consumption and health risks, including cancer. Additionally, it is important to note that not all pescatarians have healthy diets. Those who rely heavily on processed foods face a significantly increased risk of developing chronic diseases [6]. Furthermore, pescatarians may have higher cholesterol levels than meat eaters, as dairy products often contain

substantial amounts of cholesterol. Therefore, it is essential to be mindful of these potential risks and to make informed dietary choices.

5. REFERENCES

1. Kita P, Maciejewski G, Žambochová M, Ján Strelinger, Mazalánová VK. Nutritional behaviour of households: an analysis of Slovak consumers. *Forum Scientiae Oeconomia*[Internet]. 2021 [cited 2024 Nov 9];9(2):73–94. Available from: <https://ojs.wsb.edu.pl/index.php/fso/article/view/377>
2. R. Gaillac, Marbach S. The carbon footprint of meat and dairy proteins: A practical perspective to guide low carbon footprint dietary choices. *Journal of Cleaner Production* [Internet]. 2021 Sep 10 [cited 2024 Nov 9];321:128766–6. Available from: <https://www.sciencedirect.com/science/article/abs/pii/S0959652621029644>
3. Boukid F, Baune MC, Gagaoua M, Castellari M. Seafood alternatives: assessing the nutritional profile of products sold in the global market. *European Food Research and Technology* [Internet]. 2022 Mar 18 [cited 2024 Nov 9];248(7):1777–86. Available from: <https://link.springer.com/article/10.1007/s00217-022-04004-z>
4. Karcz K, Lehman I, Królak-Olejniak B. The link between knowledge of the maternal diet and breastfeeding practices

in mothers and health workers in Poland. *International Breastfeeding Journal* [Internet]. 2021 Aug 9 [cited 2024 Nov 9];16(1). Available from: <https://internationalbreastfeedingjournal.biomedcentral.com/articles/10.1186/s13006-021-00406-z>

5. Moreno LA, Meyer R, Donovan SM, Goulet O, Haines J, KokFJ, et al. Perspective: Striking a Balance between Planetary and Human Health—Is There a Path Forward? *Advances in Nutrition* [Internet]. 2021 Nov 25 [cited 2024 Nov 9];13(2):355–75. Available from: <https://pmc.ncbi.nlm.nih.gov/articles/PMC8970843/>

6. Wozniak H, Christophe Larpin, Mestral C de, Idris Guessous, Reny JL, Stringhini S. Vegetarian, pescatarian and flexitarian diets: sociodemographic determinants and association with cardiovascular risk factors in a Swiss urban population. *British Journal Of Nutrition* [Internet]. 2020 May 18 [cited 2024 Nov 9];124(8):844–52. Available from: <https://pubmed.ncbi.nlm.nih.gov/32418548/>

7. Khalid W, Arshad MS, Jabeen A, Anjum FM, Tahira BatoolQaisrani, Hafiz. Fiber-enriched botanicals: A therapeutic tool against certain metabolic ailments. *Food Science & Nutrition* [Internet]. 2022 Aug 26 [cited 2024 Nov 9];10(10):3203–18. Available from: <https://pubmed.ncbi.nlm.nih.gov/36249968/>

8. Francione GL. on Why Veganism Matters - Columbia University Press Blog

[Internet]. Columbia University Press Blog - Publishing a universe of knowledge for readers worldwide. 2022 [cited 2024 Nov 9]. Available from: <https://cupblog.org/2022/02/24/gary-l-francione-on-why-veganism-matters/#:~:text=Most%20people%20think%20that,wrong%20to%20make%20animals%20suffer.>

9. Lamb D. Moral Awareness and Animal Welfare: Moral Awareness and Animal Welfare. *Ethics International Press*; 2022 Oct 10.

10. Gvion & Liova 2021 Gvion, L., 2021. Vegan restaurants in Israel: health, environmentalism and mainstreaming. *Food, Culture & Society*, pp.1-18.<http://dx.doi.org/10.1080/15528014.2021.2015941>

11. Katsiki N. Debate: Pros and cons of being a vegetarian-Pros. *Public Health Toxicology*. 2022 May 27;2(Supplement 1).

12. Hargreaves SM, Raposo A, Saraiva A, Zandonadi RP. Vegetarian diet: an overview through the perspective of quality of life domains. *International journal of environmental research and public health*. 2021 Apr 12;18(8):4067

13. Socas-Rodríguez, B., Álvarez-Rivera, G., Valdés, A., Ibáñez, E. and Cifuentes, A., 2021. Food by-products and food wastes: Are they safe enough for their valorization?. *Trends in Food Science & Technology*, 114, pp.133-147.

14. Jagannath G. Hindu Youth Perceptions on Vegetarianism and Veganism in Durban, KwaZulu-Natal.

Indians in South Africa: Perspectives from 1860 to the 21st Century...:189.

15. Fresán U, Craig WJ, Martínez-González MA, Bes-Rastrollo M. Nutritional quality and health effects of low environmental impact diets: the "Seguimiento Universidad de Navarra"(SUN) cohort. *Nutrients*. 2020 Aug 9;12(8):2385.

16. Hemler EC, Hu FB. Plant-based diets for cardiovascular disease prevention: all plant foods are not created equal. *Current atherosclerosis reports*. 2019 May;21:1-8.

17. Petermann-Rocha F, Parra-Soto S, Gray S, Anderson J, Welsh P, Gill J, Sattar N, Ho FK, Celis-Morales C, Pell JP. Vegetarians, fish, poultry, and meat-eaters: who has higher risk of cardiovascular disease incidence and mortality? A prospective study from UK Biobank. *European Heart Journal*. 2021 Mar 21;42(12):1136-43

18. Dagevos H. Finding flexitarians: Current studies on meat eaters and meat reducers. *Trends in Food Science & Technology*. 2021 Aug 1;114:530-9.

19. Hunt MW. A defence of parental compromise concerning veganism. *Ethics and Education*. 2021 Jul 3;16(3):392-405.

20. Alcorta A, Porta A, Tárrega A, Alvarez MD, Vaquero MP. Foods for plant-based diets: Challenges and innovations. *Foods*. 2021 Feb 1;10(2):293.

21. Tomasello B, Acquaviva R, Ciarcià G, Bianchi S, Malfa GA, Naletova I, La Mantia A, Di Giacomo C. Vitamin E and non-

communicable diseases: a review. *Biomedicines*. 2022 Oct 3;10(10):2473.

22. Magkos F, Tetens I, Felby C, Schacht SR, Hill JO, Ravussin E, Astrup A. A perspective on the transition to plant-based diets: a diet change may attenuate climate change, but can it also attenuate obesity and chronic disease risk?. *Advances in Nutrition*. 2020 Jan 1;11(1):1-9.

23. Wesseldijk LW, Tybur JM, Boomsma DI, Willemsen G, VinkJM. The heritability of pescetarianism and vegetarianism. *Food Quality and Preference*. 2023 Jan 1;103:104705.

24. McClure ST, Schlechter H, Oh S, White K, Wu B, Pilla SJ, Maruthur NM, Yeh HC, Miller ER, Appel LJ. Dietary intake of adults with and without diabetes: results from NHANES 2013–2016. *BMJ Open Diabetes Research and Care*. 2020 Oct 1;8(1):e001681.

25. Protudjer JL, Mikkelsen A. Veganism and paediatric food allergy: two increasingly prevalent dietary issues that are challenging when co-occurring. *BMC pediatrics*. 2020 Jul 10;20(1):341.

26. Ford KL, Trottier CF, Wismer WV, Sawyer MB, Siervo M, Deutz NE, Prado CM, Vallianatos H. Drivers of dietary choice after a diagnosis of colorectal cancer: a qualitative study. *Journal of the Academy of Nutrition and Dietetics*. 2023 Mar 1;123(3):407-16.



مجلة الاقتصاد المنزلي، جامعة المنوفية

<https://mkas.journals.ekb.eg>

الترقيم الدولي للطباعة الترقيم الدولي اون لاين

2735-5934 2735-590X

التغذية وعلوم الاطعمة

نظام نباتيو الأسماك والنظام النباتي، أيهما أفضل صحياً؟

هبة الثبيتي

قسم التغذية الاكلينيكية، كلية العلوم الطبية التطبيقية، جامعة ام القرى، مكة المكرمة، المملكة العربية السعودية

الملخص العربي:

الصحة البشرية هي عامل رئيسي. في قطاع التغذية وعلم الأنظمة الغذائية الذي يأخذ في الاعتبار عادات التغذية الجديدة مثل النظام النباتي والنباتي. هناك أنواع مختلفة من الأنظمة الغذائية التي يمكن للناس اختيارها / تبنيها لأسباب مختلفة للعيش حياة صحية. ستنظر هذه المراجعة إلى نوعي هذه الأنظمة الغذائية النظام الغذائي النباتي مقابل النظام الغذائي النباتي وأيهما أكثر صحة. يمكن اتباع نظام غذائي قائم على النباتات بعدة طرق، تتراوح من النظام الغذائي النباتي الذي يحظر استهلاك أي منتجات مشتقة من الحيوانات، إلى النظام الغذائي المتوسطي، الذي يسمح بتناول بعض اللحوم ولكنه يركز على الأطعمة الكاملة وكمية كبيرة من النباتات. الهدف الرئيسي- من هذه الورقة هو استكشاف معنى وتأثير كل من النظام النباتي ونباتيو الاسماك على صحة الإنسان وفعاليتهم في توفير العناصر الغذائية. تم مسح جميع المقالات العلمية المنشورة وفرزها والتي تم إدراجها في قاعدة بيانات عبر الإنترنت؛ على سبيل المثال، Goggle Scholar، Science Direct (Elsevier)، Web of Scopus، PubMed، في هذه المراجعة، تم استخدام مصطلحات "النباتية" و"نباتيو الأسماك" و"النظام الغذائي النباتي" و"النظام الغذائي النباتي" في جميع قواعد البيانات عبر الإنترنت. يُعتقد أن كلا النمطين الغذائيين عبارة عن أنظمة غذائية تعتمد على تناول مختلف الخضروات بأنواعها. يركز النظام الغذائي النباتي على استبعاد جميع أنواع اللحوم والدواجن والأسماك بينما يستبعد النظام الغذائي لنباتيو الاسماك اللحوم والدواجن من جميع الوجبات؛ ومع ذلك، يأكلون الأسماك كجزء من نظامهم الغذائي على الرغم من أن النظام الغذائي لنباتيو الاسماك أكثر مرونة ويوفر العديد من العناصر الغذائية المهمة من المأكولات البحرية، إلا أن خطر التسمم بالزئبق مرتفع. الأنظمة الغذائية النباتية لها فوائد صحية في تقليل خطر الإصابة بالأمراض المزمنة لأنها نظام غذائي قائم على تناول الخضروات. ومع ذلك، من الضروري اختيار الأنظمة الغذائية الصحية الصحيحة للحفاظ على حياة صحية مثالية بناءً على تفضيلات الإنسان وهدفه الصحي وسهولة إمكانية الوصول إلى الغذاء..

الكلمات المفتاحية: نباتي، سمك، مأكولات بحرية، نباتات، لحوم

نوع المقالة

بحوث أصلية

المؤلف المسئول

هبة الثبيتي

hathubaiti@uqu.edu.sa

غير متاح+الجوال

DOI:10.21608/mkas.2024.3
25644.1345

الاستشهاد الي:

Althubaiti, 2024,
Pescatarianism VS
Vegetarianism: Which is
Healthier?
JHE, 34 (4), 153-167

تاريخ الاستلام: ٢٠٢٤ اغسطس

تاريخ القبول: ٢٣ سبتمبر ٢٠٢٤

تاريخ النشر: ١ اكتوبر ٢٠٢٤