



The **POWER** of Plant-Based Protein



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Today's food conversation goes far beyond cost, convenience, and quality. More and more, people want to know how their food choices affect not only their own health but also the health of the planet. The conversation has gotten more complex...and more interesting as the science continues to evolve on these issues!

Protein is often the focus of these complex food conversations. While there is increasing consumer demand for protein for goals like building muscle, appetite control and weight management, there's also increasing demand for sources of sustainable plant-based protein.



What Are Plant-Based Proteins?

While many vegetables, grains, and some fruit contain protein, the USDA Choose My Plate food guidance system has identified nuts & seeds and beans & peas as plant-based protein foods. The following chart tells you how much of a plant-based protein food provides as much protein as an ounce of cooked meat, poultry or seafood.

Ounce Equivalents for Protein Foods

Meats	1 ounce cooked beef, pork or lamb
Poultry	1 ounce cooked chicken or turkey
Seafood	1 ounce cooked fish or shellfish
Eggs	1 egg
Nuts & Seeds	½ ounce of nuts or seeds 1 tablespoon nut butter
Beans & Peas	¼ cup of cooked beans, peas or lentils ¼ cup of baked beans or refried beans 2 ounces of tofu 1 ounce of tempeh

Source: <http://www.choosemyplate.gov/protein-foods>

Are You Getting Enough Fiber and Potassium?

There are many reasons why nutrition experts are recommending more plant-based protein. One major reason is that plant-based protein foods like beans also contain “nutrients of concern” like fiber and potassium, nutrients that most Americans don’t get enough of in their diets.

Adults need 25-38 grams of fiber per day. The average American adult only gets about 16 grams. A single serving of beans can provide one-third of your daily fiber needs. And the average potassium intake of 2640 milligrams per day falls short of the recommend 4,700 milligrams. Most types of beans are good sources of potassium and excellent sources of fiber.

How Much Protein Do You Need?

Research shows most adults need approximately 25-30 grams of protein at each meal, yet this even spacing of protein at meals is not common. Most Americans eat very little protein with breakfast, a bit more at lunch, and the majority at dinner.

Shifting to a more even distribution of protein at meals helps the body with muscle protein synthesis, the process by which our bodies break down protein and build up muscle throughout the day. Adding simply delicious, naturally nutritious beans to breakfast is a great way to add protein and fiber, plus other important nutrients. A Breakfast Bean Burrito is an easy, delicious grab-and-go breakfast that provides 32 grams of protein. Turn the page to see how to make these delicious burritos.

Food	Portion	Calories	Protein (g)	Fiber (g)	Potassium (mg)
Black Beans	½ cup, cooked	114	8	8	306
Kidney Beans	½ cup, cooked	112	8	6	358
Navy Beans	½ cup, cooked	127	8	10	354
Pinto Beans	½ cup, cooked	122	8	8	373
Almonds	¼ cup	164	6	4	208
Peanuts	¼ cup	161	7	2	200
Walnuts	¼ cup	190	4	2	125
Hummus	¼ cup	100	5	4	137
Lentils	½ cup, cooked	115	9	8	365
Tofu	2 oz.	183	20	3	299

COOK WITH DRY BEANS: THE FOUR STEP METHOD

Dry beans are an incredibly nutritious, versatile, and inexpensive ingredient. On a per serving basis, dry beans cost about half of what canned beans cost. Cooking with dry beans is easy and rewarding, but it does take some planning. Here's what you need to do:

1 Clean the Beans



- Place the beans in a shallow layer in a pie plate, baking sheet, or bar pan.
- Pick out and discard any foreign objects like leaves, small stones or twigs, as well as any broken beans.

2 Rinse the Beans



- Place the beans in a colander or strainer and rinse them under cold running water.

3 Soak the Beans



- There are three soaking methods you can use, the Hot Soak Method, the Traditional Soak Method, and the Quick Soak Method. The Hot Soak Method is the recommended method because it reduces cooking time and gas-producing compounds the most and it produces consistently tender beans.

4 Cook the Beans



- Place beans in a large stock pot and cover with fresh, cold water.
- Place over medium heat; keep cooking water at a gentle simmer to prevent split skins.
- Since beans expand as they cook, add warm water periodically during the cooking process to keep the beans covered.
- Stir beans occasionally throughout the cooking process to prevent sticking.
- Beans take 30 minutes to 2 hours to cook, depending on the type. Beans should be tender but not mushy.

BEAN SOAKING METHODS

HOT SOAK *(Recommended)*

1. Place beans in a large pot and add 10 cups of water for every 2 cups of beans.
2. Bring to boil and boil for an additional 2 to 3 minutes.
3. Remove beans from heat, cover and let stand for 4 to 24 hours.
4. Drain beans and discard soak water.
5. Rinse beans with fresh, cool water.

TRADITIONAL SOAK

1. Pour cold water over beans to cover.
2. Soak beans for 8 hours or overnight.
3. Drain beans and discard soak water. (NOTE: Cold water starts but does not complete the rehydration process so the beans will appear wrinkled after soaking. They will fully rehydrate during cooking.)
4. Rinse beans with fresh, cool water.

QUICK SOAK *(Fastest Method)*

1. Place beans in a large pot and add 6 cups of water for every 2 cups of beans.
2. Bring to boil and boil for an additional 2 to 3 minutes.
3. Remove beans from heat, cover, and let stand for 1 hour.
4. Drain beans and discard soak water.
5. Rinse beans with fresh, cool water.



BEAN COUNTING

One pound bag of dry beans = 2 cups dry beans

One pound bag of dry beans = 6 cups cooked beans, drained

One cup of dry beans = 3 cups cooked beans, drained

½ cup cooked beans, drained = 1 serving of beans

One 15-oz. can of beans = 1 ¾ cups cooked beans, drained

One 15-oz. can of beans = About 3 servings of beans





Breakfast Bean Burrito

Makes 1 burrito

- 1-10" flour tortilla, plain or whole wheat
- ¾ cup canned, drained, and rinsed black beans
- 1 scrambled egg
- ¼ cup shredded Cheddar or Monterey Jack cheese
- 2 tablespoons of your favorite salsa

1. Lay the tortilla on a cutting board or large dinner plate.
2. Place the beans in the center, top with a scrambled egg, cheese and salsa.
3. Fold in the ends, and then roll up to form a burrito.
4. Microwave for 45-60 seconds.

Nutrition Information: Calories: 585, Total Fat: 20g, Saturated Fat: 9g, Cholesterol: 220mg, Sodium: 1025mg, Potassium: 960mg, Total Carbohydrate: 70g, Fiber: 15g, Protein: 32g

For a quick grab-and-go breakfast, make this burrito the night before. Assemble your burrito as described above with the exception of adding the salsa. Wrap in plastic wrap and keep in the refrigerator overnight. Remove from the plastic, microwave for 45-60 seconds, and then top with salsa.



Putting PLANT-BASED DIETS into Perspective

The 2015 Dietary Guidelines for Americans Scientific Advisory Committee report concluded that, “a dietary pattern that is higher in plant-based food, such as vegetables, fruits, whole grains, legumes, nuts, and seeds, and lower in animal-based foods is more health promoting and is associated with lesser environmental impact (green house gas emission and energy, land, and water use) [compared to] the current average U.S. diet.”

While the Dietary Guidelines recommend a plant-based diet, that doesn't mean a vegan or vegetarian diet. The Guidelines simply encourage Americans to consume more plant-based foods and fewer animal-based foods. An example of this is making a beef chili where half the beef is replaced with kidney beans. Another example is making a meatless meal a few times a week, featuring recipes like Pinto Bean and Quinoa Burgers (see recipe on next page).

ENVIRONMENTAL Benefits of Beans

Beans are a good source of plant-based protein. They also have a very positive environmental story to tell. Bean plants promote soil health. The roots of bean plants contain rhizomes, or nodules that contain bacteria that convert nitrogen (a greenhouse gas) in the air into a form plants can use. Even after the beans are harvested, some of the nitrogen in the bean's roots stays in the soil. This means that bean farmers may be able to use less fertilizer on their fields the next year.



Pinto Bean and Quinoa Burgers

These vegetarian burgers are moist and flavorful. You can make the burgers ahead of time and refrigerate for a few days or freeze for a few weeks until you're ready to cook them. If you freeze the burgers, thaw them in the refrigerator for 4-8 hours prior to cooking them.

Pinto Bean and Quinoa Burgers

Makes 8 burgers

For the burgers

3 cups cooked or canned, drained, rinsed pinto beans
2 teaspoon garlic, minced
½ teaspoon cumin, ground
¼ teaspoon coriander, ground
¼ teaspoon cayenne
1 teaspoon kosher salt
¼ teaspoon ground black pepper
½ cup grated carrot
(about 1 medium carrot)
¼ cup red onion, minced
1 egg
2 tablespoon all-purpose flour
½ cup bread crumbs
2 tablespoon Italian parsley, minced
1 tablespoon cilantro, minced
1 cup cooked quinoa
¼ cup canola oil
(for cooking burgers)

For the fixin's

8 whole wheat sesame buns
1 cup sriracha mayonnaise
2 large red, ripe tomatoes,
Sliced Iceberg lettuce,
as needed
1 red onion, sliced

1. Place 1 ½ cups of the pinto beans into a food processor with the garlic, spices, salt and pepper. Slightly process to obtain a rough paste, scraping down the sides with a rubber spatula; add the carrot, red onion, egg, and flour and process briefly until evenly mixed yet slightly rugged.
2. Place processed bean mixture in a large bowl and add the bread crumbs. Fold in the remaining 1 ½ cups of beans, parsley, cilantro, and quinoa. Mix to combine.
3. Divide into 8 patties and form them the size of the bun. Place on a large plate or baking sheet, cover with plastic wrap, and chill for 45 minutes in the refrigerator.
4. Heat the oil in a frying pan over medium heat and pan-fry in batches for 2 to 3 minutes on each side, until golden, then drain on paper towels.
5. Spread the tops and bottoms of each bun with a tablespoon of sriracha mayonnaise, and then build your burger.

Nutrition Information per Burger: Calories: 465, Total Fat: 28g, Saturated Fat: 4g, Cholesterol: 35mg, Sodium: 730mg, Potassium: 400mg, Total Carbohydrate: 41g, Fiber: 8g, Protein: 13g

Recipe created by The Culinary Institute of America

Trends in RESTAURANTS

Chefs also appreciate the health and environmental benefits of plant-based protein sources like beans. Today many restaurants now feature beans and other sources of plant-based protein on their menus. If you eat out often, look for plant-based protein options on your favorite restaurant's menu. This Chicken Caesar Salad recipe shows how one well-known chef, cookbook author, and former restaurateur incorporates beans into the dressing.



Restaurant-Style Chicken Caesar Salad with White Bean Dressing

Using beans in the Caesar salad dressing adds plant-based protein, ups the fiber and potassium, and reduces the total fat in this popular salad that appears on thousands of restaurant menus in the U.S.

Makes 6 servings

For the chicken

18 oz. cooked boneless, skinless chicken breast meat, cut into 1/2" cubes

For the Anchovy Garlic Vinaigrette

(Makes ½ cup, but you'll only use ¼ cup.)

½ tablespoon oil-packed anchovies, drained and finely minced	⅓ cup fruity extra virgin olive oil
1 teaspoon finely minced garlic	2 tablespoons red wine vinegar
	¼ teaspoon freshly ground black pepper

For the Caesar Salad Dressing

(Makes 2 cups, but you'll only use 1 ½ cups.)

1-15 oz. can cannellini or white kidney beans, drained and rinsed	2 teaspoons minced garlic
1 tablespoon oil-packed anchovies, drained and finely minced	4 tablespoons grated Parmesan cheese
4 tablespoons fresh lemon juice	⅓ cup extra virgin olive oil
	¼ cup cold water
	½ teaspoon freshly cracked black pepper
	¼ teaspoon kosher salt

(recipe continued on page 8)

For the Croutons

6 oz. whole wheat French baguette, cut into 1" cubes
1 tablespoon extra virgin olive oil
1 teaspoon minced garlic

For the Salad

6 large hearts (18 cups) of romaine, washed, dried, and cut into bite-size pieces
1 oz. shaved Parmesan cheese, for garnish

1. Preheat oven to 350 degrees.
2. Prepare the Anchovy Garlic Vinaigrette that will be used to dress the chicken by combining the anchovies and minced garlic in a small saucepan with 2 tablespoons of the olive oil and warming slightly over low heat. Remove the pan from the heat and whisk in the rest of the olive oil, the vinegar, and the black pepper.
3. In a large bowl, combine the grilled chicken slices with 4 tablespoons of the Anchovy Garlic Vinaigrette, toss well to coat the chicken, and set aside. **NOTE:** It's best to do this step when the chicken is still warm; it will absorb more flavor from the vinaigrette.
4. Prepare the dressing by combining all ingredients for the dressing in a blender or food processor, and blending 2-3 minutes until smooth. Set aside.
5. Prepare the croutons by combining the olive oil and minced garlic in a large mixing bowl. Add the whole wheat bread cubes, and toss well to ensure all cubes get covered with the garlic oil. Place the breads on a baking sheet, and bake for 6 minutes.
6. Prepare the salad by combining the romaine lettuce with 1 ½ cups of the dressing. Toss well, and then divide evenly among six dinner plates. Top with chicken and croutons. Finish each plate with a few pieces of shaved Parmesan.

Nutrition Information per Serving: Calories: 475, Total Fat: 24g, Saturated fat: 5g, Cholesterol: 80mg, Sodium: 565mg, Potassium: 825mg, Total Carbohydrate: 27g, Fiber: 7g, Protein: 37g

Recipe created by Chef Joyce Goldstein, San Francisco, CA.

