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# The safety and effectiveness of alternative weight-loss diets in women aged 18-65

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*A – Development of the concept and methodology of the study; B – Query – a review and analysis of the literature; C – Submission of the application to the appropriate Bioethics Committee; D – Collection of research material; E – Analysis of the research material; F – Preparation of draft version of manuscript; G – Critical analysis of manuscript draft version; H – Statistical analysis of the research material; I – Interpretation of the performed statistical analysis; K – Technical preparation of manuscript in accordance with the journal regulations; L – Supervision of the research and preparation of the manuscript*

**Abstract**

Overweight and obesity pose a serious public health challenge around the world. Many dietary plans available online do not comply with dietary recommendations and are nutritionally unbalanced. The aim of this study was to assess women's knowledge about the safe use of alternative weight loss diets, as well as to evaluate the results of using alternative diets in the studied population and their impact on health and well-being. The study was conducted between October 2023 and June 2024. The inclusion criteria were: female gender, age of 19-65 years, and adherence to alternative diets, including weight loss diets. The research method was a survey questionnaire on, among other things, frequency of consumption of different food groups, eating habits, adherence to alternative weight-loss diets, type of diet, motivation to lose weight, dietary goals, duration of the diet, results, potential side effects, and the participants' general health and well-being. A total of 393 women participated in the survey. Nearly half of the participants were unfamiliar with the term "alternative diet", and more than 40% of the surveyed women were unable to give an example of an alternative diet. The respondents were most familiar with the vegetarian diet, the Dukan diet, and the blood type diet. The largest group of participants (38.9%) were not familiar with the health risks and/or health benefits associated with unconventional diets, whereas more than 25% of the women were of the opinion that alternative diets can provide health benefits. In a group of women following alternative weight loss diets only less than a third of the studied population strictly adhered to a restrictive diet; 33% of the respondents modified their meals, and 1/5 of the women snacked between meals. Long-term use of alternative diets may cause negative side effects, such as deterioration in well-being, digestive problems and mood swings.

**Keywords:** alternative diet, weight loss diet, obesity, health impacts, nutrition knowlegde.

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## INTRODUCTION

Overweight and obesity pose a serious public health challenge around the world. Excessive body weight increases the risk of lifestyle diseases (diabetes, hypertension, coronary artery disease, and certain types of cancer) and premature mortality [1], and it also contributes to mental health issues such as low self-esteem, social isolation, and depression. Overweight can be caused by hormonal and genetic factors, but it most often results from the positive energy balance, where daily calorie intake exceeds energy expenditure. Weight loss is a long and challenging process that requires dietary modifications and, in many cases, the elimination of unhealthy eating habits.

According to the World Health Organization (WHO), the prevalence of overweight and obesity continues to increase rapidly despite the fact that a thin standard of bodily attractiveness is being widely promoted in the media [2,3]. Many people, particularly women, regard physical appearance as the key determinant of professional and personal success. As a result, even persons with a healthy body weight make attempts to lose weight, which can have negative health consequences [4,5].

Individuals with a history of multiple weight loss failures often turn to alternative diets that promise rapid weight loss without hunger or effort. Many dietary plans available online do not comply with dietary recommendations and are nutritionally unbalanced. These diets may promote rapid weight loss, but they often contribute to gastrointestinal problems and have adverse health effects [6].

Alternative diets can be divided into unbalanced and vegetarian diets. The former category includes low-carbohydrate, monotrophic (single-food), and restrictive (low-calorie) diets. These diets are often deficient in essential macronutrients, vitamins, and minerals, and can be detrimental to a person's health, or even life, in the long term. Low-carbohydrate (LC) diets are the most popular [7,8]. These diets replace carbohydrates with foods high in protein and fat. However, prolonged adherence to an LC diet can lead to a deficiency of vitamins C and B1, folic acid, calcium, magnesium, and phosphorus

[9,10]. These dietary models can also contribute to low bone mineral density and a higher risk of atherosclerosis. There is considerable evidence to indicate that iron deficiency is common when consuming an LC diet [11]. A restrictive diet that reduces the energy intake from food leads to weight loss, but it also slows down the resting metabolic rate, which may result in rapid weight gain after dieting (the yo-yo effect). The higher efficacy of LC diets for weight loss and maintenance was not consistently reported in longer-term studies conducted over a 6- to 24-month period [12,13].

The aim of this study was to assess women's knowledge about the safe use of alternative weight loss diets, as well as to evaluate the results of using alternative diets in the studied population and their impact on health and well-being.

## MATERIALS AND METHODS

A questionnaire survey was conducted on social media (Facebook and Instagram) and in the nutrition clinic of the University of Life Sciences in Lublin. A digital questionnaire (Google form) was distributed to social media users, whereas the patients of the nutrition clinic had the option of completing a questionnaire online or in print form. The study was conducted between October 2023 and June 2024. The inclusion criteria were: female gender, age of 19-65 years, and adherence to alternative diets, including weight loss diets. The exclusion criteria were: chronic diseases requiring dietary modifications or a therapeutic diet, food allergies, diagnosed eating disorders, and diagnosed obesity with pharmacological treatment. The sample size was estimated at 210 people, taking into account $\alpha = 0.95$ and a maximum error of 5%. The survey was anonymous and voluntary, and there was no time limit for completing the questionnaire. In total, we received 415 completed questionnaires (16 were rejected due to incomplete answers, 6 people declared that they were using weight loss pharmacotherapy). A total of 393 questionnaires were included in the study.

The questionnaire was designed by the authors, and it was composed of 40 questions, including demographic questions (age, education, place of residence, height, current body weight, and body weight six months before the study) and questions concerning the respondents' lifestyle, diet, and adherence to alternative diets, including weight loss diets.

In the first part of the questionnaire, the respondents were asked to indicate the consumption frequency of various food groups (meat, fish, dairy products, cereals, fruit, vegetables, fat, beverages), including fast food, coffee, and alcohol, and they were also asked about cigarette smoking. The second part of the questionnaire concerned the respondents' dietary habits and history, including adherence to alternative weight loss diets, type of diet, motivation for weight loss, dietary goals, duration of diet, outcomes, potential side effects, and subjective opinions about the effectiveness, quality, and safety of the diet, and the participants' overall health and well-being. The following questions: subjective opinions about the effectiveness and quality of the diet, and the participants' overall health and well-being were rated on a 5-point Likert scale. The respondents were also asked about the sources of information about various types of weight loss diets, alternative diets, dietary principles, and their health implications.

### Statistical analysis

Categorical variables were presented as sample percentages (%), and continuous variables were expressed by median values and the interquartile range (IQR). The differences between groups were analyzed in the chi-squared test (categorical variables) or the Mann-Whitney test (continuous variables). The Kruskal-Wallis test was applied to analyze the relationships between variables in more than two mutually independent groups. Before statistical analysis, data were checked for normal distribution in the Kolmogorov-Smirnov test. The results of all tests were regarded as statistically significant at $p < 0.05$. Data were processed in the Statistica program (version 13.1 PL; StatSoft Inc., Tulsa, OK, USA; StatSoft, Krakow, Poland).

## RESULTS

A total of 393 women participated in the survey. Most of the respondents (60.3%) were aged 19-25 years, and women aged 26-39 years were the second largest age group (128 persons). Twenty-four respondents were aged 40-53 years, and 4 respondents were aged 54-65 years. Minors did not participate in the study. The majority of the surveyed women were university (57%) and secondary school (41%) graduates, and the remaining participants had vocational and primary school education.

A third of the respondents had a healthy BMI. During the study, the mean BMI was 25.68±4.91 kg/m$^2$, and the median was 25.05 kg/m$^2$. This parameter ranged from 15.01 to 41.21 kg/m$^2$ in the study group (Fig 1).

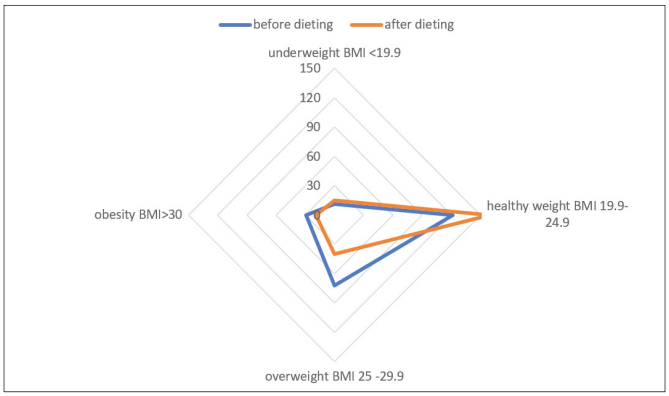


**FIGURE 1. The respondents' BMI before and after dieting.**

### Sources of knowledge about alternative weight loss diets in the studied population of women

Nearly half of the participants were unfamiliar with the term "alternative diet" (the responses were not differentiated by age, BMI, or diet history, $p<0.05$), and more than 40% of the surveyed women were unable to give an example of an alternative diet. The respondents were most familiar with the vegetarian diet, the Dukan diet, and the blood type diet. Women with a history of dieting for weight loss were significantly more familiar with alternative diets than the respondents who had never attempted to lose weight ($p=0.012$). The largest group of participants (38.9%) were not familiar with the health risks and/or health benefits associated with unconventional diets, whereas more than 25% of the women were of the opinion that alternative diets can provide health benefits. The responses were not affected by age or education ($p>0.05$). The yo-yo effect, anemia, and low energy levels were most often identified as potential negative outcomes of dieting.

Women aged 19-25 years were less likely to rely on friends and family as a source of information about weight loss diets than women older than 39 years (p=0.023). In turn, younger respondents were more likely to acquire information from the Internet (p=0.017). Every fifth respondent, regardless of age or place of residence, had consulted a dietician or a physician about safe weight loss. Books and research articles were significantly more popular sources of information about dieting among urban dwellers than among rural dwellers (p=0.021).

### The use of alternative weight loss diets and the safety of their use

A total of 233 women in the study group had adhered to alternative diets, mainly for weight loss. The choice of a specific diet was influenced by the respondents' BMI and socioeconomic status. Gluten-free and vegetarian diets were more often selected by high-income respondents (p=0.019). The Dukan diet was significantly more popular among blue collar (p=0.0023) and white collar workers (p=0.0066), and similar observations were made regarding the 1000 kcal diet (p=0.0079). Young women (18-25 years) had adhered to various diets, whereas respondents older than 26 years were more likely to opt for dr. Dąbrowska's diet (p=0.004) and the Copenhagen diet (p=0.006). An analysis of the results revealed that respondents with a history of restrictive eating were more likely to select specific low-calorie diets. Vegetarians often selected Kwaśniewski's diet (p=0.024); women on a gluten-free diet more frequently chose the ketogenic diet (p=0.005) or the paleo diet (p=0.002), whereas respondents adhering to a lactose-free diet opted for low-calorie meal kits (p=0.029).

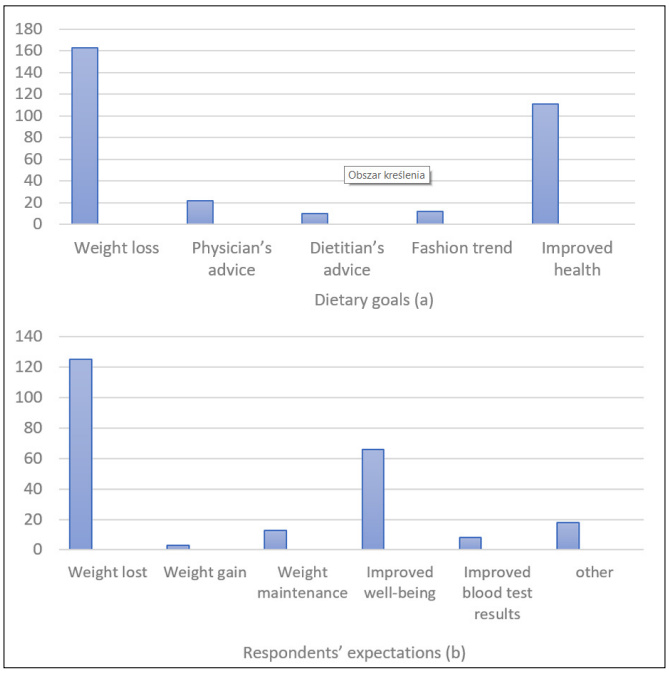


**FIGURE 2. Dietary goals (a) and the respondents' expectations (b).**

Adherence to a specific diet was linked with an increase in the number of respondents with a healthy body weight and a decrease in the percentage of overweight (by 44%, p<0.05) and obese (by 34%, p<0.05) subjects.

The main reason for embarking on an alternative diet was weight loss (70%), followed by improved health (47.6%) (Fig. 2a). Women who opted for specific dietary plans were also motivated by the desire to lose weight (53.6%) and improve their overall well-being (more than 25%). Other expectations indicated by the respondents included developing healthier eating habits, protection against diseases, and improvement in skin condition (Fig. 2b).

The relationships between the respondents' expectations and dietary outcomes were also analyzed. The yo-yo effect was much more prevalent among women who dieted to lose weight than among those who dieted to improve their well-being (p=0.0036). Successful weight maintenance was more often reported by participants who dieted to stabilize their weight than women aiming to quickly lose weight (p=0.0003) or improve their blood biochemistry parameters (p=0.0275). Unintentional weight gain was significantly more often reported by women attempting to rapidly lose weight than by respondents hoping to stabilize their weight (p=0.0317) or improve their well-being (p=0.000). Women attempting to lose weight quickly were significantly more likely to experience a diet-related decline in mood and well-being, which negatively impacted their quality of life (p=0.0268).

There was a significant relationship between yo-yo dieting and the respondents' age. The yo-yo effect was significantly more frequently reported by women aged 36-40 years than those in the 18-25 age group (p=0.0043). Fluid intake was negatively correlated with the yo-yo effect (p=0.003) and positively correlated with an improvement in well-being (p=0.015).

**TABLE 1. Weight loss associated with different diets.**

| Type of diet | Number of women adhering to the diet | Number of women who lost weight (relative to the % of women adhering to the diet) | Number of women who gained weight | Correlation between dietary adherence and weight loss (Spearman's correlation coefficient and p-value) | Mean/median weight loss | Smallest/greatest weight loss |
|---|---|---|---|---|---|---|
| Meal kits | 42 | 33 (78.5%) | 5/4 | 0.084 (0.201) | -2.65/-2.00 | -15/6 |
| Gluten-free diet | 17 | 17 (100%) | -/- | -0.125 (0.057) | -2.20/-2.00 | -8/0 |
| Lactose-free diet | 29 | 10 (34.5%) | 16/3 | 0.088 (0.181) | -1.14/-1.00 | -8/8 |
| 1000 kcal diet | 45 | 36 (80%) | 5/4 | -0.062 (0.344) | -2.93/-2.25 | -16/3 |
| Dukan diet | 23 | 18 (78.3%) | 1/4 | -0.032 (0.624) | -1.87/-2.55 | -7/11 |
| Juice diet | 10 | 8 (80%) | -/2 | -0.051 (0.443) | -3.63/-1.89 | -14/0 |
| Vegetarian diet | 19 | 7 (36.8%) | 6/6 | 0.094 (0.154) | -1.32/-1.00 | -12/3 |
| Kwaśniewski's diet | 5 | 5 (100%) | -/- | -0.092 (0.162) | -4.72/-3.00 | -14/-0.5 |
| Ketogenic diet | 9 | 6 (66.7%) | 2/1 | 0.031 (0.640) | -1.65/-1.78 | -8/-2 |
| Dr. Dąbrowska's diet | 22 | 19 (86.4%) | 1/1 | -0.023 (0.725) | -3.27/-2.00 | -14/2.67 |
| Copenhagen diet | 14 | 10 (71.4%) | 3/1 | 0.106 (0.107) | -1.71/-1.00 | -11/2.67 |
| Paleo diet | 8 | 8 (100%) | -/- | -0.117 (0.075) | -4.46/-3.5 | -10/-1.78 |

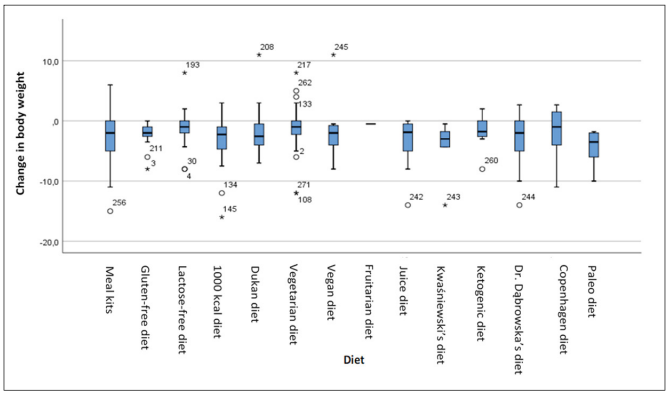


**FIGURE 3. Changes in body weight relative to the type of diet.**

An analysis of the results achieved by 177 respondents whose main dietary goal was to lose weight revealed that:

- 77 women (31.2%) reduced their body weight by up to 4 kg,
- 65 women (25.8%) reduced their body weight by more than 4 kg but not more than 10 kg,
- 29 women (12.5%) reduced their body weight by more than 10 kg but not more than 20 kg,
- 6 women (3%) reduced their body weight by more than 20 kg.

It should be noted that weight loss was not the main goal for all respondents adhering to an alternative diet. However, women who dieted to lose weight often achieved that goal (p=0.01).

The values of weight loss achieved as a result of applying the individual diets are presented in Table 1, whereas the changes in body weight depending on the type of diet used are shown in Figure 3. The type of diet had no effect on the magnitude of weight loss.

The respondents adhered to a diet for 4-6 weeks on average, but in the group of participants following to the lactose-free diet and the vegetarian diet, every other woman complied with these dietary requirements on a regular basis. Adherence to the fruitarian diet, juice diet, and 1000 kcal diet was shortest (up to 7 days). Most women followed the above diets (p=0.011), the Copenhagen diet (p=0.02) and the paleo diet (p=0.015) for 8-14 days. The longest adherence (4 weeks and longer) was reported for Kwaśniewski's diet (p=0.031), the ketogenic diet (p=0.21), and the Dukan diet (p=0.03).

Only less than a third of the studied population strictly adhered to a restrictive diet; 33% of the respondents modified their meals, and 1/5 of the women snacked between meals (Table 2). The participants reported the greatest difficulty with maintaining a consistent dietary pattern, eating regular meals, and laborious meal preparation. Strict dietary adherence was not significantly correlated with positive or negative outcomes. Every fifth participant struggled with the high cost of a healthy diet, and this problem was significantly more often reported by women who followed to the vegetarian diet (p=0.023) and the gluten-free diet (p=0.041). According to 40% of the women, feelings of hunger undermined their resolve to remain on a diet, and hunger was significantly more often reported as an obstacle by younger respondents (p=0.026) and women on low-calorie diets (p=0.02).

Additional dietary supplements were not used by 63.1% of the respondents, whereas every fourth woman took vitamin and mineral supplements, and more than 10% of the participants consumed herbal supplements and herbal teas that support weight loss.

**TABLE 2. An evaluation of the relationship between dietary outcomes and strict dietary adherence.**

| | $\chi^2$ test and p-value | Yes (72 women) | No (19 women) | Snacking between meals (45 women) | Meal modification (77 women) | Diet break (20 women) |
|---|---|---|---|---|---|---|
| Weight loss with the yo-yo effect | 4.250<br>0.373 | 16<br>22.2% | 5<br>26.3% | 13<br>28.9% | 13<br>16.9% | 7<br>35% |
| Weight loss without the yo-yo effect | 5.701<br>0.223 | 30<br>41.7% | 4<br>21.1% | 11<br>24.4% | 29<br>37.7% | 6<br>30% |
| Weight maintenance | 2.346<br>0.672 | 13<br>18.1% | 5<br>26.3% | 11<br>24.4% | 22<br>28.6% | 5<br>25% |
| Weight gain | 4.985<br>0.289 | 1<br>1.4% | 0<br>0% | 2<br>4.4% | 0<br>0% | 1<br>5% |
| Improved well-being | 5.401<br>0.249 | 35<br>48.6% | 6<br>31.6% | 16<br>35.6% | 41<br>53.2% | 9<br>45% |
| Significant decline in well-being | 1.770<br>0.778 | 5<br>6.9% | 1<br>5.3% | 4<br>8.9% | 3<br>3.9% | 2<br>10% |
| Digestive problems | 2.575<br>0.631 | 3<br>4.2% | 1<br>5.3% | 4<br>8.9% | 2<br>2.6% | 3<br>4.2% |
| Mood swings | 1.271<br>0.866 | 8<br>11.1% | 1<br>5.3% | 4<br>8.9% | 7<br>9.1% | 3<br>15% |
| Low energy levels | 2.042<br>0.728 | 8<br>11.1% | 3<br>15.8% | 8<br>17.8% | 9<br>11.7% | 4<br>20% |
| High energy levels | 2.575<br>0.631 | 16<br>22.2% | 3<br>15.8% | 6<br>13.3% | 15<br>19.5% | 2<br>10% |

Alternative weight loss diets can have adverse side effects. The 1000 kcal diet was associated with low well-being (p=0.005), digestive problems (p=0.002), mood swings (p=0.048), and low energy levels (p=0.001). Women adhering to the Dukan diet were significantly more likely to experience a decline in well-being (p=0.024), digestive problems (p=0.048), and mood swings (p=0.006). Digestive problems were more frequently reported by women following the fruitarian diet (p=0.0001) and the ketogenic diet (p=0.036). The yo-yo effect (p=0.049) and low mood (p=0.022) were significantly more prevalent among respondents following Kwaśniewski's diet. Yo-yo dieting was also significantly more often reported by women adhering to the Copenhagen diet (p=0.014). The paleo diet and dr. Dąbrowska's diet were well tolerated, and both dietary regimes were associated with higher energy levels (paleo diet, p=0.017; dr. Dąbrowska's diet, p=0.019), improved well-being (dr. Dąbrowska's diet, p=0.008), and a significantly lower risk of the yo-yo effect (paleo diet, p=0.014).

In general, nearly 50% of the participants were of the opinion that alternative diets are effective. In turn, 38% of the surveyed subjects had positive experiences, but their expectations were not fully met, whereas 16% of the respondents failed to achieve their dietary goals. Nearly 10% of the women claimed that alternative diets had adverse health effects. Based on the subjective opinions of the respondents, it was shown that one-third of the women surveyed had insufficient knowledge about alternative diets and did not rely on reliable sources of nutritional information. Only 25% of the surveyed women were of the opinion that they had sufficient knowledge to select the safest and the most appropriate alternative diet.

## DISCUSSION

According to various definitions of an alternative diet [14], such a diet (when closely followed) should meet an individual's nutritional and energy needs, but certain foods, dishes,

and cooking techniques should be temporarily eliminated or limited. The energy value of a weight loss diet should be reduced solely by limiting the intake of fats (primarily) and simple carbohydrates. Certain foods and dishes should be eliminated, restricted, or substituted with the sole purpose of decreasing energy intake, but not the nutritional value of a diet which should adequately meet individual needs [14]. Popular weight loss diets are usually low in calories and deficient in protein, some vitamins (such as vitamin D and B vitamins), and minerals (mostly calcium, magnesium, and iron) [15]. Low-carbohydrate diets are attractive because they promise quick and easy weight loss without counting calories or limiting the intake of many enjoyable foods. In turn, conventional weight loss diets restrict the intake of fat and high-calorie foods but are abundant in complex carbohydrates [16]. In the present study, most respondents opted for LC diets, where most of the daily calories came from protein-rich foods. There are no consistent, widely- accepted definitions of these diets, and different descriptions are used (such as 'low- carbohydrate, high- protein', 'low- carbohydrate, high- fat', or 'very low- carbohydrate') [7].

There is evidence to suggest that LC diets may lead to greater short-term weight loss than traditional low-fat diets, but little is known about their long-term effectiveness and safety. Most studies have shown that LC diets induced greater weight loss after the first six months, but after 12 and 24 months, no significant differences in weight loss were observed between individuals adhering to LC and low-fat diets [17]. Initial weight loss is due partly to water loss, but fat loss occurs with adherence to the low-carb approach. With all dietary interventions, as adherence to the diet wanes, the weight loss effect becomes similar to other nutritional approaches after one year [18,19]. The LC diet is deficient in vitamins (particularly B vitamins and vitamins A and E), minerals (potassium, calcium, magnesium), and flavonoids. These findings are in agreement with a systematic review that showed deficient intakes of magnesium, calcium, iron, iodine, thiamine, and folate in healthy adults who followed a carbohydrate-restricted diet [9].

Low-carbohydrate diets are generally abundant in saturated fats and cholesterol, but researchers are divided over their quality and safety [20,21]. However, the fact that LC and high-fat diets receive positive media coverage may be convincing for many people [22], many of whom are not aware that these diets may lead to nutritional deficiencies. Many consumers also fail to recognize the risks associated with excessive intake of potentially harmful macronutrients (such as saturated fats). The type and ratio of dietary fatty acids also play an important role. Increased consumption of polyunsaturated fatty acids (PUFAs), particularly n-3 PUFAs, can attenuate the pro-inflammatory effects associated with a high intake of saturated fatty acids (SFAs) [23]. At the same time, low intake of vitamins A, C, and E can contribute to oxidative stress and increase PUFAs' susceptibility to oxidation (thus promoting inflammatory responses) [24]. For this reason, consumption of SFAs should be limited. It should also be noted that alternative LC/high-protein diets tend to be deficient in fiber (the adequate daily intake of dietary fiber is 14 g/1000 kcal), which further confirms that the risk of fiber deficiency is high in LC diets [25]. A two-year dietary intervention trial revealed that Mediterranean and LC diets may be effective and equally safe alternatives to low-fat weight loss diets. In addition to promoting weight loss in a group of moderately obese subjects, LC and Mediterranean diets provided positive metabolic effects. These diets had a beneficial influence on lipids (LC diet) and glycemic control (Mediterranean diet), which suggests that dietary interventions may be tailored to personal preferences and metabolic considerations [26].

In the current study, more than a third of the respondents adhered to three and more weight loss diets. Similar observations were made by Kozirok [27] who concluded that high variability in dietary models and their application for short periods of time can compromise the achievement and maintenance of a healthy weight. In the present study, the most widely cited reasons for giving up a diet were difficulties with incorporating healthy eating habits into the daily routine, laborious meal preparation, high cost, and unpleasant side effects. In turn, most of the women surveyed by Kozirok [27] abandoned their diets due to fatigue, problems with including healthy eating habits in their daily routines, impatience, and unsatisfactory outcomes. Similarly to Semeniuk [28], this study demonstrated that women adhering to alternative diets, particularly low-calorie diets, consumed fewer meals than persons following less restrictive diets. This negative trend may be related to the misconception that individuals attempting to lose weight should eat fewer meals per day.

In summary, it should be noted that while alternative diets have possible health benefits, their effectiveness and safety is debatable. The long-term effectiveness of these dietary models has not been investigated in multi-year dietary intervention trials. In addition, maintaining a healthy weight is more important than the number of kilograms lost. Long-term dietary adherence and observance of dietary recommendations should be prioritized over dietary macronutrient modifications.

## CONCLUSIONS

1. A significant proportion of the surveyed women were unaware of the definition of alternative diets, the risk factors and their impact on health, despite their frequent use.
2. Most women choose alternative diets to lose weight (usually <4-10 kg) and improve their well-being (physical and mental health).
3. Strict adherence to the rules of the chosen diet can be difficult due to inappropriate food choices, feelings of hunger or difficulties in preparing meals, which is why it is important to work with a dietician when following alternative weight-loss diets.
4. Long-term use of alternative diets may cause negative side effects, such as deterioration in well-being, digestive problems and mood swings.
5. Since there is currently no known optimal diet that effectively curbs appetite, promotes rapid weight loss, ensures proper nutrition, and protects against the undesirable effects of weight loss, it is important to educate people about the safe use of alternative diets.

**Disclosure**

The authors report no conflict of interest.

**REFERENCES**


1. Vennu V, Abdulrahman TA, Bindawas SM. The prevalence of overweight, obesity, hypertension, and diabetes in India: Analysis of the 2015-2016 National Family Health Survey. Int J Environ Res Public Health. 2019;16(20):3987. https://doi.org/10.3390/ijerph16203987
2. Westbury S, Oyebode O, van Rens T, et al. Obesity stigma: causes, consequences, and potential solutions. Curr Obes Rep. 2023;12(1):10-23. https://doi.org/10.1007/s13679-023-00495-3
3. World Health Organization. Obesity and overweight [Internet]. Geneva: World Health Organization; 2024 [cited 2026 Apr 08]. Available from: https://www.who.int/news-room/fact-sheets/detail/obesity-and-overweight
4. Rompkovski CS, Lourenço ML, Balbi ME, et al. Reasons that lead women to weight loss: a study in southern Brazil. Rev Psicol Saude. 2021;13(1):81-96. https://doi.org/10.20435/psaude.v13i1.1093
5. Martin CB, Herrick KA, Sarafrazi N, et al. Attempts to lose weight among adults in the United States, 2013-2016. NCHS Data Brief. 2018;(313):1-8.
6. Joshi S, Mohan V. Pros & cons of some popular extreme weight-loss diets. Indian J Med Res. 2018;148(5):642-647. https://doi.org/10.4103/ijmr.IJMR_1703_18
7. Naude CE, Brand A, Schoonees A, et al. Low-carbohydrate versus balanced-carbohydrate diets for reducing weight and cardiovascular risk. Cochrane Database Syst Rev. 2022;1(1):CD013334. https://doi.org/10.1002/14651858.CD013334.pub3
8. Reguła J. Charakterystyka i ocena wybranych diet alternatywnych [Description and the evaluation of chosen alternative diets]. Forum Zaburzen Metab. 2013;4(3):115-121.
9. Churuangsuk C, Griffiths D, Lean MEJ, et al. Impacts of carbohydrate-restricted diets on micronutrient intakes and status: A systematic review. Obes Rev. 2019;20(8):1132-1147. https://doi.org/10.1111/obr.12858
10. Levran N, Levek N, Sher B, et al. The impact of a low-carbohydrate diet on micronutrient intake and status in adolescents with type 1 diabetes. Nutrients. 2023;15(6):1418. https://doi.org/10.3390/nu15061418
11. de Bock M, Lobley K, Anderson D, et al. Endocrine and metabolic consequences due to restrictive carbohydrate diets in children with type 1 diabetes: An illustrative case series. Pediatr Diabetes. 2018;19(1):129-137. https://doi.org/10.1111/pedi.12527
12. Stentz FB, Brewer A, Wan J, et al. Remission of pre-diabetes to normal glucose tolerance in obese adults with high protein versus high carbohydrate diet: randomized control trial. BMJ Open Diabetes Res Care. 2016;4(1):e000258. https://doi.org/10.1136/bmjdrc-2016-000258
13. Tricò D, Moriconi D, Berta R, et al. Effects of low-carbohydrate versus mediterranean diets on weight loss, glucose metabolism, insulin kinetics and β-cell function in morbidly obese individuals. Nutrients. 2021;13(4):1345. https://doi.org/10.3390/nu13041345
14. Kołłajtis-Dołowy A, Jeruszka-Bielak M, Wawrzyniak A. Diety alternatywne, ich stosowanie w wybranych grupach osób oraz źródła informacji [Alternative diets, usage among selected populations, information sources]. Kosmos. 2019;68(2):185-200. https://doi.org/10.36122/KOSM.2019.01.21
15. Jaime K, Mank V. Risks Associated With Excessive Weight Loss [Internet]. Treasure Island (FL): StatPearls Publishing; 2024 [cited 2026 Apr 08]. Available from: https://www.ncbi.nlm.nih.gov/books/NBK599451/
16. Malik VS, Hu FB. Popular weight-loss diets: from evidence to practice. Nat Clin Pract Cardiovasc Med. 2007;4(1):34-41. https://doi.org/10.1038/ncpcardio0743
17. Foster GD, Wyatt HR, Hill JO, et al. Weight and metabolic outcomes after 2 years on a low-carbohydrate versus low-fat diet: a randomized trial. Ann Intern Med. 2010;153(3):147-157. https://doi.org/10.7326/0003-4819-153-3-201008030-00005
18. Gardner CD, Kiazand A, Alhassan S, et al. Comparison of the Atkins, Zone, Ornish, and LEARN diets for change in weight and related risk factors among overweight premenopausal women: the A TO Z Weight Loss Study: a randomized trial. JAMA. 2007;297(9):969-977. https://doi.org/10.1001/jama.297.9.969
19. Oh R, Gilani B, Uppaluri KR. Low-Carbohydrate Diet [Internet]. Treasure Island (FL): StatPearls Publishing; 2024 [cited 2026 Apr 08]. Available from: https://www.ncbi.nlm.nih.gov/books/NBK537084/
20. Storz MA, Ronco AL. Nutrient intake in low-carbohydrate diets in comparison to the DASH diet: a cross-sectional study. Nutr Health. 2021;27(3):329-340. https://doi.org/10.1177/0260106020953153
21. Zinn C, Lenferna De La Motte KA, et al. Assessing the nutrient status of low carbohydrate, high-fat (LCHF) meal plans in children: a hypothetical case study design. Nutrients. 2022;14(8):1598. https://doi.org/10.3390/nu14081598
22. Johansson I, Nilsson LM, Stegmayr B, et al. Associations among 25-year trends in diet, cholesterol and BMI from 140,000 observations in men and women in Northern Sweden. Nutr J. 2012;11:40. https://doi.org/10.1186/1475-2891-11-40
23. Marion-Letellier R, Savoye G, Ghosh S. Polyunsaturated fatty acids and inflammation. IUBMB Life. 2015;67(9):659-667. https://doi.org/10.1002/iub.1432
24. Tao L. Oxidation of polyunsaturated fatty acids and its impact on food quality and human health. Adv Food Technol Nutr Sci Open J. 2015;1(6):135-142. https://doi.org/10.17140/AFTNSOJ-1-121
25. Quagliani D, Felt-Gunderson P. Closing America's fiber intake gap: communication strategies from a food and fiber summit. Am J Lifestyle Med. 2016;11(1):80-85. https://doi.org/10.1177/1559827615588079
26. Shai I, Schwarzfuchs D, Henkin Y, et al. Weight loss with a low-carbohydrate, Mediterranean, or low-fat diet. N Engl J Med. 2008;359(3):229-241. https://doi.org/10.1056/NEJMoa0708681
27. Kozirok W. Ocena skuteczności diet redukcyjnych [Assessment of the effectiveness of reduction diets]. Ekol Tech. 2016;24(1):10-16.
28. Semeniuk W. Zwyczaje żywieniowe studentów z Uniwersytetu Przyrodniczego w Lublinie stosujących diety alternatywne [Eating habits of students of the University of Life Sciences in Lublin using alternative diets]. Zywn Nauka Technol Jakosc. 2009;16(4):227-235.


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