## You Should Know

## **Vegetarian vs. Vegan Diets**

EN explores the differences between these diet patterns.

Plant-based diets are growing in popularity, as people look to gain health and environmental benefits. According to the Vegetarian Resource Group, 3.3 percent of the population is vegetarian, and about half of those are vegan. Younger adults (18-34 years) have the highest rate of vegetarianism (5.3 percent), suggesting continued growth on the horizon. So, what is the difference between these two eating styles? Though many people have their own personal interpretation and adherence, here are the basics.

Vegan Diet. A vegan diet excludes all animal foods, including animal flesh, dairy products (cheese, milk, yogurt, butter), eggs, and honey. While many foods such as milk, yogurt, and meat are obviously non-vegan, there are many hidden animal ingredients in foods, such as supplements, sauces, baked goods, and processed foods. Vegans may also avoid products associated with animals beyond the dinner plate, including clothing, accessories, and

cosmetics that are made with animal products such as leather, silk, or wool.

restaurant menus.

Kale, mustard greens, and

spinach are packed with

vitamin K.

such as leather, silk, or wool.

Wegetarian Diet. A vegetarian diet typically refers to a lacto-ovo vegetarian diet, which means a diet that excludes all animal flesh, but allows for dairy products and eggs. Hence, this eating pattern and lifestyle is less restrictive than a vegan

diet, though it still may require attention

to ingredients lists on food products and

The Benefits. It has become increasingly clear that vegetarian and vegan diets offer many benefits. The evidence is so solid that the Dietary Guidelines 2015-2020 suggests a vegetarian-style eating pattern as one of three diet patterns for optimal health. And the Academy of Nutrition and Dietetics reports that these diets, when appropriately planned, are

## **Vegetarian and Vegan Nutrients of Concern**

Pay attention to these nutrients of concern and sources.

	VITAMIN B <sub>12</sub>	VITAMIN D	CALCIUM	IRON	ZINC
Vegan Food Sources	Foods fortified with B <sub>12</sub> , supplement recommended	Fortified plant milks, mush- rooms exposed to light, mod- erate sunlight exposure	Fortified plant milks, tofu, kale, almonds, broccoli	Whole grains, beans, green leafy vegetables, tofu, tomatoes	Oats, tofu, cashews, beans, nuts, tempeh, broccoli,
Vegetarian Food Sources	Eggs, milk, cheese, yogurt	Fortified milk and yogurt, eggs	Milk, yogurt, cheese	None in addi- tion to above	Milk, yogurt, cheese
Note: Vegetarian choices may also include yegan options listed.					

appropriate for all ages and may reduce the risks of chronic disease and obesity.

The Adventist Health Study 2 compared five diet patterns (non-vegetarian, semi-vegetarian, pescatarian, vegetarian, and vegan) among 96,000 participants, discovering that, overall, the more plantbased the diet, the greater the benefit for conditions like body weight; blood cholesterol, insulin, blood pressure, and inflammation levels; and risks of cancer, heart disease, type 2 diabetes, and mortality. There were even environmental benefits; vegetarians had a 28 percent lower carbon footprint than non-vegetarians, and vegans had a 42 percent lower carbon footprint. The bottom line: go plant-based and reap the rewards.

—Sharon Palmer, RDN

## **Vitamin K Update**

Important for blood and bone health, green leafy vegetables are a rich source of this vitamin.

Discovered in the early 1930s, vitamin K was given its name "K" after the first letter of the German word "koagulation," due to its blood clotting effects. Since then, our knowledge base has expanded on this essential micronutrient.

What It Is. Vitamin K is a fat-soluble vitamin that comes in two forms. Phylloquinone (K1), found in plants, provides most of the vitamin K in our diets. Menaquinones (K2) is a group of compounds found mostly in fish, oils, and meats, and is also made by gut bacteria.

What It Does. Vitamin K is important in blood clotting; it acts as a coenzyme in the production of prothrombin and assists in the creation of three more proteins needed for the process. In addition,

vitamin K is essential in building bones because the body cannot utilize calcium without it. Researchers are investigating a possible link between vitamin

K deficiency and

an increase in bone

fractures, osteoporosis, and lower bone mass density. And vitamin K may also help to prevent calcification of blood vessels and loss of vessel elasticity.

Where to Find It. The best food sources of vitamin K overall are vegetable oils (i.e., soybean, canola, and olive), liver, and leafy green vegetables, such as kale, greens, and spinach. Meat, dairy, and eggs contain low amounts of vitamin K1, but slightly higher amounts of vitamin K2. Vitamin K1 is generally included in multivitamins, but is also available as its own supplement, usually

combined with calcium, magnesium, or vitamin D.

How to Fit It In. Typical intakes of vitamin K in the U.S. meet recommended levels (120 micrograms per day for men age 19 and older, and 90 mcg for women). Certain medications can interact with vitamin K. Long-term use of antibiotics can kill beneficial bacteria that make vitamin K in the gut. The weight loss drugs Orlistat or Olestra, and the cholesterol-lowering bile acid sequestrants Choletryamine, Colestipol, and Colsevelam can block fat absorption, creating a potential for vitamin K deficiency since it is fat-soluble. Individuals taking the blood thinners Warfarin or Coumadin should make sure vitamin K intake stays consistent, as too much can block the effects of blood thinners. Aside from medications, lack of absorption can be caused by hemodialysis or certain conditions, such as gallbladder, biliary, liver, celiac, and Crohn's disease. In these instances, supplementation may be recommended by your health care provider.

—Esther Ellis, MS, RD, LDN