

Plant-based Alternatives to Animal Protein!

Hi Kids! As you know we have been talking about “*plant-based foods*” as part of our program. Have you thought about what types of plant-based foods you could eat instead of animal-based meats (proteins)? Likely you have not, unless your family or friends are vegetarian (which means they eat plants and sometimes eggs, fish, or cheese) or vegan (which means they do not eat anything that comes from an animal). Keep reading below to learn more about **plant-based alternatives to animal protein** (like chicken, beef, pork, dairy, etc.). Also, check out the guide called “Plant-based Alternatives to Dairy” which includes information about this topic too!

As a reminder, *plant-based eating*, or eating *plant-based foods*, means that we eat foods that *grow out of the ground*, instead of foods that walk on the ground or swim in the water, which are called *animal-based foods*! Plant-based foods include *unprocessed (as much as possible) fruits, vegetables, wholegrains, nuts, and legumes (beans, peas, etc.)*!

When we think of protein, we typically think of animal-based products (such as hamburgers, chicken, pork, milk, cheese, yogurt, etc.) that come from cows, chickens, pigs, or other animals. When we think of protein, we don’t immediately think of *plant sources for protein*, such as legumes (soy beans/edamame, tofu, lentils, black beans, kidney beans), nuts, grains (quinoa, chia seeds), and vegetables (potatoes, kale, broccoli, mushrooms, and more).

Why do some people choose to consume plant-based proteins instead of animal-based proteins? There could be a number of reasons. People may feel they do not want animal-based proteins due to ethical or humane concerns. Others may choose plant-based proteins due to potential health benefits, such as reduced risks of cardiovascular disease, cancer, and other health issues,¹ or to avoid potential health hazards such as animal antibiotics and hormones. One thing that has to be considered if you consume only plant-based proteins is how to ensure you get the nine essential amino acids our bodies need. Some plant-based proteins have *all nine essential amino acids* that our body can’t make on its own, such as quinoa, soy, buckwheat, chia, and hempseed, but most do not. So, if you try a diet based on plant-based proteins alone, you need to be sure to **you eat a wide variety** of legumes, nuts, seeds, whole grains, fruits and vegetables each day, to ensure you get all nine essential amino acids, or take a vitamin that includes them.

The rest of this guide presents some fun ways to think about, and/or try, plant-based proteins! Check out the list of some plant proteins and their protein amounts on the last page as a quick reference. If you decide to try some of these proteins, share your experiences with us!

Share your experiences using #CommittoHealth and by tagging NRPA!

@National Recreation and Park Association (Facebook), @NRPA_news (Twitter) and @nrpa (Instagram)



Photo: Beyond Meat

Yes! This beautiful burger is made of plant-based proteins, not beef!

Photo from:
<https://www.foodbusinessnews.net/articles/11501-plant-protein-options-for-meat-alternatives>

¹The China Study. <https://nutritionstudies.org/china-study-references/>

Activity 1: What is your protein? & 1-week plant-based Challenge!!



For kids in grades 3 and up (and adults!): Write down 3 proteins you most often eat in Column 2 (hamburgers, deli meat, sausage, milk, etc.). Then, in Column 3, if your usual protein is not plant-based, write down a plant-based protein (PB-protein) that you may like to try instead of your usual protein! Finally, in Column 4, write down how your plant-based protein would be served (veggie burger on bun, beans and rice, grains in salad, etc.).

Column 1	Column 2: Name of your usual protein	Column 3: Name of a plant-based protein you would like to try	Column 4: Write how the plant-based protein in Column 3 would be served
PB-protein 1			
PB-protein 2			
PB-protein 3			

The 1-Week Plant-based Protein Challenge!

Now that you've read and talked about *delicious and nutritious plant-based proteins*, we would like to challenge you, and your family and friends, to a **1-week Plant-based Protein Challenge!** Copy this page for everyone in your Challenge, encourage them to complete the table below, and share results with each other via text, Instagram, Facebook (snap a picture), or the old way, in person! We hope you will see just how yummy plant-based proteins can be, and perhaps you'll continue to consume them after the Challenge ends! WRITE CHALLENGE START DATE HERE: _____

Challenge Day	Day of the week (Write it in)	Describe plant-based protein(s) you enjoyed	Comments about the experience (how you/others enjoyed it, what recipe you used, who you shared the protein with, etc.)
Day 1			
Day 2			
Day 3			
Day 4			
Day 5			
Day 6			
Day 7			

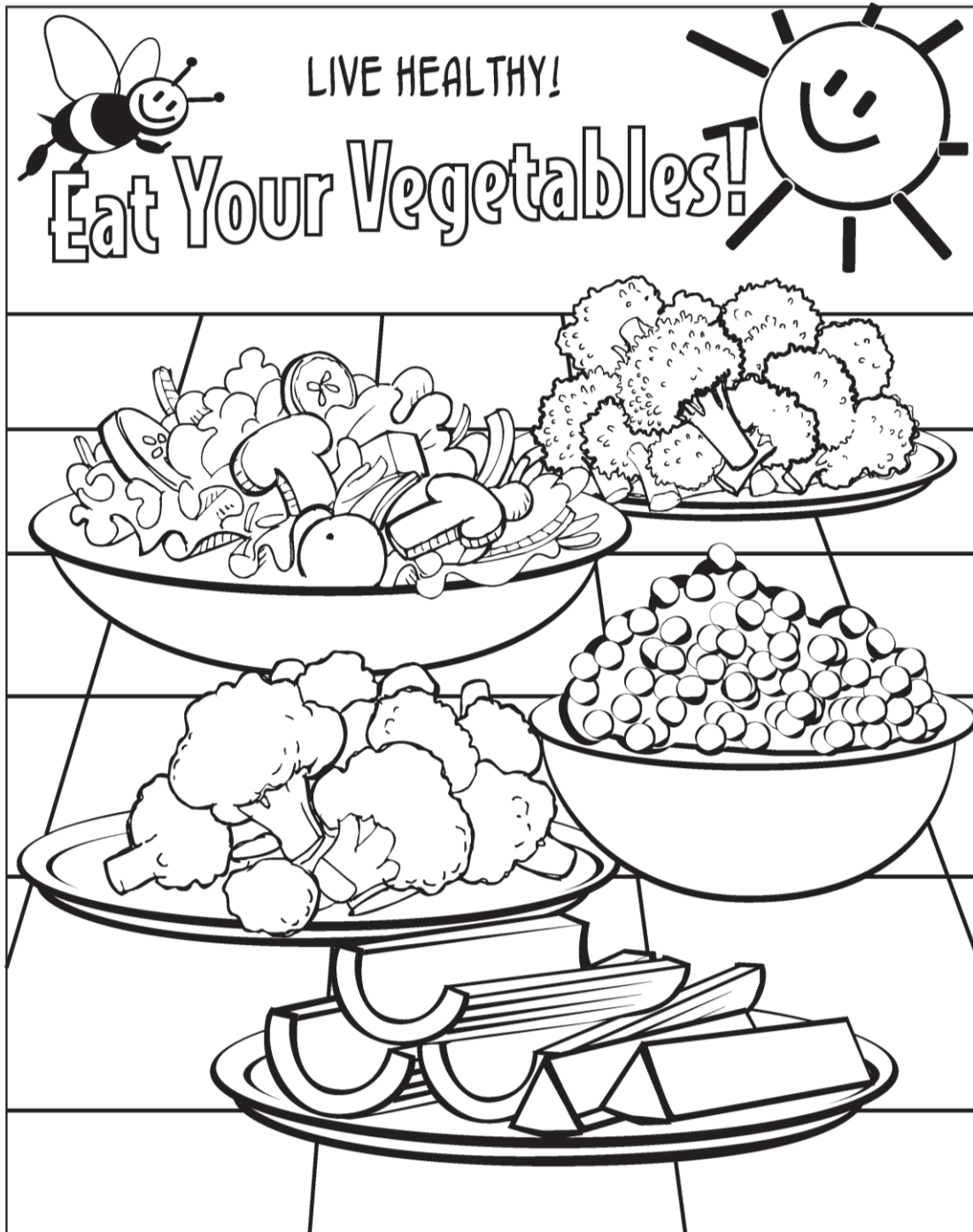
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Activity 2: Plant-based Proteins



For kids in grades PreK through 2: Color the plant-based foods below that have lots of protein – **broccoli, cauliflower, mushrooms, and beans** – that can be yummy to eat and make us strong! Adults, ask the kids which of these they eat as snacks or meals! Encourage them to think about trying these and other plant-based protein foods instead of animal-based foods (like cheese sticks, milk, hamburgers, pepperoni, etc.).



Plant-based Protein Recommendations



Ok, so you are interested in *plant-based alternatives to proteins*...well, great news, there are lots of high-protein options!! Remember that you need to eat a variety of plants (vegetables/fruits) to get the nine essential amino acids your body needs, so mix it up with some of the plant-based protein powerhouses below!

NO MEAT ATHLETE BEST PLANT-BASED SOURCES OF PROTEIN

NUTS AND SEEDS

Food	Serving Size	Calories (Cal)	Protein (G)	Calories from Protein
Hemp seeds	1 oz	162	10	25%
Pumpkin seeds, kernels only	1 oz	151	7	19%
Peanuts, without shells	1 oz	164	7	17%
Black walnuts	1 oz	173	7	16%
Pistachios, without shells	1 oz	160	6	15%
Sunflower seeds	1 oz	164	6	15%
Almonds	1 oz	167	6	14%
Cashews	1 oz	155	5	13%
Flax seeds	1 oz	150	5	13%
Chia seeds	1 oz	137	4	12%
Walnuts	1 oz	185	4	9%

VEGETABLES

Food	Serving Size	Calories (Cal)	Protein (G)	Calories from Protein
Spinach, cooked	1 cup	41	5	49%
Mushrooms, cooked	1 cup	42	5	48%
Asparagus	1 cup	27	3	44%
Broccoli	1 cup	31	2.6	34%
Brussels sprouts	1 cup	38	3	32%
Peas, cooked	1 cup	134	9	27%
Kale, cooked	1 cup	36	2	22%

PROTEIN POWDER

Food	Serving Size	Calories (Cal)	Protein (G)	Calories from Protein
Soy protein	1 oz	112	24	86%
Pea protein	1 oz	103	21	83%
Spirulina	1 oz	81	16	79%
Brown rice protein	1 oz	99	18	73%
Hemp protein	1 oz	85	13	61%

BEANS AND LEGUMES

Food (cooked)	Serving Size	Calories (Cal)	Protein (G)	Calories from Protein
Tempeh	½ cup	180	16	46%
Tofu	½ cup	94	10	43%
Soy beans	½ cup	127	11	35%
Brown lentils	½ cup	115	9	31%
Red lentils	½ cup	115	9	31%
Green lentils	½ cup	115	9	31%
Kidney beans	½ cup	120	7	28%
Split peas	½ cup	116	8	28%
Lima beans	½ cup	109	7.5	28%
Cannellini beans	½ cup	100	7	28%
Navy beans	½ cup	90	6	27%
Black-eyed peas	½ cup	80	5	25%
Black beans	½ cup	100	6	24%
Pinto beans	½ cup	100	6	24%
Chickpeas (Garbanzo beans)	½ cup	120	6	20%

BREAD, GRAINS, PASTA

Food (cooked)	Serving Size	Calories (Cal)	Protein (G)	Calories from Protein
Seitan	½ cup	180	31.5	70%
Whole wheat bread	2 slices	138	7	20%
Spelt	½ cup	123	5.5	18%
Whole wheat pasta	½ cup	87	3.5	16%
Teff	½ cup	128	5	14%
Quinoa	½ cup	111	4	14%
Oats	½ cup	154	5.5	14%
Buckwheat	½ cup	284	9.5	13%

Created by No Meat Athlete (nomeatathlete.com)

Plant-based Protein Recipes



Sautéed Spinach and Mushrooms¹

- 2 tablespoons extra-virgin olive oil
- 3 cloves garlic, smashed (or 3 tsp prepared, minced garlic)
- 2 cups sliced cremini mushrooms (or other sliced mushrooms)
- Salt and freshly ground black pepper
- 10 ounces baby spinach
- 1 to 2 tablespoons balsamic vinegar (optional)



Heat the oil in pan over medium-low heat. Add the garlic and cook until fragrant, about 2 minutes (do not let the garlic brown or it will taste bad!). Push the garlic off to the side of the pan and add the mushrooms. Increase the heat to medium high, cook, stirring occasionally, until the mushrooms are cooked through and begin to become golden in spots (about 10 to 12 minutes; this works best when not using a nonstick pan). Add salt and pepper to taste. Then add the spinach, sprinkle with an additional pinch of salt and turn with tongs until wilted. (If you can't fit all the spinach in the pan, cover it for a few minutes, then uncover and stir in the rest.) Transfer to a serving platter, drizzle with the vinegar (if using), and serve warm.

Kale and Spinach Juice²

Servings: 1

- ½ handful of kale
- ½ handful of spinach
- ½ Tbsp ground flax seed or chia seed (optional, but try to include it for the rich omega-3 and protein boost!)
- ½ cup orange juice, with calcium added
- 8 ice cubes
- ½ cup cold water (or more if needed to make juice)



Blend together all ingredients in blender till smooth. Add more ice cubes if desired.

Black Bean and Quinoa Salad – made with a complete protein!²

- 1 15 oz can black beans, rinsed and drained
- 2 cups quinoa, cooked and cooled (a complete protein!)
- 3 Tbsp sherry vinegar
- 1 Tbsp soy sauce
- 1 Tbsp fresh lime juice (or from concentrate)
- 1 chipotle in adobo, minced (substitute for this found at: <http://bit.ly/chipoltesub>)
- ¼ cup extra-virgin olive oil
- 6 scallions, white and light green parts only, thinly sliced
- 1 small red onion, finely diced
- 1 yellow bell pepper, finely diced (or green, red, orange pepper)
- ¼ cup chopped cilantro (or 2 Tbsp dried, and put salad in fridge for couple of hours before serving so dried cilantro softens a bit).

In a large bowl, whisk the vinegar, soy sauce, lime juice, and chipotle. Add the olive oil in a thin stream, whisking until blended. Add the black beans, quinoa, scallions, red onion, pepper, and cilantro. Season with salt to taste, toss to combine, and serve. Chill if refrigerator overnight if desired.

¹Recipe adapted from and photo found at: <https://www.foodnetwork.com/recipes/valerie-bertinelli/sauteed-spinach-and-mushrooms-3523982>

²From Dr. Danielle Hollar's recipe files

Kale juice photo from: <http://farmtotablela.com/kale-apple-juice/>.

PARENTS: Blenders are our best friends when we include plant-based snacks and meals in our dietary plans. Yes, some are very expensive, but some affordable “bullet” blenders can do the job of blending the nutritious vegetables and fruits included in these recipes.

Look for affordable “bullet” blender brands such as Oster, Hamilton Beach, KitchenSmith, and Bella for some that are *less than \$20!*