

## Dry Beans Provide Many Diets With Nutritional Advantages

By Kathleen Zelman, MPH, RDN

No matter which type of diet your clients follow, the inclusion of dry beans in that diet gives them a nutritional advantage.

Beans are one of nature's treasures. They are a good source of protein, loaded with disease-fighting phytonutrients and cholesterol-lowering fiber, and naturally low in fat, cholesterol, and sodium.

Dry beans are a member of the legume family which also includes peanuts, lentils, and peas. The term "dry beans" refers to many varieties of beans, except green beans, string beans, and soybeans. Legumes once served as a cornerstone for many traditional diets throughout the world.

### Nutritional Goodness

Dry beans are an excellent source of protein and have a lower glycemic index than most starchy foods.<sup>1</sup> Most half cup portions of beans contain 7–9 grams of protein and beneficial nutrients and bioactive compounds, including folate, vitamin B6, niacin, calcium, and phytochemicals. A USDA study on antioxidant levels in more than 100 common foods found that small red beans, red kidney beans, and pinto beans are in the top four.<sup>2</sup>

### RDN Takeaway #1:

**Plant protein from dry beans can improve the nutritional quality of many diets.**

Not only are dry beans nutritious, but they also provide nutrients of concern like fiber, calcium, and potassium. Most Americans get only about 16 grams of fiber per day,<sup>3</sup> less than the daily

recommended 25–38 grams. Eating one cup of cooked beans provides 12 grams of fiber along with a wide variety of good-for-you nutrients.

### Vegan, Vegetarian, and Flexitarian Diets

Dry beans are a staple in all types of vegetarian diets from the plant-only vegan, lacto, ovo, and lacto-ovo diets, to the flexitarian diets that include some animal products.

Dry beans help deliver nutrients that can be missing in vegetarian diets, such as zinc and calcium.<sup>4</sup> Protein needs can also be met with a variety of animal and/or plant foods, including beans, peas, nuts, and soy.

It is important to note that when complete animal proteins are absent, combining proteins at the same meal is no longer necessary as long as all of the essential amino acids are consumed within a day. Complete proteins contain all nine essential amino acids, whereas plant proteins tend to be deficient in one or more.<sup>5</sup>

### Traditional and Weight-Loss Diets

When cutting calories, it is essential to load up on healthy foods. Adding beans is a strategy that gets weight loss results.

When you replace high fat meat with beans, calories are slashed along with saturated fat while improving the nutritional composition of the diet.

Beans are particularly effective because they are nutrient rich and contain the ultimate weight loss trifecta: water, fiber, and protein. Diets that



### Cooking with Dry Beans

Beans are economical, versatile, easy-to-use, and have a long shelf life. They come in three varieties: canned, dry, and frozen. Canned and frozen beans are ready to use and most are available in reduced or low sodium varieties. Rinsing canned beans thoroughly can reduce the sodium content by up to 40 percent.<sup>12</sup>

With the wealth of information available today, it can be easy to add dry beans to your diet. Many recipes explain how to add dry beans to your salads, soups, stews, pasta, side dishes, and dips.

(See *BeanInstitute.com*)

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contain plenty of water, fiber, and protein make you feel fuller faster and ultimately may decrease subsequent energy intake. Beans are digested slowly which keeps you satisfied longer so you can cut calories.

Furthermore, proteins require more energy to digest and metabolize than carbohydrates or fat. Higher protein diets are usually lower in glyce-mic index and glycemic load, thus slowing down absorption and blood sugar/insulin response.<sup>6</sup>

For example, a high protein, low glycemic index diet promoted weight loss maintenance among 773 overweight adults who lost at least 8 percent of their initial body weight over 26 weeks.<sup>6</sup>

### Gluten Free Diets

A gluten free diet can be trendy for people interested in cutting carbs and losing weight, but for those with Celiac disease, it is a medical necessity. Eliminating gluten-containing grains can lead to diets that lack folate, calcium, iron, and fiber.<sup>7</sup> Adding dry beans, which are gluten free, to this diet is an excellent way to pick up the missing nutrients and add carbohydrates.

In addition, bean flours can be used in gluten free diets to replace gluten-containing flours.

### *RDN Takeaway #2:*

**Beans are particularly effective in weight loss diets because they contain the ultimate weight loss trifecta: water, fiber, and protein.**

### Good For The Heart

Research shows that beans are also good for your heart. A 2005 study reported that a ½ cup daily serving of beans was associated with a 38 percent lower risk of heart attack.<sup>8</sup>

In the OMNIHeart study,<sup>9,10</sup> a high protein diet with 0.9 oz. of legumes per day yielded multiple cardiovascular benefits. “A diet high in total protein (25% of energy) that provided 62g of plant protein showed greater reductions in LDL-cholesterol, triglycerides, systolic blood pressure, and diastolic blood pressure compared with a high CHO DASH Diet,” Penn State

researcher, Penny Kris-Etherton, PhD, RDN, said in a recent interview.

### *RDN Takeaway #3:*

**Meeting protein requirements is not a concern when substituting dry beans for animal protein.**

In addition, a diet focusing on plant-based protein sources is beneficial for the prevention of diabetes and cardiovascular disease, said Harvard Professor Frank Hu, MD, PhD, during an educational session at the Academy of Nutrition and Dietetics (AND) annual meeting in October, 2014.

### The Power of Plant Protein

Plant protein foods include legumes, nuts, peanuts, and soy. Compelling scientific evidence on these foods led to one of the four major findings used to develop the *2010 Dietary Guidelines for Americans* (DGA), which encourages the shift of food intake patterns to a more plant-based diet. A plant-based diet was defined as one in which the majority of protein comes from plant products, although animal products are not totally excluded from the diet.<sup>4</sup>

Focusing on dry beans, the DGA recommended an increase in dry bean consumption from one cup to three cups per week. The DGA also said that dry beans were included in both the vegetable and protein groups. One cup of whole or mashed beans equals one cup of vegetables. One quarter cup of cooked beans is a one ounce protein equivalent.<sup>11</sup> 

### About the Author

**Kathleen Zelman, MPH, RDN, LDN**, is an award-winning journalist who has been educating consumers on health and nutrition for more than eleven years. Zelman writes for *WebMD*, *Food & Nutrition Magazine*, and *Environmental Nutrition*. She won the AND’s “Media Excellence Award” and the “Media Award for Excellence in Consumer Journalism” from the Institute of Food Technologists.

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## Beans & Cancer

“The more beans the rats ate, the greater the protection against cancer,” said Dr. Henry Thompson, a Colorado State University researcher, in a recent interview. Thompson is studying the impact that bean consumption can have on cancer.

In addition, Thompson said that his research is showing that even in rats fed the lowest percentage of beans, cancer incidence and multiplicity (number of tumors each rat had) were significantly lower than in rats fed the normal diet.

## “Beans are Go!”

In April, 1981, the NASA crew at the Kennedy Space Center was hard at work preparing for STS-1, the first orbital flight of the space shuttle program. On the day of the launch, test director Norm Carlson brought in his contribution to the crew’s potluck: corn bread and a small crock pot of beans.

After a successful lift-off, the team celebrated and dug in to the food. Carlson’s beans were a hit and quickly disappeared. For the next shuttle launch, Carlson doubled his recipe and brought in two pots of beans. The larger batch was again eaten in no time. He kept bringing in more and more beans and more and more crock pots for each flight.

Finally, sensing that it was getting too difficult to bring in enough crock pots to feed everyone, Carlson switched to an 18-quart cooker and set up shop on the fourth floor of the launch control center, just above the firing rooms. The call, “Beans are go!” came to signal that the shuttle had successfully launched, and it was time to relax and unwind.

## A Year of Beans

The U.N.’s Food and Agriculture Organization has declared 2016 “The International Year of Pulses.” The designation will raise awareness of the dry bean crops and celebrate their roles in food security, health, and sustainability throughout the world.

*Editor’s Note: Dry beans are referred to as “pulses” in some countries.*

## Smart Choice Recipe

### Black Bean, Cilantro, and Avocado Quesadillas

#### Ingredients

- One 15-ounce (425g) can black beans, no salt added, rinsed and drained, liquid reserved (or 1¾ cups cooked)
- 1 medium tomato, diced
- ½ small chile pepper (e.g., jalapeño, Anaheim), finely diced
- 1 Tablespoon fresh lemon juice
- 1 medium garlic clove, minced
- ¼ cup (15g) finely diced fresh cilantro
- 2 teaspoons extra virgin olive oil
- Eight 6-inch (15 cm) corn tortillas
- ¼ cup (28g) shredded cheese, optional
- 1 medium avocado, peeled and cut into thin slices
- Plant-based sour cream, optional



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#### PREPARATION

1. In a small mixing bowl, mash the beans with a potato masher or fork, adding 1 to 2 tablespoons of the reserved bean liquid to make a thick, lumpy mixture.
2. Add the tomato, chile pepper, lemon juice, garlic, and cilantro to the beans and mix well.
3. Heat 1 teaspoon of the olive oil in a large skillet.
4. Spread ½ cup of the bean mixture onto two tortillas smoothly. Place them in the skillet, bean side up. Sprinkle each with 1 tablespoon of cheese, if desired. Top with another tortilla. Cook the quesadillas over medium heat for about 4 minutes, until the bottom side is browned. Turn over carefully and cook the other side for about 4 minutes, until browned.
5. Remove the quesadilla from the skillet and garnish with avocado slices and plant-based sour cream, if desired. Repeat the process again to make 4 quesadillas.

*Variation:* You may substitute canned pinto beans or white beans for the black beans, or use 1¾ cups cooked beans or lentils (any variety). If you don’t like cilantro, you may substitute parsley.

**YIELD:** 4 servings | **SERVING SIZE:** One quesadilla

**ACTIVE PREPARATION TIME:** 17 min. | **TOTAL PREPARATION TIME:** 30 min

#### NUTRIENT INFORMATION PER SERVING:

Calories: 302, Protein: 9g, Carbohydrates: 47g, Fat: 12g, Saturated fat: 2g, Fiber: 12g, Sugar: 4g, Sodium: 282mg

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*Managing Editor's Note: We're glad to share this feedback from DBQ readers. Please send us your thoughts and comments about dry beans to [DBQ@mail.com](mailto:DBQ@mail.com).*

“My clients enjoy the ‘unusual’ recipes for beans, i.e. black bean brownies. If they’ve never cooked with beans, that’s my go-to recipe to get them hooked!”

—Lana Ginn, RDN  
Rogers, AR

“My favorite strategy for encouraging patients to eat more beans is discussing how they can use beans in place of some or all the meat in many dishes.”

—Andrea Nikolai, MPH, RDN, LDN  
Washington, NC

“I know this sounds simple but I always talk to patients about using beans as a ‘side dish,’ in place of potatoes/pasta/rice, for their starch in a balanced meal. I encourage eating three things per meal: protein, fruit and/or vegetable, and high-fiber starch. Then we talk about the benefits of increased satiety, stable blood sugars, and heart/colon health with beans as a high-fiber side dish.”

—Heather Pitschka, RDN, LD, CDE  
Duluth, MN

“What I often tell my clients is that we can all benefit from the nutritional benefits of beans. I often recommend that they try bean soups, beans and rice, hummus with vegetables or pita bread, and bean burritos on whole wheat tortillas, or simply add beans to their salads. I have found that most of the people I work with like at least one of these options.”

—Buck August, MS, RDN  
Paradise, CA

“I love using beans. However, many folks don’t know how easy it is to soak-cook them, especially with just a bit of pre-planning. It’s something I’ve taught my children, all of whom have lived on limited budgets at one time or another and have successfully used beans as part of their protein intake as collegiate athletes.”

—Marcia Christiansen, RDN, LD  
New Ipswich, NH

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