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Vegan in College: Simple, Affordable, Healthy Meals for Students

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Vegan in College

simple, affordable, healthy
meals for students

Haley Cedarholm

For the animals.

Special thanks to the University of Rhode Island Honors Program, the Department of Nutrition and Food Sciences, my faculty advisor Dr. Geoffery Greene, Jessie Boukarim, and the many college vegans who gave me their input. I could not have done it without your help.

Thank You.

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Introduction

For the entirety of my college career I have led a vegan lifestyle. Like many students, college represented the first time in my life where I experienced independence. As I began to live by myself, I had to make food choices and overcome barriers such as lack of time, money and knowledge of nutrition. While leading a healthy vegan lifestyle can be affordable and easy, I struggled to find this balance and I knew I wasn't alone.

Many students, vegan or not, experience the same barriers to eating healthfully that I did. I set out to discover the specific barriers that vegan students face and to come up with meaningful solutions. I started with qualitative research. I conducted a focus group with vegan students in order to learn about the food choices that they make on a tight budget and the barriers that can lead them away from their goal of a healthful vegan lifestyle. I learned about the distrust that these students have in traditional sources of nutrition information. Many felt that traditional sources of information were biased and that they could not relate to them because they included animal products in their definition of a healthy diet. I learned how students used recipes as meal inspiration, and about the importance of easy to prepare meals.

As a result, I began to create this educational resource for vegan students who are in the same position as me. Through this process, I learned about nutrition information specifically tailored to vegan students, how to conduct qualitative research, how to create and test my own recipes designed to help solve the barriers to success vegans face at URI, and how to create a visually appealing resource for students. The number of students choosing to lead a vegan lifestyle at URI and across the country is constantly increasing. It is my hope that my honors project can become a resource for them to turn to while they learn to live a healthy life on their own.

- Haley Cedarholm



THE VEGAN PLATE



OTHER ESSENTIALS*
*Omega 3s
Vitamin B₁₂
Vitamin D
Iodine

The above image was taken from Becoming Vegan: The Complete Reference to Plant Based Nutrition (Comprehensive Edition) by Brenda Davis and Vesanto Melina. It is included with permission from the publisher.

Where do you get your protein?

This is one of the most common questions that vegans are asked. The answer is of course, plants! Protein is an essential nutrient in everyone's diet, vegan or not (Davis and Melina pg 82). We require protein because of the amino acids that are present in it. Our bodies use these amino acids to perform many important daily functions. There are two main types of amino acids; essential and non-essential. Essential amino acids are ones that our bodies cannot create on their own. Non-essential amino acids are ones that our bodies can create on their own (Davis and Melina pg 83). It's necessary to eat enough of all of the essential amino acids so our bodies can perform daily functions. Luckily, you can consume all of them from plants.

Particular plants contain different ratios of amino acids. If you've heard of 'complete' and 'incomplete' protein, this is where that concept comes from. Complete proteins contain all of the necessary amino acids (Davis and Melina pg 82). The essential amino acids are histidine, isoleucine, lysine, methionine, phenylalanine, threonine, tryptophan and valine (Whitney and Rolfes pg 174). Not all plants contain every amino acid and this is why it is crucial to eat a variety of different plant proteins every day (Academy of Nutrition and Dietetics pg 1971). When combined, complementary proteins provide all of the amino acids that our bodies need. If you are eating enough calories and a variety of grains, legumes, fruits, vegetables, nuts and seeds you should have no problem getting the proper types of protein in your daily diet (Vegan Resource Group).

So, how much protein should you be eating every day? There is a simple formula to figure out this amount. For adults, take your healthy/ideal weight in pounds and multiply it by 2.2. From this first equation you will get your weight in kilograms. Next, multiply your weight in kilograms by 0.9. From this second equation you will get your recommended amount of daily protein in grams. Plant proteins are not as well digested as animal proteins. Some experts suggest eating a 0.4-1g/kg more plant protein than is recommended for omnivores to make up for this difference (Davis and Melina pg 85-86). For most people, eating 3-4 servings of high protein foods a day will be sufficient (Vegan Health).

One great source of plant protein is soy (Academy of Nutrition and Dietetics pg 1971). While not necessary for a vegan diet, eating 1-2 servings of soy a day is an appropriate amount (Davis and Melina pg 105). In this book you will find recipes containing tofu on pages 12 and 14.

Vitamins

Vitamins are organic substances made by living things. In total, there are 13; A, C, D, E, K and the eight B vitamins. All of these vitamins can be derived from plants. Vitamins A, E, D and K are fat soluble so there is a risk of toxicity if too many are consumed. Vitamin C and the B vitamins are water soluble so there is virtually no risk of toxicity from them (Food and Drug Administration). Some vitamins, specifically B₁₂ and D can be difficult for vegans to get from their plant-based diets. To avoid deficiencies, it is important for all vegans to be aware of how much of these vitamins they need and what sources to integrate into their diets.

Vitamin B₁₂

Vitamin B₁₂ is one of the most important vitamins for vegans to be aware of. This vitamin is not naturally made by plants and as a result vegan diets are at risk of being deficient in B₁₂ (Key, Appleby, Rosell pg 37). Diets deficient in B₁₂ can have major health consequences (Davis and Melina pg 220). The primary vegan sources of B₁₂ are fortified foods and dietary supplements (Key, Appleby, Rosell pg 36).

There are multiple ways that college vegans may ensure they are eating the necessary amount of B₁₂ everyday. An appropriate amount of B₁₂ from fortified foods is 4-7 mg a day (Davis and Melina pg 220). The body only absorbs a portion of the vitamins in supplements, so it is important to take a higher dose of B₁₂ when receiving it from supplements. It is recommended that vegans eat two servings of B₁₂ fortified foods a day containing 2-4 mg per serving. Examples of fortified foods are tofu, non-dairy milk and nutritional yeast. These foods are not always fortified so it is important to check the Nutrition Facts label for B₁₂ contents (Academy of Nutrition and Dietetics pg 1972). As an alternative, vegans can take a daily supplement containing 25-100mg of B₁₂ or a biweekly supplement containing 1000mg (Vegan Health). B₁₂ is one of the two water soluble vitamins, thus, excess B₁₂ is excreted by the urinary system (Davis and Melina pg 219).

Vitamin D

Vitamin D is another one of the most important vitamins that vegans must be aware of. While our bodies naturally make vitamin D from sun exposure, they often do not make enough (Davis and Melina pg 226). This is especially true for vegans who live in the northern hemispheres or who are not exposed to the sun regularly (Academy of Nutrition and Dietetics pg 1972). As a result, vegans need to be aware of their vitamin D intakes.

For your body to create enough vitamin D from sun exposure it is important for dark skin people to spend 20 minutes a day in the sun and for light skin people to spend 10-15 minutes a day in the sun (Vegan Health). Fortified foods and supplements are commonly required to meet daily vitamin D needs (Davis and Melina pg 229). Vegan examples of vitamin D fortified foods include some non-dairy milks, fruit juices and cereals and margarines. Mushrooms that have been exposed to ultraviolet light also contain vitamin D (Academy of Nutrition and Dietetics pg 1972). Adult vegans may also take a 600-1000 mg supplement of vitamin D once a day (Vegan Health).

There are three types of vitamin D. Vitamin D₁ is the form that your body creates from sun exposure, vitamin D₂ is the form that is derived from plant foods and vitamin D₃ is the form that is derived from animal products (Davis and Melina pg 229). By definition vitamin D₃ is not a vegan form of vitamin D. When buying vitamin D fortified foods or supplements it is important to make sure that the added form is D₂ rather than D₃.

Minerals

Minerals are inorganic substances that are not made by living things (Food and Drug Administration). All necessary minerals can be obtained from vegan sources. Many minerals are abundant in a vegan diet but there are some that vegans should pay close attention to in order to avoid deficiencies.

Calcium

Calcium intakes for vegans may fall below the recommended amount, making this mineral particularly important for vegans to be aware of (Academy of Nutrition and Dietetics pg 1972). It is recommended that adult vegans consume 1000 mg of calcium a day (Vegan Resource Group). Some calcium rich foods include fortified non-dairy milks, collard greens, fortified tofu, calcium fortified orange juice, kale, broccoli, tempeh, almonds, and tahini (Academy of Nutrition and Dietetics pg 1972). To ensure that you are consuming the appropriate amount of calcium you should eat at least two servings of high calcium foods a day or take a daily supplement containing 300 mg of calcium (Vegan Health). It is also important to note that in foods like raw spinach, rhubarb, chard, beet greens, etc., the oxalic acid binds to the available calcium and reduces the amount of the mineral that the body is able to absorb (Vegan Resource Group). As a result, avoiding coupling these sources with calcium intake, is preferable for maximizing benefits.

Iron

While vegans generally consume similar amounts of iron as non-vegans, the type of iron is often different (Academy of Nutrition and Dietetics pg 1971). Iron from plant sources is non-heme iron (Vegan Health). For some people, especially those who have recently begun a vegan diet, absorbing non-heme iron is difficult (Academy of Nutrition and Dietetics pg 1971). There is some evidence that over time the body adapts to absorb non-heme iron more efficiently (Academy of Nutrition and Dietetics pg 1971). It is important for vegans to consume adequate amounts of iron and to promote iron absorption within their bodies.

Vegan foods high in iron include many types of beans such as soy, lentil, kidney, chickpea, black bean, etc., and dark leafy greens such as kale and swiss chard (Vegan Health). Vitamin C helps to promote iron absorption. Pairing foods high in iron and foods high in vitamin C can help your body to absorb more of the iron available in your diet (Key, Appleby, Rosell pg 37).

Iodine

Additionally, vegan diets that do not include around 150 mg of iodine a day may be at risk of deficiency. Iodine is important for optimal health considering deficiencies can cause major thyroid problems. Sea vegetables are the only plant food sufficient in iodine (Academy of Nutrition and Dietetics pg 1972). Vegans who do not consume sea vegetables on a regular basis should consume iodine by eating iodized salt or by taking supplements. ¼ teaspoon of iodized salt contains 75 mg of iodine and most multivitamins also contain it (Vegan Health). It is important to note that iodized salt is not used in processed foods and sea salt, kosher salt and salty seasonings do not usually contain iodine, therefore these foods are not a good source (Academy of Nutrition and Dietetics pg 1972).

Zinc

Zinc is an important mineral for immunity (Vegan Health). Studies show that plant-based diets that contain a variety of foods and enough calories are not typically deficient, however it remains a mineral that vegans should be aware of. Vegans should consume 9-34 mg of zinc a day (Vegan Health). High zinc foods include soy, legumes, nuts, seeds and grains (Academy of Nutrition and Dietetics pg 1972). Additionally, most multivitamin supplements contain zinc.



Blueberry Banana Muffins

Servings: 6

Prep time: 15 Minutes

Cook Time: 20 Minutes

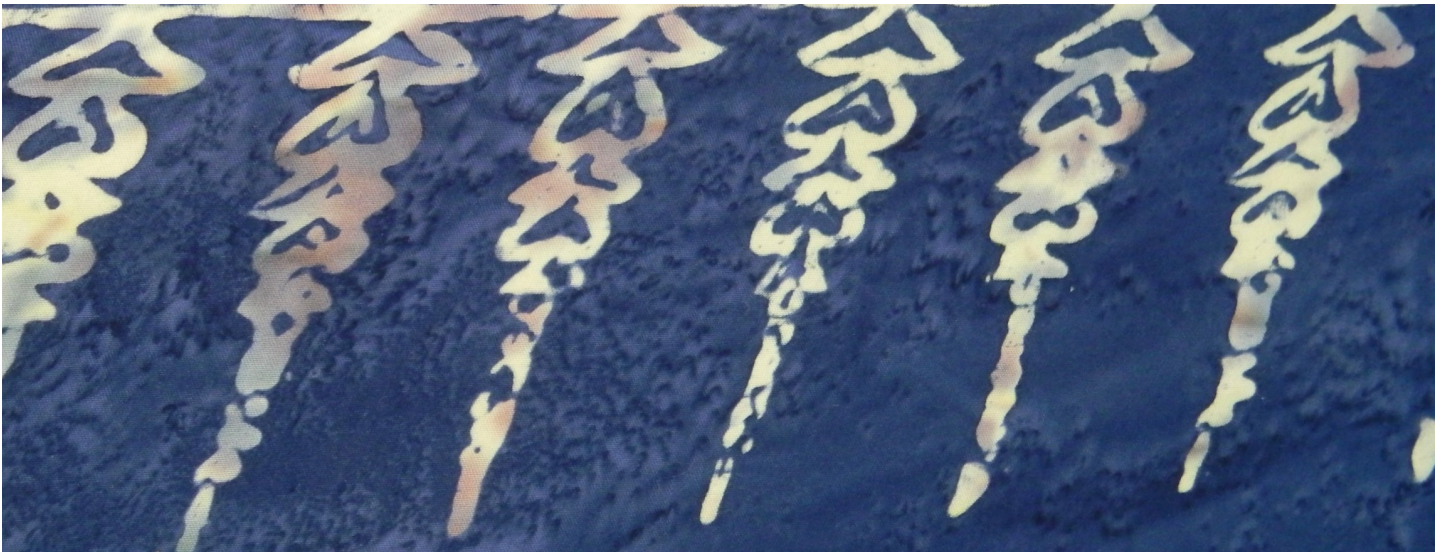
Ingredients:

- 1 ¼ cups all-purpose flour
- ¼ cup organic sugar
- 2 tablespoons baking powder
- ½ teaspoon salt
- ½ teaspoon ground cinnamon
- 2 medium, ripe, bananas
- ½ cup and 2 tablespoons almond milk (or other non-dairy milk)
- 2 tablespoons vegetable oil (plus extra for pan)
- 1 cup frozen wild blueberries

Directions:

- Preheat the oven to 375° and lightly grease a regular sized muffin tin with vegetable oil on a paper towel.
- In a medium sized bowl; combine the flour, sugar, baking powder, salt and cinnamon.
- Create a well (hole) in the middle of the dry mixture.
- In a small bowl, mash the two bananas with a fork until no chunks remain. Add the almond milk and oil and mix well.
- Add the banana mixture to the well in the dry ingredients. Fold the wet and dry ingredients together. Stop mixing as soon as they're combined to avoid overmixing.
- Add the blueberries and fold them into the batter.
- Next, fill the muffin tins with the batter. Leave a ¼ inch at the top of the tin to allow the muffins space to rise.
- Bake the muffins for 20 minutes, remove from the tins, let cool on a cooling rack for at least 20 minutes before serving.
- These muffins are a great breakfast or snack and can be kept for up to one week.

Nutrition Facts			
Serving Size 2.00 item(s) (136g)			
Amount Per Serving			
Calories	213	Calories from Fat	47
			% Daily Value
Total Fat	5.2g		8 %
Saturated Fat	0.4g		2 %
Trans Fat	0.0g		
Cholesterol	0.0mg		0 %
Sodium	214.6mg		9 %
Total Carbohydrate	41.8g		14 %
Dietary Fiber	2.5g		10 %
Sugars	16.1g		
Protein	3.2g		
Vitamin A	2 %	Calcium	27 %
Vitamin C	7 %	Iron	9 %



Tofu Scramble Burrito

Servings: 5

Prep Time: 20 Minutes

Cook Time: 25 Minutes

Ingredients

- 12 oz. extra firm tofu
- 1 cup onion, chopped
- 1 cup sweet red pepper, chopped
- ½ cup carrot , peeled and grated
- 1 cup broccoli florets, sliced
- 2 cups raw baby spinach
- 1 tablespoon olive oil
- ⅓ cup nutritional yeast
- ½ teaspoon salt
- ½ teaspoon dried dill weed
- ¼ teaspoon garlic powder
- ¼ teaspoon chili powder
- ¼ teaspoon black pepper
- ½ teaspoon ground turmeric
- 5 medium/taco sized flour tortillas

Directions

- Drain tofu and press lightly in tofu press (or between two plates) for 15 minutes. While tofu is pressing, prepare the vegetables.
- In a large bowl, break up tofu by hand into small pieces
- Add grated carrot to tofu and combine.
- Add nutritional yeast to tofu mixture and combine.
- Add salt, dill, garlic powder, black pepper, turmeric, and chili powder to tofu mixture and combine.

- In a large frying pan (or wok), heat olive oil on medium heat for 2 minutes.
- Add onion to pan and turn heat to low. Cook until onion is translucent.
- Add peppers and broccoli to onions and oil, cover and cook for 3 minutes.
- Add tofu mixture to pan and combine with vegetables. Cover and cook for 10 minutes on low heat, while stirring occasionally.
- Add spinach and cook for an additional 5 minutes (or until spinach is wilted) then take off heat.
- Roll ¾ cup of tofu scramble into a medium/taco sized flour tortillas. To roll, place scramble in middle of tortilla, fold in sides and roll tightly.
- Wrap leftover burritos in plastic wrap and freeze for up to 2 weeks.
- To thaw frozen burritos, microwave for 90-120 seconds on each side.

Nutrition Facts			
Serving Size 1.00 item(s) (231g)			
Amount Per Serving			
Calories	312	Calories from Fat	99
		% Daily Value	
Total Fat	11.0g		17 %
	Saturated Fat	1.6g	8 %
	Trans Fat	0.0g	
Cholesterol	0.0mg		0 %
Sodium	731.6mg		30 %
Total Carbohydrate	37.0g		12 %
	Dietary Fiber	4.0g	16 %
	Sugars	3.6g	
Protein	17.1g		
Vitamin A	85 %	Calcium	21 %
Vitamin C	101 %	Iron	19 %



Baked Tofu

Servings: 4

Prep Time: 20 Minutes

Cook Time: 30 Minutes

Ingredients

12 oz. extra firm tofu

2 teaspoons olive oil

1 tablespoon liquid amino acids (or soy sauce)

½ teaspoon chili powder

1 teaspoon garlic powder

Directions

- Preheat the oven to 375°.
- Drain tofu, and press in tofu press (or between two plates) until it is about 2 inches thick.
- Slice the tofu lengthwise into ¼ inch slices, and place slices on a baking pan, lined with parchment paper.
- Use a spoon to spread half of the liquid amino acids and half of the olive oil on the tofu slices.
- Sprinkle half of the chili powder and half of the garlic powder on the slices, and spread with the back side of the spoon.
- Carefully flip each tofu slice over and cover the other side with the remaining olive oil, liquid amino acids, chili powder and garlic powder.
- Bake for 15 minutes in the oven. Take the tofu out and flip each slice. Bake for another 15 minutes and remove from oven.
- After the tofu cools for at least 20 minutes, add it to a sandwich, salad, stir-fry, or eat it plain. Baked tofu can be stored in the refrigerator for up to a week.

Nutrition Facts			
Serving Size 0.50 cup(s) (92g)			
Amount Per Serving			
Calories	133	Calories from Fat	75
			% Daily Value
Total Fat	8.3g		13 %
Saturated Fat	1.3g		7 %
Trans Fat	0.0g		
Cholesterol	0.0mg		0 %
Sodium	180.4mg		8 %
Total Carbohydrate	3.8g		1 %
Dietary Fiber	1.2g		5 %
Sugars	0.0g		
Protein	11.6g		
Vitamin A	2 %	Calcium	10 %
Vitamin C	0 %	Iron	11 %

Best rated recipe!



Thai Peanut Dressing

Servings: 3

Prep Time: 7 Minutes

Cook Time: 3 Minutes

Ingredients

- 6 tablespoons smooth natural peanut butter
- 2 tablespoons lemon juice
- 4 tablespoons water
- 2 teaspoons liquid amino acids (or soy sauce)
- 1 tablespoon agave
- 2 cloves fresh garlic, peeled and diced
- 1/8 teaspoon cayenne pepper
- 1/8 teaspoon five Chinese spice mix

Nutrition Facts			
Serving Size 2.00 tablespoon(s) (68g)			
Amount Per Serving			
Calories	205	Calories from Fat	144
% Daily Value			
Total Fat	16.0g		25 %
Saturated Fat	2.5g		13 %
Trans Fat	0.0g		
Cholesterol	0.0mg		0 %
Sodium	252.7mg		11 %
Total Carbohydrate	7.5g		3 %
Dietary Fiber	2.1g		8 %
Sugars	1.3g		
Protein	7.6g		
Vitamin A	0 %	Calcium	0 %
Vitamin C	8 %	Iron	2 %

Directions

- Combine peanut butter, lemon juice, water, liquid amino acids, agave and garlic in a food processor or blender and blend until smooth.
- Add spices and blend again. Taste the dressing and adjust cayenne pepper to your spice preference.
- Serve two tablespoons of dressing over your favorite green salad, stir fry, or use it as a dip for raw vegetables.
- This sauce will stay fresh in the refrigerator for up to ten days.



Chickpea Salad

Servings: 3

Time: 10 minutes

Ingredients

- 1 can (15.5 oz.) of chickpeas, drained and rinsed
- 1 cup English cucumber, diced
- 1 tablespoon vegan mayonnaise
- ¼ teaspoon ground cumin
- ⅛ teaspoon salt
- 1 tablespoon nutritional yeast
- ½ teaspoon dried dill weed
- ¼ teaspoon garlic powder
- A sprinkle of ground turmeric, for color
- Ground black pepper, to taste

Directions

- In a large bowl, mash chickpeas.
- Add diced cucumber to chickpeas and combine.
- Add mayonnaise to chickpea mixture and combine.
- Add salt, ground cumin, nutritional yeast, dill weed, garlic powder, a sprinkle of ground turmeric and ground black pepper to taste to mixture.
- Serve ½ cup of chickpea salad on a toasted roll with lettuce, add to a green salad or enjoy it plain.
- Keep leftovers refrigerated for up to 4 days.

Nutrition Facts			
Serving Size 0.50 cup(s) (188g)			
Amount Per Serving			
Calories	231	Calories from Fat	47
			% Daily Value
Total Fat	5.2g		8 %
Saturated Fat	0.3g		2 %
Trans Fat	0.0g		
Cholesterol	0.0mg		0 %
Sodium	449.0mg		19 %
Total Carbohydrate	36.5g		12 %
Dietary Fiber	9.7g		39 %
Sugars	7.1g		
Protein	11.3g		
Vitamin A	2 %	Calcium	7 %
Vitamin C	3 %	Iron	10 %



Fried Rice

Servings: 5

Prep Time: 15 minutes

Cook Time: 20 minutes

Ingredients

- 2 cups water
- 1 cup uncooked long grain white rice
- 1 small onion, chopped
- 1 cup carrots, peeled and chopped
- 1 cup frozen green peas
- 1 cup broccoli florets, sliced
- 1 tablespoon olive oil
- 3 tablespoons amino acid (or soy sauce)
- 1 teaspoon agave
- ½ teaspoon garlic powder
- cayenne pepper to taste

Nutrition Facts

Serving Size 1.00 cup(s) (214g)

Amount Per Serving			
Calories 208		Calories from Fat 29	
		% Daily Value	
Total Fat	3.2g		5 %
Saturated Fat	0.5g		2 %
Trans Fat	0.0g		
Cholesterol	0.0mg		0 %
Sodium	423.9mg		18 %
Total Carbohydrate	39.9g		13 %
Dietary Fiber	3.9g		15 %
Sugars	5.7g		
Protein	6.5g		
Vitamin A	89 %	Calcium	4 %
Vitamin C	42 %	Iron	11 %

Directions

- In a medium sized pot, bring 2 cups of water to a boil. Once the water boils, add uncooked rice and turn heat to low. Cover the rice and cook for 15 minutes. While rice is cooking, prepare the vegetables.
- Next, heat olive oil in a large frying pan (or wok) on medium heat for 2 minutes, then add the onion.
- Cook the onion until translucent, then add the broccoli, carrots, and peas. Cook the vegetables on medium heat, stirring occasionally, for 7 minutes or until the vegetables begin to soften.
- While the vegetables are cooking, create the sauce. Add the agave, garlic powder, cayenne pepper and the liquid amino acids to a small bowl and stir with a fork.
- Next, add the cooked rice to the vegetable mixture and stir. Then, add the sauce and stir. Test the taste and adjust cayenne pepper to your spice preference.
- After the fried rice is well mixed, add the nutritional yeast and stir.
- Cook for 3 more minutes and serve.
- Store leftovers in the refrigerator for up to 5 days.

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