FN-AP.041



# Vegetarian 101: History, Health and Tips

Every day we make choices about what we will eat. Some of us choose foods without much thought. Others make choices based on their health goals. For those electing a plant-based eating pattern, choices might range from foods with no animal connections (vegan) to those with mostly plant-based foods and minimal animal connections (flexitarian and vegetarian). This publication focuses on vegan (no animal products) and vegetarian (no animals harmed for the food) eating patterns.

# **History**

Vegetarianism can be traced through history to the Greeks who ate plant-based diets. Many believed they would lead a longer life. The term vegetarian, however, was first used only a few hundred years ago.

In the 1800s vegetarianism found new life in Great Britain and the United States with religious organizations leading the way. The first vegetarian society was formed in Ramsgate, England, in 1847. Three years later, William Metcalfe, Sylvester Graham, William Alcott and Russell Trall formed the American Vegetarian Society in New York City.

Ellen White, founder of the Seventh-day Adventists, converted to a vegetarian diet in 1864. John Harvey Kellogg, another Seventh-day Adventist, was the chief physician at the Western Health Reform Institute of Battle Creek which he later renamed the Battle Creek Sanitarium. The



sanitarium featured a menu of nuts, seeds, whole grains, fruits and legumes. Today, a number of religions, including Seventh-day Adventists, follow vegetarian or vegan diets.

Upton Sinclair depicted unsanitary practices in the meat-packing industry in his novel *The Jungle*. This novel not only spurred the creation of the U.S. Food and Drug Administration and the Pure Food and Drug Act in 1906, but also prompted many readers to stop eating meat.

In the 1960s and 70s, vegetarianism saw a revival with a focus on the environment, science, and morality. Today, vegetarians from all segments of the world's population



# **Definitions**

The term vegetarian can be difficult to define. As a general guide, vegetarians eat a plant-based diet that includes foods such as milk and eggs — foods made by animals but that do not involve harming the animal.

**Vegetarians** enjoy a plant-based diet that does not include the flesh of any animal. Vegetarians generally eat foods produced by animals including honey, milk and eggs.

**Vegans** abstain from eating animalderived products including meats, dairy items, honey and eggs. Most also will not use any animal products including leather, wool and silk.

**Lacto-ovo vegetarians** enjoy a plant-based diet that includes dairy products and eggs.

Lacto vegetarians consume dairy products but no eggs.

**Ovo vegetarians** enjoy eggs but no dairy products.

There are other definitions associated with vegetarianism that include more and less restrictive eating patterns. These include "pescatarian" (those who eat fish and seafood), "pollotarian" (those who do not eat red meat) and "flexitarian" or "semi-vegetarian" (those who usually eat a plant-based diet but who also include lean meats, poultry and

can be found following their dietary beliefs for many reasons. It is estimated that about 5 percent of those living in the United States consider themselves vegetarians while fewer than 3 percent are vegans.

# Reasons for a Vegetarian or Vegan Lifestyle

We choose what to eat for many reasons, including taste, availability, what we grew up eating and how much money we have to spend on food. Ethics, personal health and environmental concerns are named most frequently as reasons for choosing a vegetarian or vegan lifestyle. Other reasons may include financial and religious.

No matter the reason there are some benefits and challenges to following a vegetarian or vegan diet. The more restrictive the diet, the more challenges and potential nutritional concerns and individual will face.

#### **Health Benefits**

Usually, vegetarian diets are lower in fat, saturated fat and cholesterol. Colorful fruits and vegetables are nutritious. Dry beans are high in protein and fiber. Any diet can be unhealthy if poor food choices are made.

Vegetarians might see the following health benefits:

- Lower death rates from coronary heart disease.
- Lower LDL (bad) cholesterol and higher levels of HDL (good) cholesterol.
- Lower average blood pressure.
- Lower incidence of type 2 diabetes.
- Lower death rates from colon cancer.
- Less constipation and diverticular disease.

## **Possible Nutrient Challenges**

All humans need carbohydrates, protein, fats, vitamins, minerals and water to survive and thrive. These nutrients come from the foods we eat.

Some needed nutrients are more readily available in foods from animals. However, vegetarians, especially vegans who are aware of possible nutrient challenges, may find foods and ways to maintain their health with a diet featuring the right combination of foods. Vegetarians, and especially vegans, should be aware of their intake of several key nutrients, including vitamin B12, calcium, iron, protein, zinc and omega-3 fats.

Vitamin B12 is needed for the formation of red blood cells, healthy brain function and a healthy nervous system. It comes mainly from animal-derived foods including eggs and dairy products. Those who do not eat eggs or dairy may obtain vitamin B12 from fortified cereals, nutritional yeast, soy milk and some soy products.

Calcium is used in the body for muscle contraction and strong bones. Calcium is readily available in many dairy products and many milk substitutes. It also is found in leafy greens, including collards and kale. Other good food sources include calcium-fortified 100 percent fruit juices and tofu made with calcium sulfate.

Iron carries oxygen in our blood and plays a role in resistance to infections. We easily absorb iron from animal sources. Vegetarians, specifically vegans and other strict vegetarians, may obtain iron from fortified cereals, beans, spinach, chard, blackstrap molasses, bulgur and dried fruits.

Protein may or may not be a concern for vegetarians. Generally, most Americans consume adequate protein. It is needed for cell repair, growth and overall health. Protein is found in eggs and dairy products. Other sources include dry beans, nuts and tofu.

Vitamin D helps move calcium into the bones. It is commonly added to milk. Those who do not consume milk may look to non-dairy beverages fortified with vitamin D. Vitamin D also may be made by the body with adequate exposure to sunlight.

Zinc is a mineral important for insulin activity, growth, wound healing and our ability to taste. It is readily found in meats, especially red meats. Vegetarians may choose wheat germ, eggs, zinc-fortified cereals, beans, lentils, nuts, whole-grain cereals, dairy products and yeast for their source of zinc.



Omega-3 fatty acids are essential nutrients that our bodies cannot make. They are required for heart and brain health. Vegetarians are especially challenged to get adequate amounts of omega-3 fats that are easily used by the body. Fatty fish provide DHA — the type of omega-3 fatty acids most readily used by the body. Plants provide ALA omega-3s, a type that must be converted by the body to a more usable form. It is difficult for the body to convert ALA omega-3s. Good sources of ALA omega-3 fats are chia seeds, pumpkin seeds, flax seeds. soybeans and walnuts. Vegetarian supplements of omega-3 fats are available and may be a topic to discuss with your healthcare provider.

#### **Fake Meats**

"Fake meats" or meat substitutes are available in many grocery stores. Many are made to look like the meat or product they are substituting. Products include tofu dogs, tofu turkey, soy bacon, and vegetarian crumbles. Many meat substitutes are made with tofu, or textured vegetable or soy protein (TVP or TSP). Read the nutrition label to ensure the products provide the desired nutrition. Many products are high in

sodium. Better choices are those that contain no more than 350 mg sodium per serving. Some meat substitutes are high in saturated fat. Saturated fat is known to contribute to heart disease. Look for products with no more than 10 % DV (daily value) of saturated fat per serving. Also, look to see whether the meat substitute has added vitamins and minerals, such as zinc and vitamin B12 — the ones most often lacking in the vegetarian or vegan diet.

Enjoyable food textures are a personal preference. Different brands of similar products of meat substitutes may have different flavors and textures. Be sure to follow the cooking instructions provided with the product. Undercooking may lead to foodborne illness while overcooking may result in something dry, tough, chewy and inedible.

# Eating Vegetarian and Vegan Away from Home

Following an eating plan at home, where food purchasing and preparation readily are controlled, makes being a vegetarian or vegan easier. When away from home, there may be challenges.



If dining at someone's home it is best to let your host know your dietary restrictions well ahead of time. Always offer to bring a dish to add to the meal to help relieve stress on the host or hostess. When dining at a restaurant, do research ahead of time. Don't be afraid to ask questions about preparation methods or techniques. Some restaurants will accommodate reasonable requests.

## **Moving Toward a Plant-Based Diet**

Those who wish to move toward a plant-based diet may be overwhelmed with the idea. In reality, it may not be that difficult. Determine your goals and why you want to adopt a vegetarian or vegan lifestyle. You might start with eating one vegetarian or vegan meal a week. Consider the foods you currently enjoy that have no meat or meat products in them. Hummus, macaroni and cheese, pesto sauce and other foods may already be in your eating plan and may be vegetarian or vegan.

Simple changes may often be made to favorite recipes to make them vegetarian or vegan. Instead of choosing beef or chicken broth for your vegetable soup, choose vegetable broth or tomato juice. Select fatfree or vegetarian refried beans. Use

seasoned black or pinto beans instead of chicken or beef. Spice up red beans and

rice instead of choosing meatladen jambalaya. Add nuts and seeds to your favorite salad to add protein and crunch.



## Summary

There are benefits and challenges for those choosing to follow a plant-based vegetarian diet. Awareness, research, experimentation and knowledge of your goals and reasons will help guide your food choices. Making small changes over time can help you move toward a more plant-based diet.

#### Resources

Avey, T. (28 January 2014). From Pythagorean to Pescatarian – The Evolution of Vegetarianism. The History Kitchen retrieved February 19, 2015 at <a href="https://www.pbs.org/food/the-history-kitchen/evoluation-vegetarianism/">www.pbs.org/food/the-history-kitchen/evoluation-vegetarianism/</a>.

Gustafson, N. (April 2007). Vegetarian Nutrition, Ashland, OR: Nutrition Dimension.

Hunt, JR. (September 2003). Bioavailability of iron, zinc, and other trace minerals from vegetarian diets. *Am J Clin Nutr. Vol. 78 no. 3 633S-639S.* Retrieved February 19, 2015 from <a href="http://ajcn.nutrition.org/content/78/3/633S.long.">http://ajcn.nutrition.org/content/78/3/633S.long.</a>

McBride, J. (March 1998). Vegetarians, Watch Your Zinc. *Agriculture Research*. Retrieved February 19, 2015 from <a href="http://www.ars.usda.gov/is/ar/archive/mar98/zinc0398.pdf">http://www.ars.usda.gov/is/ar/archive/mar98/zinc0398.pdf</a>.

Melina, V. & Davis, B. (2003). <u>The New Becoming Vegetarian</u>. Summertown, TN: Healthy Living Publications.

Moore, M. (July/August 2013). Counseling a Conscious Choice. Food & Nutrition. 12-13.

The Vegetarian Resource Group at <a href="http://www.vrg.org/">http://www.vrg.org/</a>.

Vannice, GK. (2011). Omega-3 Handbook: A Ready Reference Guide for Health Professionals. Portland, OR: Omega-3 RD™.

Vegetarian Diets: Build on the Basics (Revised May 2008). *Arizona Cooperative Extension, AZ1231*. Retrieved February 19, 2015 from <a href="http://extension.arizona.edu/sites/extension.arizona.edu/files/pubs/az1231.pdf">http://extension.arizona.edu/sites/extension.arizona.edu/files/pubs/az1231.pdf</a>.

Vegetarianism in a Nutshell (n.d.). *The Vegetarian Resource Group*. Retrieved February 19, 2015 from http://www.vrg.org/nutshell/nutshell.htm#what.

Veganism in a Nutshell (n.d.). *The Vegetarian Resource Group.* Retrieved February 19, 2015 from http://www.vrg.org/nutshell/vegan.htm.

Vitamin B12 Information Sheet (n.d.). *Vegetarian Society*. Retrieved February 19, 2015 from <a href="https://www.vegsoc.org/B12">https://www.vegsoc.org/B12</a>.

Photos: 123RF.com

University of Kentucky College of Agriculture, Food and Environment

Family and Consumer Sciences Extension

Diane M. Mason, M.S., R.D., L.D. Boone County Extension Agent for Family and Consumer Sciences

Janet T. Mullins, Ph.D., R.D., L.D. Extension Specialist for Food and Nutrition

**April 2016** 

COOPERATIVE EXTENSION SERVICE



Copyright © 2016 for materials developed by University of Kentucky Cooperative Extension. This publication may be reproduced in portions or its entirety for educational or nonprofit purposes only. Permitted users shall give credit to the author(s) and include this copyright notice.

Educational programs of the Kentucky Cooperative Extension serve all people regardless of race, color, age, sex, religion, disability, or national origin.