

The Opportunities Offered by Nutrition Science and Gastronomy in Vegetarian and Vegan Diets

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Review Article

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Abstract

Good nutrition plays a significant role for maintaining good health. Different diets and eating habits are prevalent globally. Prominent representatives of these forms of nutrition are the vegetarian and vegan diets. Therefore, we explore the possibilities offered by these diets in our manuscript. Furthermore, we present foods with the practical application of the science of gastronomy. These foods are delicious and also effectively meet the need of human body for energy, protein, other macronutrients (carbohydrate and fat), omega-3 fatty acids, fibre, antioxidants, vitamins, and minerals and so on. It can also reduce the susceptibility of people with special dietary needs to diseases (for example: malnutrition, gastrointestinal diseases, anaemia, haemorrhage, vitamin deficiency diseases, chronic weakness, depression, muscle weakness and degeneration, postoperative conditions, cardiovascular diseases and metabolic syndrome). We hope to contribute to the maximum intake of macro- and micro-nutrients into the human body without consuming meat or other animal products. In the case of an exclusive plant based diet, the development of complex main meals is also of outstanding importance. Thus, all the essential amino acids can enter the body.

Keywords : Gastronomy; Nutrition; Nutritional Supplementation; Recipe; Vegan; Vegetarian.

Introduction

Nowadays, more and more people are turning to plant based nutrition. It is now well recognized that vegetarian and vegan diets are good to maintain good health. This is also due to current trends, special nutritional needs, environmentally conscious lifestyles and international nutritional characteristics [6]. Among the plant based diets, the best known are the vegetarian and vegan diets [5, 8, 9, 10, 11]. In this context, Cramer and co-workers (2017) mentioned the characteristics of Americans choosing the vegetarian and vegan diets for health reasons.

Among the followers of the vegetarian diet, we also distinguish between ovo-lacto and lacto-vegetarians. In these cases, milk and dairy products or eggs are consumed from products of the animal origin. Of course, the preference is given to plant-based ingredients in the diet. Followers of the vegan diet completely avoid consuming foods of animal origin. In their way of life, other products of animal origin, such as clothing, home furnishings and beauty products are not included. The persons who follow both diets need to pay close attention to providing macro-nutrients for the body. It is also important to supplement the diet with vitamins and minerals. The complex, as proteins with all of the essential amino acid can be achieved by selecting the appropriate ingredients and cooking technologies. Vitamins and minerals are complete by enriching plant-based foods (e.g., plant-based beverages fortified with vitamins) [4]. A wide variety of cereals can be consumed as

part of both a vegetarian and vegan diet. It can be used well as a side dish (brown rice, pasta, millet, bulgur), as part of muesli, for porridges, salads, in the form of baked goods or as a base-products [3].

The vegetables and fruits also play an important role in plant-based nutrition. They can be used in many ways (side dish, a salad base and ingredients in smoothies). The best known ingredients in the vegan and vegetarian diet are soybeans, beans, lentils, and sweet potatoes; and also useful plant-based drink ingredients are oilseeds as well. Quantitative recommendations and content values are also the most important aspects in the selection and consumption of the vegetables and fruits [2]. Followers of the vegan diet completely avoid consuming products of animal origin. However, some vegetarian groups consume milk and dairy products or eggs. Other products of animal origin are also avoided by vegetarians in their diet. These foods (meat, fish) are not detailed in the manuscript [1]. The consumption of unsaturated fatty acids has a number of beneficial effects on the functioning of the human body. The good complementary properties of vegetable oils used in vegetarian and vegan diets can be used as part of salads, sauces and cooking technologies [7]. The sweets and other high-sugar foods, alcoholic beverages can be consumed in accordance with the principles of healthy eating. In this manuscript, we prepare and present various dishes that contribute to the practical application of vegetarian and vegan diets.

Gastronomy offers opportunities in the vegan and vegetarian diets

In the following, we present some of the possibilities offered by gastronomy for the practical application of the vegetarian and vegan diets (Figure 1-6). The composition of different food items and nutritional values of different recipes prepared by us is summarized below in each figure. The dishes we prepare can be incorporated into international gastronomy. The ingredients are available from all over the world, so they can be easily used in the kitchens of all nations.



Ingredients: Plant-based drink 2 dl, banana 50 g, salad 100 g, oilseeds 10 g; Energy: 189.6 Kcal, Protein: 6.7 g, Fat: 5.9 g, Carbohydrate: 14.7 g

Figure 1: Smoothie with vegetables and bananas (Own recipe)



Ingredients: kefir 100 g, flour 40 g, oil 5 g, yeast 3 g (+ for example: water, salt, sugar, garlic, greenpesto); Energy: 220.4 Kcal, Protein: 8 g, Fat: 6 g, Carbohydrate: 32.6 g

Figure 2: Garlic cream and home-made baked goods with green pesto (Own recipe)



Ingredients: Eggs 2 pieces, oil 5 g, potato 80 g, salad 100 g; Energy: 290.6 Kcal, Protein: 16.8 g, Fat: 15.3 g, Carbohydrate: 17.5 g

Figure 3: Fried egg with potato garnish (Own recipe)



Ingredients: Orange 50 g, banane 50 g, pomegranate 50 g, apple 50 g (+ foreexample: water); Energy: 129 Kcal, Protein: 2 g, Fat: -, Carbohydrate: 29 g

Figure 4: Healing drink mix: Vitamin-enriched juice with a combination of orange, banana, pomegranate and apple (Own recipe)



Ingredients: Tofu 60 g, bread (with high fiber content) 80 g, salad 100 g; Energy: 261.6 Kcal, Protein: 13 g, Fat: 3.7 g, Carbohydrate: 43.3 g

Figure 5: Tofu salad with toast (Own recipe)



Ingredients: Plant-based drink 2 dl, muesli 40 g, fruits (banana or orange) 50 g, oilseeds 10 g; Energy: 332.1 Kcal, Protein: 8 g, Fat: 9.2 g, Carbohydrate: 40.8 g

Figure 6: Plant-based drink with muesli, fruits and oilseeds (Own recipe)

Conclusion

We present the characteristics of vegetarian and vegan diet in the manuscript. We also analyze the possibilities provided by food groups that can be used in special diets. The main part

of the work is to use the science of gastronomy to prepare the vegan and vegetarian dishes. We prepare and present, such dishes (smoothie with vegetables and bananas; garlic cream and home-made baked goods with green pesto; fried egg with potato garnish; healing drink mix: vitamin enriched juice with a combination of orange, banana, pomegranate, and apple; tofu salad with toast; plant based drink with muesli, fruits and oilseeds), which can be a useful part of the diet. In addition, their content values contribute to the full protein, other useful macronutrient and physiological active components (for example: omega-3 fatty acids, antioxidant, fibre) intake of the human body. Furthermore, we also consider it important to supplement vitamins like B12 vitamins and minerals such as iron, folic acid without the need for food of animal origin. We can contribute to the nutritional supplementation of people with special nutritional needs by presenting the possibilities offered by nutrition science and gastronomy. In addition, we pay special attention to increasing the enjoyment value of food, so that the idea that food can be not only healthy but also delicious makes sense.

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Contribution of authors

Both the authors contributed equally. They read the final version, and approved it for the publication.

Conflict of interest

The authors declare that they do not have conflict of interest.

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