

## Factsheet: Veganism

### How do you obtain all the nutrients from a vegan diet that are important to lead exposed individuals?

By Rose Lennon, B.A. UNSW, March 2010



Photo: Title: Backyard vegies.

*Lead-Safety Message: These backyard vegies are organic and lead-free. Are yours?  
A winning entry in the 2013 Volcano Art Prize by Photographer: Gabriel Anderson.*

#### **What is Veganism?**

Veganism is a lifestyle that aims to eliminate exploitation of, and cruelty to, animals, as much as is practically possible<sup>1</sup>. Vegans eat a plant-based diet. They do not consume or use any animal products, such as meat, dairy, eggs, honey, leather, wool, feathers, lanolin, and beeswax. In addition, vegans avoid supporting products and services that

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<sup>1</sup> 'Who we are', *The Vegan Society*, accessed 15 March 2010, <http://www.vegansociety.com/about/who-we-are.aspx>.

involve the exploitation of animals, such as animal circuses and toiletries that were produced with the assistance of vivisection.

### **Why vegan?**

The main reasons for becoming vegan are ethical concerns against animal cruelty and animal exploitation. Other ethical motivations include the environmental degradation caused by factory farming practices and raising livestock for human consumption<sup>2</sup>. Health reasons may also be a factor for choosing a vegan diet.

### **An important note**

Please keep in mind that while the information presented in this factsheet has drawn upon the suggestions of various accredited dieticians it should not be considered medical advice. If you are considering a vegan diet based on any information in this factsheet, then please refer to an accredited practicing dietician or medical specialist for confirmation of your own specific nutritional needs.

### **Variety**

While this factsheet focuses on specific nutrients relevant to lead levels in the body and the vegan diet, this is not to suggest that these particular nutrients are more important than others are. Rather, this factsheet hopes to promote a varied, whole-foods diet, which when planned properly should ensure a good coverage of all nutrients.

### **Calcium**

Vegetarian diets tend to be more alkaline, while diets that focus on animal-sourced food (i.e. meat, dairy, eggs etc) are usually more acidic<sup>3</sup>. Calcium balance is generally better supported by plant-based diets as fruits and vegetables produce an alkaline ash<sup>4</sup>. A diet high in protein and sodium can contribute to leaching of calcium from the body<sup>5</sup>. For example, consuming 1gm of protein is equal to losing 1mg of calcium through urine, while consuming 1gm of sodium can result in the body losing 23-26mg of calcium<sup>6</sup>. Try to spread your calcium intake throughout the day, as this allows your body to absorb calcium more efficiently<sup>7</sup>.

### **Vitamin D**

Vitamin D is important for calcium absorption<sup>8</sup>. It can be produced in the body through exposure to UV rays/sunlight, preferably on the arms and legs for approx 10-15 minutes,

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<sup>2</sup> H Steinfeld, P Gerber, T Wassenaar, V Castel, M Rosales & C de Haan, *Livestock's long shadow: environmental issues and options*, FAO, 2006, Rome, accessed 15 March 2010, <http://www.fao.org/docrep/010/a0701e/a0701e00.htm>.

<sup>3</sup> B Davis & V Melina, *Becoming vegan: the complete guide to adopting a healthy plant-based diet*, Book Publishing Company, Summertown, 2000, p. 94.

<sup>4</sup> *ibid.*

<sup>5</sup> 'Where do I get my calcium if I don't drink cow's milk?', *Vegetarian Food for Thought*, podcast, presented by Colleen Patrick-Goudreau from Compassionate Cooks, 18 March 2006, <http://feeds.feedburner.com/VegetarianFoodForThought>, accessed 15 March 2010.

<sup>6</sup> Davis & Melina, *Becoming vegan*, pp. 93-94.

<sup>7</sup> *ibid.*, p. 97.

<sup>8</sup> *ibid.*, p. 98.

although a longer amount of time may be required for those with darker skin and the elderly<sup>9</sup>. If using supplements and vitamin D fortified foods, vegans will need to ensure they take vitamin D<sub>2</sub>, which is usually sourced from yeast, while avoiding the animal-derived D<sub>3</sub><sup>10</sup>.

### **Iron**

Worldwide, iron deficiency is one of the most common nutrient deficiencies among both vegetarians and omnivores<sup>11</sup>. Eat iron-rich foods, in conjunction with Vitamin C to aid iron absorption<sup>12</sup>. Try to avoid consuming black or green tea, coffee, or dairy at the same time as main meals as these foods can inhibit iron absorption<sup>13</sup>.

### **Vitamin B12**

Vegans must get their B12 through fortified foods and supplements<sup>14</sup>. Those over the age of 50 (including omnivores) may have trouble absorbing B12 from their normal diet and may need to use a B12 supplement or include some B12 fortified foods into their diet<sup>15</sup>.

### **Omega-3 Fatty Acids**

The most important where nutrition is concerned are Alpha-linolenic acid (ALA), Docosahexaenoic acid (DHA), and Eicosapentaenoic acid (EPA)<sup>16</sup>. Humans cannot produce ALA themselves and therefore are reliant on their diet for sufficient intake. ALA can be found in dark green leafy vegetables, broccoli, seaweeds, flax seeds, walnuts, soybeans, and the oils of some of these foods, for example, flax seed oil<sup>17</sup>. Humans can convert ALA into DHA and EPA, although it is generally recommended that for those who do not eat dairy, eggs, or fish that have fed on microalgae, that they also incorporate DHA supplements or fortified foods into their diet<sup>18</sup>.

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<sup>9</sup> J Norris, 'Bones, vitamin D, and calcium', *VeganHealth.org*, December 2009, accessed on 15 March 2010, <http://www.veganhealth.org/articles/bones/>.

<sup>10</sup> *ibid.*

<sup>11</sup> 'An essential mineral: iron', *Vegetarian Food for Thought*, podcast, presented by Colleen Patrick-Goudreau from Compassionate Cooks, 29 January 2007, <http://feeds.feedburner.com/VegetarianFoodForThought>, accessed 15 March 2010.

<sup>12</sup> V Messina, 'Vegetarian nutrition', *Vegetarian diets: a dietician's guide*, 2010, accessed on 15 March 2010, <http://www.vegnutrition.com/nutrition/index.html>.

<sup>13</sup> *ibid.*

<sup>14</sup> *ibid.*

<sup>15</sup> J Norris, 'Special concerns for those over 50', *VeganHealth.org*, 2009, accessed on 15 March 2010, <http://www.veganhealth.org/b12/older>.

<sup>16</sup> R Mangels, 'Questions and answers about omega-3 fatty acids for vegans', *Vegetarian Journal*, vol. 26, no. 1, 2007, p. 22, accessed 15 March 2010, <http://www.vrg.org/journal/vj2007issue1/vj2007issue1.pdf>.

<sup>17</sup> Davis & Melina, *Becoming vegan*, p. 66.

<sup>18</sup> Mangels, 'Questions and answers about omega-3 fatty acids for vegans', pp. 22-23.

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10. *ibid*
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