



## Vegetarian Nutrition

a dietetic practice group of the  
**eat right** Academy of Nutrition and Dietetics  
*Experts in Plant-Based Nutrition*

### RDN Resources for Consumers:

# Misconception Regarding Plant-based Diets

#### **Vegetarian diets should not be used because of high risk of nutrient deficiencies**

Inadequate nutrient intake and/or some nutrient deficiencies, such as vitamin B12, do occur among vegetarians, especially vegans. However, non-vegetarians also ingest inadequate amounts of some nutrients, such as folate, magnesium, and dietary fiber. Intake of these nutrients among non-vegetarians is, in some cases, considerably below recommendations. Thus, nutrient deficiencies are not only a result of adopting plant-based diets.

It is important to keep in mind that, in high-income countries, such as the United States, nutritional deficiencies do not constitute the main cause of mortality or morbidity. Chronic health conditions such as heart disease, cancer, diabetes, or obesity are the main causes of loss of productivity, sickness, and death. These are the very same conditions vegetarian diets are effective in preventing, treating, and, in some cases, reversing.

#### **Plant foods lack essential amino acids**

The myth that individuals adhering to plant-based diets are destined to develop protein deficiency has been around for decades, even though not a single study has ever documented protein deficiency among vegetarians. Plant protein from foods such as wheat, rice, and corn constitute the bulk of total protein intake in hundreds of millions of people from developing countries. Protein deficiency in these individuals occurs only when insufficient amounts of food (calories) are being consumed. Consuming a variety of protein is a key to ingesting the required amounts.

#### **Soybean-based products should not be recommended to girls, boys, and adults**

There are several reasons for the allegations that soybean and soy products should not be consumed, including feminization of boys and men, masculinization of girls, and increased risk of breast cancer. Scientific studies do not support any of the above-mentioned allegations as shown in the following quotes: "... neither soy protein nor isoflavones affect reproductive hormone concentrations in men regardless of age or cancer status;" "An increased incidence of feminization

in male infants or an increased incidence of hypospadias in high soy consuming populations have not been observed;" and "No deleterious effects were discerned in the fetuses of Japanese mothers with relatively high soy consumption."

#### **It is not possible to ingest adequate amounts of calcium on a vegan diet**

Most studies that evaluated calcium intake among vegans did show a lower intake in comparison to lacto- and lacto-ovo-vegetarians and to non-vegetarians; intake was often below Institute of Medicine's Adequate Intake (AI) of 1000 mg/day. However, the lower than AI calcium intake among vegans may not be detrimental and it may be adequate as typical amounts of calcium ingested by vegans is similar to the amount needed to achieve neutral or positive calcium balance.

#### **Plant-based diet are tasteless and boring**

Taste is largely a personal preference. Boredom, when it comes to eating, may indicate lack of a variety in ingested foods. This may reflect individual's creativity in food preparation regardless of the type of a diet a given individual or a household adhere to. Vegetarian and vegan foods include popular dish types, including pizza, pasta, lasagna, burgers, stroganoff, sausages, soups, etc. Vegetarian, including vegan, recipes include international dishes, such as Lebanese, Middle Eastern, Turkish, Mediterranean, Mexican, Indian, French, Polish, Chinese, Thai, Vietnamese, Japanese, Korean, and Ethiopian. Plant-based deserts include ice cream, pies, and cakes. In addition, studies have shown that vegetarians, not just discard meat and, in case of vegans, animal products, but have more variety of plant foods, compared to non-vegetarians.<sup>11</sup> Consistently, it may be possible for plant-based diets to be more diverse compared to non-vegetarian diets.

#### **You cannot be an athlete or build muscles without eating meat. Vegan diet will make you weak**

The above statement is contradicted by the example of hundreds of elite athletes, including world record holders, Olympic and World's gold medalists who are vegetarians or vegans. Some of these individuals not only compete but are considered among the best who have ever competed in given

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sports (e.g. Serena Williams, Novak Djokovic, Carl Lewis). In fact, some of them, such as Carl Lewis, have stated that they achieved the best results after they switched to a vegetarian or vegan diet. Vegetarian and vegan athletes compete in all types of disciplines, including high and ultra-high endurance/strength disciplines.

### **Plant-based diets are not filling enough**

There are a few factors that contribute to satiety. Dietary fiber is one of such factors. All plant foods, unless they are ultra-refined, contain dietary fiber. Thus, plant-based diet that is based largely on unrefined plant foods should be filling.

In one study, eight of 10 food items with the highest satiety index were of plant origin and included grains, fruits, and legumes.

### **Vegetarian diet is too expensive**

The cost of any diet largely depends on the type of foods a person buys and where these foods are purchased. Many inexpensive grain products, beans, vegetables, and fruits are available. Consider how many bananas can be bought for a dollar? How much does it cost to buy a bunch of kale? How much does a honeydew cost (think about how many servings of fruit you get from just one melon)? How much do rolled oats, lentils, or other beans, cost? These are just some of many examples that show that plant-based diets can be inexpensive

or at least that it does not have to be more expensive than meat-based diets. A recent study that assessed the cost of different diet types on a global scale found that, “Variants of vegetarian and vegan dietary patterns were generally most affordable, and pescatarian diets were least affordable.”

It should be remembered that plant-based diets reduce the risk of several chronic health conditions and that these diets may reverse some of these health problems. Thus, even if some individuals spend more money on eating a plant-based diet in a long-term, adhering to such diets will result in substantial savings due to lower healthcare expenditure.

### **It is hard to follow a plant-based diet**

Switching to a vegetarian, especially vegan, diet may be somewhat hard in the beginning. However, plant-based diets are increasingly popular and millions of individuals have done it successfully. As the time goes by, preparing plant-based foods will become easier. Countless plant-based recipes on youtube.com and websites of dozens of support groups are available. Individuals who adopted plant-based diets to deal with specific health conditions found it easier to follow them compared to alternative dietary management.

The content found in this handout is intended for informational purposes only and is not intended to serve as a substitute for the consultation, diagnosis, and/or medical treatment of a qualified physician or healthcare provider. Please use this handout in conjunction with your dietitian.