

**Comments to the 2015 Dietary Guidelines Advisory Committee**

**Submitted by:**

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Thank you for the opportunity to submit comments for the 8<sup>th</sup> edition of *Dietary Guidelines for Americans*.

The Vegetarian Resource Group (VRG) is an independent non-profit organization dedicated to educating the public on vegetarianism and the interrelated issues of health, nutrition, ecology, ethics, and world hunger. In addition to publishing the *Vegetarian Journal*, VRG produces books, pamphlets, and article reprints. Our health professionals, activists, and educators work with businesses and individuals to bring about healthy changes in schools, workplaces, and the community. Registered dietitians and physicians aid in the development of nutrition-related publications and answer questions about the vegetarian and vegan diet. Financial support comes primarily from memberships, contributions, and book sales.

We were extremely impressed with the thoroughness of *Dietary Guidelines for Americans, 2010* and the accompanying *Report of the Dietary Guidelines Committee*. The inclusion of both vegetarian and vegan food patterns provided needed guidance for Americans who choose to eat vegetarian or vegan meals, whether this is done occasionally or every day. The text of the *Guidelines* makes a clear and compelling case for a rapid shift in the American diet to one that is more plant-based. The evidence-based approach used throughout the report allows readers to understand the basis for the recommendations that are made. This is an impressive report and we commend and thank the committee members for their diligence.

We respectfully submit comments and suggestions for the revision of *Dietary Guidelines for Americans*.

**Continue to include detailed, specific information about vegetarian and vegan diets.**

Since the *Dietary Guidelines* were last updated, a number of papers have been published on vegetarian diets. Information from this body of research should be used when updating the sections on vegetarian diets. Examples of relevant information to include:

- A recent meta-analysis that included more than 120,000 study subjects reported a 29% lower risk of death from cardiovascular disease in vegetarians (those eating meat or fish less than once a week) and an 18% lower incidence of cancer overall in vegetarians.<sup>1</sup>
- Vegetarians have a lower risk of hospitalization or death from ischemic heart disease.<sup>2</sup>
- Vegetarian diets are associated with lower blood pressure<sup>3</sup> and a lower risk of having hypertension.<sup>3,4</sup>
- Vegetarians, especially vegans, have a lower risk of developing type 2 diabetes.<sup>5,6</sup>
- A vegetarian diet is associated with a lower risk of developing metabolic syndrome.<sup>7</sup>
- Vegetarians have a lower risk of some cancers than do meat eaters; overall, vegetarians and fish eaters had a lower risk of cancer compared to meat eaters.<sup>8</sup>
- Vegetarians have a lower risk of diverticular disease compared to meat eaters or fish eaters; vegans have an even lower risk.<sup>9</sup>

We encourage the Committee to continue to stress the benefits of plant-based diets, to expand the discussion of benefits of these diets, and to keep the examples of eating patterns for vegetarians and vegans in Appendices 8 and 9.

**Provide specific information about foods to avoid/eat less.**

Figure B2.2. Dietary intakes in comparison to recommended intake levels or limits, in the Report of the Dietary Guidelines Advisory Committee on the Dietary Guidelines for Americans, 2010, contains a listing of both foods and nutrients to eat more of including fruits, vegetables, and whole grains. In contrast, the listing “eat less of these,” focuses on calories from SOFAs, solid fats, and added sugars – substances that may not be as understandable to the public as fatty meats, sweets, cheese, and other dairy products. Clearly indicating **foods** to eat less of would make the *Dietary Guidelines* a more effective tool.

Red meat and processed meats are among the foods that should be clearly identified as foods to avoid/eat less of. Two large epidemiological studies conducted by researchers at the National Cancer Institute and Harvard School of Public Health found strong associations between the amount of red and processed meat consumed and risk of death from cancer or cardiovascular disease.<sup>10,11</sup>

The National Cancer Institute examined more than 500,000 adults and reported that those eating the most red meat and processed meat had the highest risk of dying from cancer and cardiovascular disease as well as having the highest overall mortality. The researchers estimated that 11% of deaths in men and 16% of deaths in women could be prevented by people decreasing their red meat consumption. For women, a marked decrease in red meat or processed meat consumption was estimated to prevent about 1 in 5 deaths from cardiovascular disease.<sup>10</sup>

Similarly, based on data from the Health Professionals Follow-up Study (more than 37,000 male subjects) and the Nurses’ Health Study (close to 84,000 female subjects), the more red meat (including both processed and unprocessed meat) subjects ate, the greater their risk was of dying due to cardiovascular disease or cancer. A one serving per day increase in total red meat consumption was associated with a 16% higher risk of dying of cardiovascular disease and a 10% higher risk of dying of cancer. If only processed meat was examined, a one serving per day increase was associated with a 21% higher risk of dying of cardiovascular disease and a 16% higher risk of dying of cancer. The researchers estimated that if red meat consumption had been limited to less than half a serving per day, 8.6% (men) and 12.2% (women) of deaths from cardiovascular disease during the follow-up period would not have occurred.<sup>11</sup>

In addition to their effects on death from cardiovascular disease and overall cancer, high intakes of red meat and processed meat have also been linked to other conditions including type 2 diabetes,<sup>12</sup> colorectal cancer<sup>13-15</sup> and breast cancer.<sup>16, 17</sup> The World Cancer Research Fund/American Institute for Cancer Research concluded that “The evidence that consumption of red meat and processed meat are causes of colorectal cancer is convincing.”<sup>18</sup>

These results strongly indicate the need for specific, focused guidance for Americans that calls for a reduced intake of both red and processed meat. Interestingly, one group of researchers estimated that if one serving of red meat per day was replaced with a serving of nuts, the risk of type 2 diabetes would be 21% lower; replacing one serving of red meat per day with a serving of whole grains was estimated to reduce the risk by 23%.<sup>12</sup> Close to 2 million new cases of diabetes occur each year in the United States; some of these could be prevented by replacing red and processed meats with plant foods including nuts and whole grains

### **Reconsider the use of 3 cup-equivalents of dairy per day.**

Appendices 7 and 8 call for 3 cup-equivalents of dairy per day for most calorie levels. Appendix 9 includes a vegan “dairy” group which consists of calcium-fortified soy and rice beverages and soy yogurt, and calcium-set tofu. We propose development of meal patterns with appropriate increases in servings of alternative sources of key nutrients commonly found in dairy (e.g. calcium, vitamin D, potassium) such as dark green leafy vegetables, fortified foods, dried beans, and soy products that would provide an alternative for all Americans who do not use 3 cups of dairy or fortified soy products per day.

### **Consider the Impact of Dietary Choices on Food System Sustainability**

We congratulate the Committee on their interest in including information about sustainability in the *Dietary Guidelines for Americans 2015*. Numerous resources have examined diet’s role in greenhouse gas production. One of the first was the Food and Agriculture Organization (FAO) of the United Nations’ 2006 report *Livestock’s Long Shadow*. Livestock production was shown to have a serious effect on land degradation, climate change, air pollution, water shortage and pollution, and the loss of biodiversity. The livestock sector was identified as being responsible for a greater production of greenhouse gas than automobiles and other forms of transportation. Livestock also produce almost two-thirds of ammonia emissions, a significant contributor to acid rain. The report calls for a reduction in “excessive consumption of livestock products among wealthy people.”<sup>19</sup>

Another analysis used the fossil fuel needs for irrigation energy, farm machinery, and labor and considered the production of non-CO<sub>2</sub> greenhouse gases methane and nitrous oxide resulting from animal waste in evaluating various diets’ environmental impacts. Animal-based diets, whether based on red meat, fish, poultry, or dairy products and eggs resulted in a higher greenhouse burden than did vegan diets. The difference in greenhouse gas production between eating approximately 20% of calories from animal products (which is a lower level of animal product use than the typical American diet) and a vegan diet is roughly equivalent to the difference between driving a Camry and a Prius. If one chooses a diet high in red meat and animal products (35% of calories from animal products), the difference in greenhouse gas production between this type of diet and a vegan diet is equivalent to the difference between driving an SUV and driving a Camry.<sup>10</sup>

An advisory committee in the United Kingdom created three possible scenarios for dietary changes that could reduce greenhouse gas emissions.<sup>21</sup>

- Scenario 1 called for a 50% reduction in consumption of meat and dairy products and an increase in fruits, vegetables, and cereals. This was estimated to reduce greenhouse gas emissions by 19% and to result in 36,910 deaths per year being delayed or averted due to the healthier nature of the diet.
- Scenario 2 called for a 75% reduction in use of cow and sheep meat and replacing these foods with chicken and pork. This was estimated to reduce greenhouse gas emissions by 9% and to delay or avert 1999 deaths per year.
- Scenario 3 called for a 50% reduction in use of meat from pigs and chickens and replacement of those foods by fruits, vegetables, and cereals. This was estimated to reduce greenhouse gas emissions by 3% and to result in 9297 deaths per year being delayed or averted.

Another group in the United Kingdom created six scenarios based on typical UK eating habits with modifications in the types of foods but no change in the calorie level and estimated the impact that each scenario would have on greenhouse gas emissions.<sup>22</sup>

- In scenario 1, meat was directly replaced with dairy products. This change was estimated to reduce greenhouse gas emissions by 22% but resulted in a higher fat diet.
- Scenario 2 was developed to be similar to the diet of a typical vegetarian in the UK. A change to this scenario would result in an 18% reduction in greenhouse gas emissions.
- Scenario 3 replaced meat with grains, fruits, vegetables, nuts, seeds, and dried beans. Dairy product consumption was unchanged. Greenhouse gas emissions would be 25% lower with this scenario compared to the typical UK diet.
- Scenario 4 replaced meat and dairy products with a mixture of healthy and unhealthy plant-based foods (sweets, alcohol, soft drinks, etc.). This scenario was estimated to reduce greenhouse gas emissions by 31% but was also higher in sugar and was not believed to be a health-promoting diet.
- Scenario 5 was similar to the diet of a typical vegan in the US. Greenhouse gas emissions would be about 23% lower.
- Scenario 6 replaced meat and dairy products with grains, fruits, vegetables, nuts, seeds and dried beans. Greenhouse gas emissions would be about 25% lower. In addition, this scenario is lowest in fat and sugar.

On average, changing from a nonvegetarian to a vegetarian diet could reduce greenhouse gas emissions by 22% (average of scenarios 1-3). Changing from a nonvegetarian to a vegan diet was estimated to reduce greenhouse gas emissions by 26% (average of scenarios 4-6). Any of these changes would be less expensive than the average diet in the UK and would have adequate protein. Scenarios 3 and 6 would offer significant health benefits including a lower fat content and greater use of fruits, vegetables, beans, and grains. Further modifications to scenario 6 including use of more local, in-season produce and reduction of unnecessary packaging might lead to reductions in greenhouse gas emissions in excess of 50% compared with a current “typical” UK diet, according to the study’s authors.<sup>22</sup>

Analyses similar to these should be conducted in the United States so that dietary recommendations can be developed that represent best practices with regards to both the environment and health.

Thank you for the opportunity to provide comments.

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