

## **1. It is safe at every stage of life**

The position of the Academy of Nutrition and Dietetics approved properly planned plant diets, both vegetarian and vegan, as appropriate at all stages of life and for athletes. This includes pregnancy, lactation, infancy, childhood, adolescence and old adulthood. Plant-based diets have health benefits due to high consumption of vegetables, fruits, and whole grains, as well as pods, nuts and seeds. In practice, if you are just starting your adventure with a plant-based diet or plan to introduce it to your child, it is worth consulting a qualified dietitian to balance it properly and start nutritional education that will allow you to compose nutritious meals yourself.

## **2. Helps the planet**

According to the WHO list of urgent global challenges for the next decade, one of the most pressing problems of civilization is climate change and the need to protect the environment. Does the diet have anything to do with it? It turns out that it is - the production of plant-based ingredients consumes much less natural resources and is associated with a lower level of greenhouse gas emissions. This is because plant-based products need less investment to produce a kilogram of finished product. There are three main benefits of eliminating meat from the diet in the context of positive environmental changes. The production of 1 kg of beef protein produces the equivalent of 45-640 kg of carbon dioxide, in comparison, the same amount of protein from tofu is only 10 kg of CO<sub>2</sub>. It is worth noting that the very change of the consumption of beef protein to protein from poultry or pork will have a positive effect on the level of carbon dioxide emissions, because they create amounts of 10-30 kg and 20-55 kg of CO<sub>2</sub>. Therefore, you do not have to give up meat completely, but only include more plant-based protein sources in your menu and replace red meat with poultry.

As much as 30% of global land use and 70% of agricultural land is livestock. These amounts include not only the areas where the animals are housed, but also the production of plants for fodder. The last aspect, i.e. water consumption, cannot be overlooked here. The production of 1 kg of beef requires ~ 15,000 liters of water (it depends on the type of production, composition and origin of the feed), while 1 kg of chicken is ~ 4300 liters of water, and of tomatoes ~ 214 liters. What can we do to have a real impact on the environment? Replace 3 lunches a week with plant-based versions, adding tofu, beans or chickpeas. Yes, it's that simple!

## **3. Reduces the risk of insulin resistance and type 2 diabetes**

Let's move on to the health aspects and the benefits that you can achieve in this case by increasing the proportion of plant products in the diet. Research shows that the incidence of type 2 diabetes and insulin resistance is much lower in people who base their diet mainly on plants. The analysis showed that people who adhered to more plant-based diets had a 34% lower risk of developing type 2 diabetes. Why is this happening? A plant-based diet usually contains more fiber, which affects the postprandial glucose concentration (the sugar level after eating breakfast will be lower in the case of porridge

containing a greater proportion of fiber than white roll with cheese), additionally reduces the energy density of food, promotes a greater sense of satiety, which translates into on the amount of calories consumed [6]. Moreover, the risk of developing type 2 diabetes is influenced by the excessive consumption of heme iron and its high reserves in the body, and this type of iron can be found only in animal products. It is worth noting that the effects of protection against the development of type 2 diabetes also occur during the implementation of a semi-vegetarian (meat restriction) and lacto-ovo-vegetarian (containing milk and eggs) diets.

#### **4. It protects the heart**

This, of course, is just the beginning of the advantages that will appear in your life after modifying the menu! Research shows that vegetarians have a 29% lower coronary heart disease death rate and a 22% lower death rate. We can list several indirect factors influencing the beneficial effects of a plant-based diet on cardiovascular diseases. It is a reduction in total cholesterol and blood pressure levels. The average reduction in total cholesterol and LDL by 0.36 and 0.34 mmol / l is responsible for a lower risk of cardiovascular diseases by 9 to 10.6%! This is due to a higher consumption of dietary fiber, vitamins B, C and E, magnesium and potassium, as well as a reduction in the proportion of saturated fatty acids. Remember that you can achieve this by changing the proportion of meat in your diet and adding pods, more vegetables and whole grains to your meals!

#### **5. Protects against cancer**

Have you heard that plant-based diets can lower your risk of cancer? Yes it's true! Vegetarian and pesco-vegetarian diets are associated with a reduced risk of colorectal cancer. It does so by eliminating red processed meat that has been classified as carcinogenic [12] and by introducing more vegetables, fruits and whole grains. They are the basic sources of fiber, vitamins and antioxidants that reduce the risk of morbidity by 20% compared to plant-based diets. As you can see, that doesn't mean you have to turn your diet upside down. Give up sausages, sausages and red meat preserves for an additional portion of pods, green vegetables or a pesco-vegetarian option - choose a second lunch with fatty sea fish during the week. In addition, maintaining a healthy body weight or reducing it in the event of obesity is a factor that reduces the risk of cancer, and plant-based diets are helpful in this process - as you will learn in a moment.

#### **6. It helps in weight loss**

Are you starting weight loss for the hundredth time? You don't want to focus on counting calories but change your eating habits and lose a few pounds? A plant-based diet will help you with this. This is because a menu rich in plant-based products has a lower energy density and improves satiety, which means that you are not hungry on a diet and reduces energy consumption. The lowest BMI (Body Mass Index) was registered in people on a plant-based diet! The easiest way to understand this is with a specific example and let's take a closer look at the seeds of legumes. By adding a can of white beans

to dinner, we get an average of 275 kcal, including as much as 11 g of fiber and a large volume. Its higher share in a meal ensures a greater feeling of fullness, which may translate into lower energy consumption. Simply put, if you eat pasta with beans and broccoli, you will feel more full than a similar meal with chicken. This was confirmed by a study in which two groups of women consumed different amounts of fiber throughout the day. The group that had a higher share in the diet had a 28% lower risk of significant body gain.

## **7. May weaken bones**

In addition to the undisputed advantages of a plant-based diet, it is worth noting the adverse effects of an improperly balanced diet. Avoiding or minimizing animal and animal products may result in lower intakes of protein, calcium, vitamin D, and B12. Bone mineral density has been shown to be 4% lower in vegetarians than in those following traditional diets. This was due to a 30% lower protein and calcium intake, which on a plant-based (lacto-ovo-vegetarian and vegan) diet was on average at the level of 746-768 mg. In the case of the fracture rate, the rate was 30% higher in vegans. However, it decreased by as much as half when the analyzed group was limited to people consuming at least 525 mg of calcium per day. Deficiency of these ingredients may adversely affect bone health, but it can be remedied in an easy dietary way. Remember to buy calcium fortified products, so a soy drink or tofu will provide calcium, but also an extra portion of protein! If you do not eliminate all animal ingredients, the matter is even simpler - add milk to the porridge, make a shake based on yogurt, and add mozzarella or parmesan to your sandwiches.

## **8. Increases the risk of anemia**

When introducing a menu based on plant products, pay attention to the ingredient, which is iron. I am explaining why it is so important! The traditional method of nutrition provides us with heme iron, the source of which is animal products, while in plants we can find non-heme iron, which we can find more per 100 g of the product, but its digestibility will be much lower. Iron deficiency can lead to anemia which will cause weakness, dizziness, pale skin and excessive tiredness. It is worth noting that the need for iron is much higher in women - 18 mg than in men - 10 mg and it is related to bleeding during menstruation. In one study, as many as 78% of women following a vegetarian diet were deficient in iron. Interestingly, this deficiency is less in vegans because the calcium contained in dairy products also reduces the bioavailability of iron. For this reason, it is extremely important to ensure the proper absorption of non-haem iron in plant-based diets. How can I do that? Enrich your meals with products containing vitamin C, such as peppers, parsley, kiwi, strawberries, citrus, because the organic acids contained in them will increase the absorption of iron. Also use spices - turmeric, onion, garlic. In addition, avoid coffee and tea during meals, because the tannins present there reduce bioavailability - an interval of 1 - 2 hours between your dinner is enough.

## **9. It has to do with eating disorders**

Can a plant-based diet, due to its restrictions and elimination of certain product groups, be associated with an eating disorder? A study was conducted to see how many people with eating disorders have ever introduced a vegetarian diet. It turned out that significantly more people with disease reported using (now or earlier) a plant-based diet compared to people without a history of the disorder. 68% of respondents concluded that there was a relationship between an eating disorder and a change in diet. However, it should be noted that the choice of a plant-based diet was associated with the desire to reduce body weight, reduce the amount of calories consumed and maintain a sense of control. Therefore, one cannot accuse the plant-based diet of causing disorders through restrictions, but only consider it as a tool that can be used for their development. The solution is to consult a specialist and determine the motive that causes the desire to change the diet, which may help to avoid further development of the disease.

## **10. Increases the risk of gout**

Is a plant-based diet responsible for an increased risk of gout? To make it clear - gout is an inflammation of the joints caused by too much uric acid in the blood. The method of treatment is to change the eating habits and limit the purine-rich foods in the diet, i.e. mainly meat (offal, cold cuts, fish). So why can plant-based diets be bad for you? The study shows that the highest uric acid levels were found in vegan diets, followed by traditional diets, and the lowest levels were found in vegetarian and pesovegetarian diets. This may be due to the elimination of dairy products in the vegan diet, and therefore lower calcium intake, which in the study was inversely related to uric acid levels. Therefore, it is worth changing the proportions of ingredients in your diet and including more ingredients of plant origin, but you do not have to completely change your menu. However, if you decide to eliminate animal products, remember that it is worth consulting a specialist so that your diet is ideally suited to your needs and preferences.