



## Social Reception of People on a Vegan Diet Based on Vegan Declarations

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## Abstract

**Introduction:** Veganism is more and more popular in Poland, however, it still raises numerous controversies, although many environmental, ethical and nutritional reasons confirm its legitimacy.

**Aim:** The main purpose of the study was to find out the vegan opinions on the social perception of people on a vegan diet.

**Material and methods:** The survey was conducted among 950 respondents from January to June 2019, using the author's questionnaire containing 27 questions.

**Results:** Of all respondents (950 people), almost all, i.e. 93.7% (890 people), were women. The subjects were asked to indicate the main reason for choosing the vegan diet as a way of eating. The most frequently indicated responses were the ethical reasons – 69.1% of respondents (656 persons) and health reasons – such an answer was chosen by 47.8% of respondents (454 persons). Over a half of the respondents, 55.5% (527 people), admitted that they had met with uninvited comments on their meal several times, while 11.7% (111 people) replied that they met with such comments on a regular basis. In the group of surveyed vegans, almost half of the respondents, i.e. 46.4% (441 people), replied that several times they were a victim of verbal aggression due to their diet, while 6.3% of respondents (63 people) met with this phenomenon regularly.

**Conclusions:** According to vegans, social attitudes towards people on a vegan diet are unfavourable. Vegans are often perceived through the prism of stereotypes, which is why they are regularly exposed to unpleasant or even aggressive behaviour and are forced to argue with the views of others often based on false premises.

**Key words:** vegetarianism, veganism, nutrition, vegan diet

## Introduction

Veganism is getting more and more popular in Poland, however, it still raises numerous controversies, although many environmental, ethical and nutritional reasons confirm its legitimacy.

Veganism as a diet means excluding all animal products from the menu, which is why it is called a plant-based diet.

While vegetarianism is rarely considered a behaviour deviating from accepted social norms, veganism in Poland is still considered aberration.

Estimates carried out by the Institute of Agriculture and Food Economics indicate that the average Pole consumes 40.5 kg of pork, 30 kg of poultry and 2.2 kg of beef in a year. Compared to the general consumption of meat in Europe, Poles consume more of it – the average EU citizen eats 68.6 kg of meat but consumes several times more beef than people living in Poland [1].

The described situation may indicate that vegan restaurants are not popular in Poland – in fact Warsaw took seventh place in the ranking maintained by the Happy Cow website, which registers vegan places around the world [2]. Three components were taken into account in the ranking: 1 – the number of vegan restaurants within a radius of 8 km from the places where they are most concentrated, 2 – the number of vegan options in restaurants within a radius of 8 km from the places where there is the majority of them, 3 – the general impression of a pro-vegan initiative.

In Poland, we observe a regular increase in the number of people declaring vegetarianism and veganism. Such way of eating is particularly popular among young people. The observed trends should translate to the increased consumption of vegetables by Poles. However, it turns out to be quite the opposite, because the Central Statistical Office data shows that vegetable consumption has not increased in the recent years: 2015 – 8.68 kg, 2016 – 8.59 kg, 2017 – 8.24 kg [3, 4].

Scientific studies indicate that a well-balanced vegan diet is healthy. The American Dietetic Association believes the properly balanced vegetarian diets (including vegans) are healthy, cover caloric and energy

needs, and what is more, they can bring health benefits, especially by preventing the occurrence of some diet-related diseases [5]. Scientific societies also state that the properly balanced vegan diets can be used at any age but emphasise the necessity of special supervision over nutrition of children and adolescents [5, 6, 7].

As the results of research conducted at the University of Loma show, among people on a plant diet a lower BMI index is observed – such results were obtained by scientists from the University of Loma. 71,751 people were included in the study: non-vegetarians, semi-vegetarians, pescowegarians, lacto-ovo-vegetarians and vegans. Among vegans compared to other groups there was the lowest percentage of overweight and obese people, and the highest of people with normal weight; the percentage of people on a vegan diet with a normal BMI, i.e. below 25, was 66.9%, there was 23.7% of overweight people, while 9.4% of all vegans were obese [8]. Studies by other authors indicate that vegetarian and vegan diets effectively reduce the risk of cardiovascular disease, obesity, type II diabetes and some types of cancer [5, 9, 10, 11, 12, 13].

People on a vegan diet usually consume larger amounts of fiber, magnesium, folic acid, vitamins C and E, iron or phytochemicals, while consuming fewer calories, saturated fat and cholesterol [14].

Meta-analyses conducted in Great Britain, the United States, Germany, the Netherlands and Japan involving 124,706 respondents showed that the mortality rate due to cardiovascular diseases in vegetarians was 16% lower than in non-vegetarian diets, while the risk of death from coronary heart disease was lower by 29%. Cardiovascular diseases risk factors: body mass index (BMI), total cholesterol, low density lipoprotein (LDL), and apolipoprotein B are lower in vegetarians (especially those on a vegan diet) than nonvegetarians [15, 16].

Although vegan diet is healthy, we need to keep in mind that, like any other diet, it can take an unhealthy form. An unhealthy vegan diet is one where vitamin B12 and D are not supplemented (in the winter months), the rules on proper caloric content of meals are not observed, highly processed products are consumed, not all nutritional values are provided –

these elements, except for cobalamin supplementation, are the determinants of all unhealthy diets.

Vitamin B12 supplementation plays the key role in a healthy and safe vegan diet. As indicated by the results of the study, the reserves of vitamin B12 accumulated in the body are sufficient for 3-6 years, and only after this time since the cessation of consumption of animal products, symptoms associated with deficiency can be observed [17]. The effect of cobalamin deficiency is megaloblastic anaemia – its insufficient supply leads to impaired production of erythroblasts and their premature destruction in the bone marrow; both factors contribute to inefficient erythropoiesis. Deficiency of the mentioned vitamin may also lead to a disorder in the synthesis of purine bases necessary for the construction of DNA, which is manifested in the malfunction of tissues with high cell turnover (an example may be the gastrointestinal mucosa), as well as improper myelin transformation and loss of nerve fibres, which in turn leads to various ailments from the nervous system [17].

### **Aim**

The main aim of the study was to find out the vegan opinions on the social perception of people on a vegan diet.

### **Material and methods**

The survey was conducted among 950 respondents from January to June 2019, using the author's questionnaire containing 27 multiple choice questions: 4 metric questions, 5 general questions and 18 specific questions. The survey was conducted online using the Google Forms questionnaire. The survey questionnaire was disseminated on Internet forums devoted to broadly understood vegan topics. The survey was voluntary and anonymous. 950 respondents participated in the survey. The data contained in the surveys were entered into the MS Excel spreadsheet. In order to develop the collected empirical material, descriptive methods and methods of statistical inference were used. For the description of the whole group of examined and subgroups distinguished on the basis

of qualitative features, the structure indicators were calculated, which were expressed as a percentage [%]. To compare the incidence of particular categories of quantitative features in the analysed groups, the chi-square independence test or chi-square independence test with Yates's correction was used. The results for which the values of the statistics obtained in the conducted tests belonged to the critical area of the relevant distribution at the significance level  $p = 0.05$  were considered significant. For statistical analysis, STATISTICA version 10.0 was used.

## Results

Of all respondents (950 people), almost all, i.e. 93.7% (890 people), were women (tab. 1).

The most numerous group of respondents, i.e. 61.2% (581 people) were people aged 19-29. People aged 40 and over accounted for only 5.3% (51 people) of all respondents (table 1).

In the group of all respondents (950 people) the most represented were the respondents with higher education – 458 people, i.e. 48.2% (table 1).

The most numerous group among all respondents, i.e. 42.9% (408 people) were respondents living in very large cities – over 500,000 residents (table 1).

The subjects were asked to indicate the main reason for choosing vegan diet as a way of eating. The most frequently indicated responses by the respondents were ethical reasons – 69.1% of respondents (656 persons), and health reasons – such answer was chosen by 47.8% of respondents (454 persons) (table 2).

Among all respondents (950 people), the largest group – 35.6% (338 people), were respondents who declared maintaining the vegan diet for over 2 years. The least numerous (7.7%, 73 people) were the respondents who maintained the vegan diet for 1-2 months (table 2).

Table 1. Respondents' characteristics

<b>Gender</b>	<b>N</b>	<b>%</b>
woman	890	93.7
man	60	6.3
total	950	100.0
<b>Age</b>	<b>N</b>	<b>%</b>
up to 18	161	16.9
19-29	581	61.2
30-39	157	16.5
40-49	47	4.9
50-59	3	0.3
60 years and more	1	0.1
total	950	100.0
<b>Education</b>	<b>N</b>	<b>%</b>
primary	20	2.1
junior high	109	11.5
basic vocational	11	1.2
secondary	352	37.1
higher	458	48.2
total	950	100.0
<b>Place of residence</b>	<b>N</b>	<b>%</b>
village	92	9.7
city to 50,000 residents	158	16.6
city over 50 to 150,000 residents	125	13.2
city over 150 to 500,000 residents	167	17.6
city over 500,000 residents	408	42.9
total	950	100.0

Table 2. Determinants of the choice of a vegan diet and the duration of maintaining a vegan diet by respondents

Reason for choosing a vegan diet (multiple choice question)	N	% of responses
Ethical reasons	656	69.1
Ecological reasons	380	40.0
Health reasons	454	47.8
Willingness to try a new way of eating	138	14.5
All of the above	180	18.9
Duration of following the vegan diet	N	%
1-2 months	73	7.7
3-6 months	142	14.9
7-12 months	176	18.5
Over a year to 2 years	221	23.3
Over 2 years	338	35.6
total	950	100.0

Among all respondents the vast majority, i.e. 82.9% (788 people), encountered the opinion that their following a vegan diet is only a temporary whim, a result of a trend (table 3).

The vast majority of respondents, i.e. 85.1% (808 people), met with the opinion of their interlocutors that the names of vegan dishes are inappropriate because they imitate the names of meat dishes (table 3).

In the group of surveyed vegans, 36.8% of respondents (350 people) replied that they regularly meet with the opinions of the public that their vegan diet does not provide the right amount of protein (table 3).

Over half of the respondents, 55.5% (527 people), admitted that they met with uninvited comments on their meal several times, while 11.7% (111 people) replied that they met with such comments on a regular basis (table 3).

Among all respondents 22.9% of vegans (218 people) while ordering vegan meals encountered remarks to not flaunt their diet (table 3).



Table 3. Selected social behaviours in relation to vegans and vegan diet declared by respondents

<b>Encountering the opinion that the vegan diet is only a temporary whim, the result of a trend</b>	<b>N</b>	<b>%</b>
Yes	788	82.9
No	162	17.1
Total	950	100.0
<b>Encountering the opinion that the names of vegan meals (e.g. soy hot dogs, lentil pate) are inappropriate because they try to imitate their original meat/dairy counterparts</b>	<b>N</b>	<b>%</b>
Yes	808	85.1
No	142	14.9
total	950	100.0
<b>Frequency of opinions that a vegan diet does not provide enough protein</b>	<b>N</b>	<b>%</b>
Never	60	6.3
Several times	540	56.8
Regularly	350	36.8
total	950	100.0
<b>Frequency of uninvited comments about one's meal (e.g. emphasis of it not being fully nutritious)</b>	<b>N</b>	<b>%</b>
Never	312	32.8
Several times	527	55.5
Regularly	111	11.7
total	950	100.0
<b>Frequency of comments not to flaunt one's diet when ordering a vegan meal</b>	<b>N</b>	<b>%</b>
Never	713	75.1
Several times	218	22.9
Regularly	19	2.0
total	950	100.0

Table 4. Frequency of becoming the object of jokes and a victim of verbal aggression due to the use of vegan diet by sex

Frequency of becoming the object of jokes because of a vegan diet	Women		Men		Total		p
	N	%	N	%	N	%	
Never	141	15.8	4	6.7	145	15.3	chi <sup>2</sup> = 8,241; p<0,05
Several times	518	58.2	46	76.6	564	59.4	
Regularly	231	26.0	10	16.7	241	25.4	
Total	890	100.0	60	100.0	950	100.0	
The frequency of encountering verbal aggression (offence) because of a vegan diet	N	%	N	%	N	%	p
Never	423	47.5	26	43.3	449	47.3	chi <sup>2</sup> = 0,764; p>0,05
Several times	410	46.1	31	51.7	441	46.4	
Regularly	57	6.4	3	5.0	60	6.3	
Total	890	100.0	60	100.0	950	100.0	

Every fourth respondent (25.4%, 241 people) admitted that they were regularly the subject of jokes due to their diet. In the group of women, the percentage affected by this behaviour was 26.0% (231 people), while in the group of men 16.7% (10 people). The observed differences turned out to be statistically significant – chi-square = 8,241;  $p < 0.05$  (tab. 4).

In the group of surveyed vegans, almost half of the respondents, i.e. 46.4% (441 people), replied that several times they were a victim of verbal aggression due to their diet, while 6.3% of respondents (63 people) met with this phenomenon regularly. Compared with women, men encountered verbal aggression several times more often (51.7% vs 46.1%). The differences turned out to be statistically insignificant –  $p > 0.05$  (table 4).

## Discussion

Although eating is one of the basic physiological needs and can be regarded as somewhat trivial, it is entangled in a dense network of socio-cultural conditions. Veganism is visible in the construction of individual and social identities. However, all vegans cannot be ascribed the same features or aspirations – although the group is homogeneous from the outside, internally different issues (e.g. political, health) divide them.

In this study, the highest percentage of respondents (69.1%) indicated the ethical reasons as the main reason for using the vegan diet. Health reasons were the second most frequently indicated determinant of the vegan diet (47.8%).

In the study of Śliwińska et al. the respondents on a vegetarian diet gave following motivation to use this diet: caring for the well-being of the animals (96%), caring for their own health (95%), environmental protection (74%) disliking/not favouring the taste of meat (74%) [18]. The results of the study carried out by Pribis et al. showed that young people (11-20) more often choose a plant diet due to ethical and environmental reasons, while the older ones (41-60) are motivated by health reasons [19].

The results of own research showed that 42.1% of vegans regularly hear comments that they are following an unhealthy diet, and 36.8% that it does not provide enough protein.

In a study carried out by Śliwińska et al. it was noted that 40% of vegetarians and 77% of people on a traditional diet considered vegan diet to be not fully nutritious. In the group of non-vegetarians, 58% of the respondents gave protein as an insufficiently supplied ingredient on a vegan diet. 33% of the non-vegetarian group also said that vegan diet should not be used by anyone [18].

Names of food products that contain the word referring to meat products make potential customers know what form of the product and what taste they are dealing with. The above fact makes the use of „meat” terms seem helpful to both customers and food producers. From the linguistic point of view, the discussed phenomenon is neo-semantisation, i.e. giving the existing word in the language a new, additional meaning. Thus, the cutlet, which until now was understood as a flat-shaped piece of meat, can also be a vegetable dish, e.g. a cauliflower cutlet.

A study conducted for Ingredient Communications showed that in the opinion of 25% of respondents, the „meat” names of plant products, such as sausage, steak, burger, are incorrect and inappropriate. In the case of vegetarians, the percentage in question was 18%, vegans – 33%, while in the group of people using the traditional nutrition model – 26%. In the case of purchasing decisions, differences in the responses of vegans and vegetarians were noted. In the first group, the majority, i.e. 57%, said they were less likely to buy a plant product if the packaging was labeled with the word for meat product, while 49% of vegetarians said they were more likely to buy such a product. Nearly 60% of respondents who did not mind „meat” terms for plant product indicated that they correctly describe the structure and type of the product, while among those surveyed who were opposed to such naming, 60% of them pointed out the misleading function of naming [20].

In the analysed research the vegans were asked „Have you ever heard that the names of vegan meals (e.g. soy hot dogs, lentil pate) are inappropriate, because they try to imitate their original meat/dairy counterparts?” The vast majority of the respondents, i.e. 85.1%, confirmed it.

## Conclusions

1. According to vegans, social attitudes towards people on a vegan diet are unfavourable. Vegans are often perceived through the prism of stereotypes, which is why they are regularly exposed to unpleasant or even aggressive behaviour and are forced to argue with the views of others often based on false premises.
2. It is necessary to intensify the educational activities of the society devoted to the principles of healthy eating, types of diets and the risks arising from improper nutrition in order to eliminate incorrect social attitudes resulting from a lack of knowledge in the area.
3. In the era of growing popularity of veganism in Polish society, there is a need to conduct further, systematic research to observe changes in social attitudes towards people on a vegan diet.

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