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NEWSLETTER



Roasting veggies, Photo by Judy Doherty

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- What Is A Vegan Diet
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- Vegan Diet Replacers
- Going Vegan With MyPlate
- Easing Into A Plant Based Diet
- Melatonin, Kids, and Sleep (4 pages)

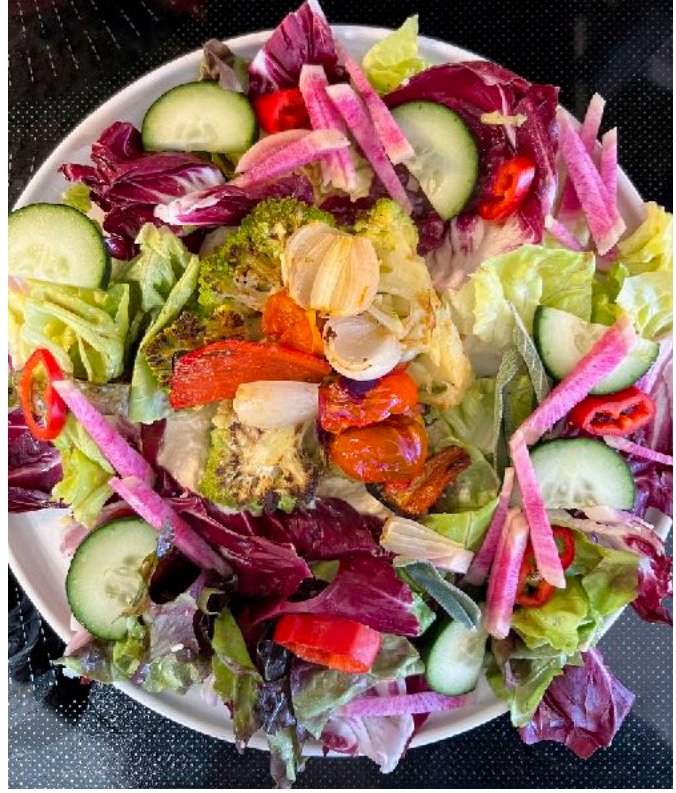
Research Corner:

- Vegan Diet Improves Cardiovascular Health

Editor's Note:

This issue pairs research on reducing cardiovascular disease through a plant-based diet with fun tips to changing to one plus answering questions about melatonin and sleep. Enjoy!

-- Judy Doherty, MPS,
PC II



Roasted Veggie Hummus Bowl

INGREDIENTS

- 1 head of cauliflower or romanesco, sliced lengthwise in 4 slices
- 1 bell pepper, remove seeds, and cut into thick strips
- 1 cup cherry tomatoes cut in half
- 1 small onion cut into slices
- 1 tablespoon olive oil
- pinch paprika
- 1 tsp cracked pepper
- 2 tsp Italian seasoning
- 4 cups lettuce
- 2 cups sliced cucumbers
- 1 cup sliced radishes
- 4 tablespoons light salad dressing

INSTRUCTIONS

1. Place the cauliflower or romanesco in an oven-proof skillet with the peppers, tomatoes, and onions. Sprinkle with olive oil and seasonings. Bake at 400 degrees for 15 minutes, turning the veggies once or twice. They are done when browned and crisp-tender.
2. Place the hummus in the center of 4 large plates. Surround it with the lettuce, radishes, and cucumbers.
3. Place the roasted veggies in the center of the plates on top of the hummus.
4. Sprinkle each plate with one tablespoon of light dressing.
5. Serve immediately. It is nice to have a lemon wedge and whole wheat pita half on the side of each plate as a garnish.

Serves 4. Each 1 cup serving: 168 calories, 9 g fat, 1.4 g saturated fat, 0 mg cholesterol, 0 mg trans fat, 164 mg sodium, 19 g carbohydrates, 6 g fiber, 9 g sugar, 5 g protein.



Buffalo Chili

Ingredients:

- 1 tablespoon olive oil
- 1 onion, chopped
- 2 cloves garlic, minced
- 8 ounces buffalo stew meat, cut in small pieces (or lean meat or poultry)
- 2 cans pinto beans, drained
- 1 can crushed tomatoes, no salt added
- 1 large red yam, cut in cubes
- 2 cups vegetable or beef broth, low sodium
- 2 tsp ground cumin
- 2 tsp chili powder
- 1 tsp oregano
- 1 tsp garlic powder
- 1 tsp red pepper flakes
- 1 tsp paprika
- 1 sprig parsley
- Garnish: 1/2 cup shredded cheddar
- Garnish: 1/2 cup diced raw onion or green scallion
- Garnish: 4 tsp sour cream

Directions:

1. Place the olive oil in a Dutch oven pan. Sauté the onions and garlic.
2. Add the buffalo or lean beef and brown briefly.
3. Add the drained canned pinto beans, diced sweet potato, canned tomato, broth, and seasonings. Bring to a boil, then cover and lower to a simmer. Stir occasionally. Cook for 15-20 minutes or until the meat is tender up to 45 minutes.
4. Serve in 4 bowls. Garnish with cheese, sour cream, and onion.

Serves 5. Each 1 cup serving: 440 calories, 11 g fat, 4 g saturated fat, 41 mg cholesterol., 0 g trans fat, 350 mg sodium, 61 g carbohydrate, 14 g fiber, 26 g protein.

Melatonin Use Increasing in Children and Teens

Insomnia doesn't just impact CEOs of big companies or parents of newborns. A new study from the University of Colorado at Boulder finds that nearly 20% of school-aged kids and preteens now use melatonin for sleep. In addition, some parents consistently provide the hormone to preschoolers, according to a new study published in the November 13th issue of *JAMA Pediatrics*.



Dietary supplements lack Food and Drug Administration (FDA) regulation, which concerns the researchers as the safety and efficacy of using these products are also limited.

Lead author Lauren Hartstein, PhD, a postdoctoral fellow in the Sleep and Development Lab at CU Boulder, notes, "We hope this paper raises awareness for parents and clinicians and sounds the alarm for the scientific community. We are not saying that melatonin is necessarily harmful to children. But much more research needs to be done before we can confidently state that it is safe for kids to take long-term."

Calls to Poison Control Centers on the Rise

The pineal gland produces melatonin naturally and tells the body that it's time to sleep and manage its circadian rhythm- the physiological cycle over 24 hours.

The hormone is classified as a medication in many countries and is available by prescription only.

Yet, chemically created or animal-based melatonin is available over the counter as a dietary supplement in the US. It's also increasingly available in kid-friendly gummies.

Melatonin Use Increasing in Children and Teens

Hartstein, who studies how environmental cues, including light at night and children's sleep quality and melatonin production, notes, "All of a sudden, in 2022, we started noticing many parents telling us that their healthy child was regularly taking melatonin".

Between 2017 and 2018, roughly 1.3% of parents in the US reported that their children used melatonin.

Hartstein and colleagues questioned nearly 1,000 parents in the first half of 2023 to evaluate the current prevalence of melatonin use.

18.5% of children between the ages of 5 and 9 surveyed had been given melatonin in the past 30 days. In preteens between the ages of 10 and 13, the number increased to 19.4%. Almost 6% of preschoolers between the ages of 1 and 4 had been given melatonin in the previous month.

Grade-school-aged kids and preteens have used melatonin for an average of 18 and 21 months, while preschoolers who used it had been using it for roughly one year.

The dosage increased with the age of the child, with preschoolers using between 0.25 to 2 mg and preteens using up to 10 mg.

Caution Advised

A study published in April 2023 analyzed 25 gummy melatonin products and found that 22 contained various amounts of melatonin compared to what the label stated. One supplement contained over three times the amount on the label, while one had none at all.

Additionally, some melatonin supplements have been discovered to contain other substances of concern, including serotonin.



Melatonin Use Increasing in Children and Teens

Harstein is concerned that, "Parents may not actually know what they are giving to their children when administering these supplements,"

Other researchers are concerned that giving melatonin to children whose brains and bodies are still growing could impact the timing of the onset of puberty.

Inconsistent results have been seen in a few small-scale human studies investigating this.

Another concern is gummies, as they look and taste like candy. The authors note that from 2012 to 2021, reports of melatonin ingestion to poison control centers were up 530%, primarily in children under age 5. Over 94% were unintentional, and 85% were asymptomatic.

A Place for Appropriate Use

According to co-author Julie Boergers, Ph.D., a psychologist and pediatric sleep specialist at Rhode Island Hospital and the Alpert Medical School of Brown University, **"when used under the supervision of a health care provider, melatonin can be a useful short-term aid, particularly in youth with autism or severe sleep problems.**

"But it is almost never a first-line treatment," she said, noting that she often recommends that families look to behavioral changes first and use melatonin only temporarily. "Although it's typically well-tolerated, whenever we're using any kind of medication or supplement in a young, developing body, we want to exercise caution."

Her patient's parents have noted that the supplement typically works well in the beginning, but over time, kids may require higher doses to get the same effect.

Harstein warns that using melatonin early in life could also have another unintended consequence. It could send a message that if you have trouble sleeping, pills are the answer.

According to the authors, this study was small and doesn't necessarily represent nationwide usage.

However, "If this many kids are taking melatonin, that suggests there are a lot of underlying sleep issues out there that need to be addressed," Hartstein said. "Addressing the symptom doesn't necessarily address the cause."

Natural ways to improve sleep in children and preteens:

- Set a **consistent** bedtime schedule, even on weekends.
- Encourage a **regular wake-up time** during the week and also on weekends.
- **Reduce screen time**, especially at night before bedtime.
- **Avoid caffeine consumption**, mainly after 2 PM.
- Teach children ways to **relax**, such as meditation or deep breathing.
- Encourage regular **exercise** and getting **outside**, which aid in regulating the circadian rhythm
- **Avoid stressful discussions** or arguments right before bed
- Ask your **doctor** about using melatonin or other sleep aids before using them.

Reference:

1. Lauren E. Hartstein et al. **Characteristics of Melatonin Use Among US Children and Adolescents**. *JAMA Pediatrics*, 2023 DOI: [10.1001/jamapediatrics.2023.4749](https://doi.org/10.1001/jamapediatrics.2023.4749)



What Is A Vegan Diet?

A vegan diet is a type of vegetarian diet that excludes all forms of animal products, both meat and other animal-derived ingredients. People who follow a vegan diet, known as vegans, abstain from consuming meat, poultry, fish, dairy products, eggs, and honey. Additionally, they avoid other animal-derived ingredients in food like sugar and honey, as well as in other products like clothing and cosmetics.

A well-planned vegan diet can be nutritionally adequate and may offer health benefits such as lower risk of heart disease, certain cancers, and type 2 diabetes. However, it's essential for vegans to pay attention to key nutrients like vitamin B12, iron, calcium, and omega-3 fatty acids, ensuring they get an adequate intake through food or supplements.

Here are some key components of a vegan diet:

1. Plant-Based Foods:

- **Fruits and Vegetables:** A variety of fruits and vegetables provide essential vitamins, minerals, and antioxidants. Here is where the vegan diet excels because there are so many fruits and vegetables available and they are all good for your health.
- **Whole Grains:** Foods like quinoa, brown rice, oats, and whole wheat are staples for energy and fiber. Today's stores make them accessible and easy to prepare.
- **Legumes:** Beans, lentils, and chickpeas are excellent sources of protein, fiber, and various nutrients. There are many choices from canned to frozen or dried.
- **Nuts and Seeds:** Almonds, walnuts, chia seeds, flaxseeds, and others offer healthy fats, protein, and micronutrients. Nut butters are often convenient.
- **Plant Oils:** Olive oil, canola oil, avocado oil and vegetable oil are all available for cooking in place of lard or butter.



Vegan Diet Replacers

3. Plant-Based Dairy Alternatives:

- **Plant Milk:** Soy milk, almond milk, coconut milk, and oat milk are common dairy alternatives. Read the label to ensure you are getting at least 30% DV for calcium in one serving. Some plant milks will also include nutrients of concern for vegans like B12 or iron.
- **Plant-Based Yogurt:** Made from coconut, almond, or soy.
- **Cheese Alternatives:** Vegan cheeses made from nuts, soy, or other plant-based ingredients.

4. Egg Replacements:

- **Flaxseeds and Chia Seeds:** Often used as egg substitutes in baking.
- **Commercial Egg Replacers:** Various commercial products are designed to replace eggs in recipes.

5. No Animal-Derived Additives:

- Vegans avoid food additives derived from animals, such as gelatin (commonly found in desserts and candies), certain colorings, and some flavorings.

6. Honey Alternatives:

- Vegans typically avoid honey and use alternatives like maple syrup, agave nectar, or other plant-based sweeteners.

7. Vegan-Friendly Products:

- Vegans extend their lifestyle choices beyond diet, avoiding animal-derived ingredients in personal care products, clothing, and other items.

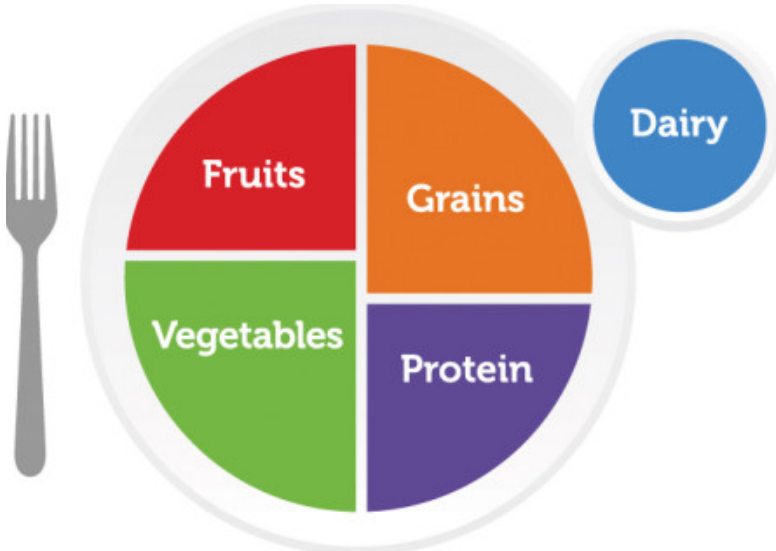
8. Supplements:

- Some vegans may need to supplement certain nutrients that are more commonly found in animal products, such as vitamin B12, iron, and omega-3 fatty acids. However, this varies based on individual needs and dietary choices.

As with any diet, it's advisable to consult with a healthcare professional or a registered dietitian to ensure that nutritional needs are met and to address any potential deficiencies.



Going Vegan Or Vegetarian With MyPlate: MyPlate is Already 3/4 Plant-Based!



MyPlate.gov



Changing To A Plant-Based Diet?

Focus on eating a variety of foods in the MyPlate Food Groups:

- Vegetables
- Fruits
- Whole Grains
- Plant-based Dairy (with calcium)
- Plant-based Protein

By filling your plate 3/4 full with plants (fruits, veggies, and grains), you only have to worry about making 1/4 of it plant-based with the protein.

Here are tips for the journey:

Explore Plant-Based Recipes:

- Experiment with new plant-based recipes to discover delicious and satisfying meals.
- Look for plant-based alternatives for your favorite dishes.
- Slowly reduce your intake of animal products rather than cutting them out all at once. Be flexible!
- Consider eliminating one type of animal product at a time, such as red meat, poultry, or dairy.

Find Plant-Based Alternatives:

- Explore plant-based alternatives for dairy products (almond milk, soy milk, etc.) and meat substitutes (tofu, tempeh, seitan).
- Discover a variety of plant-based protein sources, such as legumes, beans, lentils, and quinoa.

Plan Your Meals:

- Plan your meals ahead of time to ensure you have a variety of plant-based options available.
- Keep healthy snacks on hand to avoid resorting to non-plant-based options when hungry.

Stay Hydrated:

Drink plenty of water to stay hydrated, as sometimes the increased fiber intake from plant-based foods may require more fluids.

Remember that everyone's journey to a plant-based diet is unique. Find what works best for you, and make adjustments as needed.



A vegan diet improves cardiovascular health according to research in identical twins.

Have a heart! Recent research in 22 pairs of identical twins by Stanford Medicine scientists finds that compared to an omnivore diet, a vegan diet improves cardiovascular health in just eight weeks.

While there's plenty of research to support reducing meat intake to improve heart health, studies are often limited by genetic variants, environmental differences, and lifestyle choices. However, by evaluating identical twins, the researchers were able to control for genetics and lifestyle factors since they grew up in the same home.

According to Christopher Gardner, PhD, the Rehnborg Farquhar Professor and a professor of medicine, "Not only did this study provide a groundbreaking way to assert that a vegan diet is healthier than the conventional omnivore diet, but the twins were also a riot to work with. "They dressed the same, they talked the same and they had a banter between them that you could have only if you spent an inordinate amount of time together."

The research was published in *JAMA Network Open*. The study was co-first authored by Matthew Landry, PhD, a former Stanford Prevention Research Center postdoctoral scholar, now at the University of California, Irvine, and Catherine Ward, PhD, a post-doctoral scholar at the center.

Twin subjects

Research, which included 22 sets of identical twins, was completed from May to July 2022 with 44 total subjects. Healthy participants without cardiovascular disease were picked from the Stanford Twin Registry -- a database of fraternal and identical twins who have agreed to participate in research studies -- and matched one twin from each pair with either an omnivore or vegan diet.

The omnivore and vegan diets were healthy and included plenty of fruits, vegetables, beans, and whole grains and limited amounts of sugars and refined grains. The vegan diet was completely plant-based and was void of meat, eggs, and dairy products. The omnivore diet included fish, poultry, eggs, dairy products, and animal-based foods.

A meal service delivered 21 meals weekly including seven breakfasts, lunches, and dinners during the initial four weeks. The participants made their own meals for the last four weeks of the study.

According to Gardner, a registered dietitian AKA “diet whisperer” was available to provide suggestions and answer questions about the diets throughout the study. Subjects were surveyed about their dietary intake and kept a food log of what they consumed.

Gardner noted that forty-three percent of subjects finished the study, showing how simple it can be to learn to cook a healthy diet in four weeks. She stated, “Our study used a generalizable diet that is accessible to anyone because 21 out of the 22 vegans followed through with the diet.”

Gardner, who is a professor in the Stanford Prevention Research Center noted, “This suggests that anyone who chooses a vegan diet can improve their long-term health in two months, with the most change seen in the first month.”

Better health

The Stanford researchers discovered that the most improvement was observed in the first four weeks of diet changes. The subjects on a vegan diet had significantly lower LDL cholesterol (low-density lipoprotein) levels, insulin, and body weight, which are linked with improved cardiovascular health compared to the omnivore subjects.

Subjects were weighed and blood was drawn at three time points, the start of the trial, four weeks in and at eight weeks. The average LDL cholesterol at baseline for the vegan subjects was 110.7 mg/dL and 118.5 mg/dL in the omnivore subjects. This level dropped to 95.5 in the vegan group and 116.1 in the omnivore group by the conclusion of the study. An optimal healthy LDL cholesterol is below 100 mg/dL.

Gardner noted that since the subjects started with healthy LDL cholesterol levels, there was less room for change, suggesting that subjects with higher baseline lipids would demonstrate the greatest change.

Vegan subjects also had nearly a 20% drop in fasting insulin. Elevated insulin levels are a risk factor for the development of diabetes. Compared to the omnivores, the vegan participants lost an average of 4.2 more pounds.

“Based on these results and thinking about longevity, most of us would benefit from going to a more plant-based diet,” Gardner said.

According to Gardner, the vegans as well as the omnivores reduced saturated fat, increased fiber, and lost weight- the three most important things to improve heart health.

A global touch

While Gardner recognizes that most people won't go completely vegan, following a more plant-based diet can still improve health. She notes, "A vegan diet can confer additional benefits such as increased gut bacteria and the reduction of telomere loss, which slows aging in the body,".

Gardner has followed a "mostly vegan" diet for the past 40 years and finds that "Having fun with vegan multicultural foods like Indian masala, Asian stir-fry, and African lentil-based dishes can be a great first step."

She is a member of the Stanford Cardiovascular Institute, the Wu Tsai Human Performance Alliance, the Maternal and Child Health Research Institute, and the Stanford Cancer Institute.

The study received funding from the Vogt Foundation; the Stanford Clinical and Translational Science Award; and the National Heart, Lung, and Blood Institute.

Want tips for following a more heart-healthy, plant-based diet? Keep reading!

- Substitute beans for poultry or meat in chili, soups, or stews.
- Keep frozen vegetables on hand to add to grains, pasta sauce, soup, and other dishes
- Choose fresh or dried fruit for dessert over sugary treats.
- Use hummus as a spread for sandwiches in place of mayonnaise
- Swap soy milk for cow's milk
- Eat nuts instead of processed snack foods
- Cook with olive or canola oil instead of butter or lard
- Keep a bag of raw spinach leaves in the fridge for quick salads
- Chop peppers, celery, and carrots ahead of time for fast snacks
- Use red or brown lentils in spaghetti sauce in place of beef

Lisa Andrews, MEd, RD, LD

Reference:

Matthew J. Landry, Catherine P. Ward, Kristen M. Cunanan, Lindsay R. Durand, Dalia Perelman, Jennifer L. Robinson, Tayler Hennings, Linda Koh, Christopher Dant, Amanda Zeitlin, Emily R. Ebel, Erica D. Sonnenburg, Justin L. Sonnenburg, Christopher D. Gardner. Cardiometabolic Effects of Omnivorous vs Vegan Diets in Identical Twins. *JAMA Network Open*, 2023; 6 (11): e2344457 DOI: 10.1001/jamanetworkopen.2023.44457

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