

## Dry Beans Part of New Diet Pattern That Shows Promise in Improving Brain Health

By Christine C. Tangney, PhD, FACN, CNS

Dry beans are part of a new diet pattern that, researchers say, could improve brain health and lower a person's risk of developing Alzheimer's disease (AD).<sup>1</sup>

Rush University (Chicago) epidemiologists have developed the Mediterranean-DASH Intervention for Neurodegenerative Delay (MIND) diet.<sup>2</sup> The diet includes 15 components and features three servings of whole grains, a salad, and another vegetable every day, along with a glass of wine. The diet recommends consumption of beans every other day.

Rush University Nutritional Epidemiologist Martha Clare Morris, and colleagues at Rush, developed the MIND diet. "One of the more exciting things about this study is that people who adhered even moderately to the MIND diet had a reduction in their risk of AD,"<sup>1</sup> said Morris, assistant provost and director of nutrition and nutritional epidemiology, in an article in *Science Daily*.

### RDN Takeaway #1:

Those who followed the MIND diet, even moderately well, had a reduction in their risk of Alzheimer's.

In one report based on a longitudinal study of older adults, the Rush researchers found that the MIND diet lowered the risk of Alzheimer's disease by as much as 53 percent in participants who adhered to the diet rigorously, and by about 35 percent in those who followed it moderately well,<sup>1,3</sup> as part of a healthy lifestyle.



The MIND diet lists 15 dietary components, including ten brain-healthy foods. Green leafy vegetables, other vegetables, nuts, berries, beans, whole grains, fish, poultry, olive oil, and wine are the brain-healthy foods recommended in the diet.

### RDN Takeaway #2:

Beans are included among the ten brain-healthy foods in the MIND diet.

"Beans provide so many health benefits—they are chock full of potassium and, of course, dietary fiber and protein, while being almost devoid of sodium," Morris said.

These recent reports<sup>1,2</sup> are based on findings from the ongoing Rush Memory and Aging

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Project, which began in 1997 among residents in Chicago-area retirement communities and senior public housing complexes. These residents completed an optional “food frequency questionnaire,” which was administered annually from 2004 to 2013. The findings are based on the prospective data from 923 volunteers, with valid dietary information, who were followed for an average of 4.7 years. During that time, a total of 144 cases of AD were identified.<sup>1</sup>

Morris and her co-workers suggest these findings need to be confirmed by other investigator groups in different populations, and in randomized trials in which this dietary plan can be evaluated with respect to incident AD. “That’s the best way to establish a cause-and-effect relationship between the MIND diet and reductions in the incidence of Alzheimer’s disease,” Morris said.

### RDN Takeaway #3:

**Another study suggests that the rate of decline in cognitive function was slower among those assigned the “Mediterranean” diets, supplemented with olive oil or mixed nuts.**

Recently, new evidence from secondary analyses of 334 participants in the so-called PREDIMED trial of Spanish older adults at high risk of cardiovascular disease suggests that the rate of decline in cognitive function was slower among those assigned the Mediterranean diets supplemented with extra virgin olive oil or mixed nuts after a median of 4.1 years.<sup>4</sup> At least one other trial of the Mediterranean diet and aerobic exercise is in progress.<sup>3</sup> Previous evidence for improved cognition was also reported for a short-term weight loss and Dietary Approach to Stop Hypertension (DASH) intervention.<sup>5</sup> All three dietary patterns (MIND, Mediterranean, and DASH), nevertheless, include beans or legumes as a critical component. Additional research is needed, including well-designed trials with whole foods, not supplements or medications. But the results so far on cognitive change and incident AD are encouraging. 🌿

### References

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### About the Author

**Christine C. Tangney, PhD**, is a professor in the Department of Clinical Nutrition, and associate dean of research, College of Health Sciences at Rush University Medical Center in Chicago. She has been teaching future dietitians and other health professionals for more than 30 years. She is the nutritionist/co-investigator for a clinicopathologic study of diet and brain vitamin E levels of the deceased individuals from the Rush University Memory and Aging Study.

### Study to Look at Health Attributes of Beans

“Innovating Beans: Linking Agronomic Aims with Functional Attributes to Increase Dry Bean Consumption for Human Health” has been funded by USDA’s Specialty Crop Research Initiative. Research dollars will be disbursed to USDA’s Children’s Nutrition Research Center in Houston, Texas. The grant will be administered by Dr. Michael Grusak.

The study is a multi-year project aimed at linking the functional performance of bean ingredients with breeding targets and nutrition and health outcomes. Dr. Janice Rueda, ADM Edible Bean Specialties, Inc., co-chairs the project team and looks forward to hearing from members from every part of the bean value chain throughout this process. 🌿

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Please send comments to:

*Dry Bean Quarterly*  
P.O. Box 237  
Jefferson City, MO 65102  
DBQ@mail.com

Northarvest Bean Growers  
Association  
50072 East Lake Seven Road  
Frazee, MN 56544

Tim Courneya,  
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### Take the Pulse Pledge

A 2016 International Year of Pulses initiative, encouraging a commitment to eat more pulses for better health, is supported by recent research. A study published in the *British Journal of Nutrition* last summer found that pulse-based meals reduce inflammatory biomarkers in overweight people with diabetes. *Editor's Note:* Dry beans are called pulses in some countries. A pulse, sometimes called a "grain legume," is the edible seed of certain leguminous plants, like peas, beans, or lentils.

### Bean Videos on YouTube

The Bean Institute has recently posted four cooking videos on YouTube. You can access the videos at [www.youtube.com/c/BeanInstitute](http://www.youtube.com/c/BeanInstitute). The videos feature Carolyn Skelton, a dietitian from Kansas City.



#### Quick Tip for Breakfast!

Make a Southwestern-inspired breakfast. When your eggs are nearly cooked, add black beans, salsa, and your favorite cheese before folding into an omelet.

Please send us your favorite breakfast recipes that include beans to [DBQ@mail.com](mailto:DBQ@mail.com).

## Tempeh Chili

Tempeh is a chunky, tender soybean cake that can be marinated or grilled and added to soups, casseroles, or chili.

#### Ingredients:

- 2 tablespoons soy oil
- 1 medium onion, diced
- 1 clove of garlic, minced
- One 8-ounce package tempeh, crumbled finely
- 1 large red bell pepper, diced
- ½ cup low sodium tomato sauce
- 15-ounce can low sodium kidney beans, drained (or 1½ cups cooked)
- 15-ounce can low sodium black beans, drained (or 1½ cups cooked)
- ½ teaspoon cumin
- 2 teaspoons chili powder
- ¼ teaspoon crushed red pepper flakes (or more to taste)
- Plain soy yogurt



### PREPARATION

1. Heat the soy oil in a large pot over medium heat.
2. Add the onions and garlic, cook for 5 minutes, then add the tempeh.
3. Cook till the tempeh begins to brown (5 to 8 minutes).
4. Add the red bell pepper and cook until tender (another 5 minutes).
5. Add all of the remaining ingredients, along with half a cup of water.
6. Reduce heat to a simmer and cook until the chili is fragrant, warm, and the flavors have come together (25 to 30 minutes).  
If the chili becomes too thick, add more water.
7. Serve with a dollop of soy yogurt and enjoy!

**YIELD:** 6 servings | **SERVING SIZE:** One cup

#### NUTRIENT INFORMATION PER SERVING:

Calories per serving, 375 calories; total fat, 12g; total carbohydrates, 47g; protein, 22g; fiber, 16g; iron (4mg), 22% DV; Vitamin A (1,096mg), 22% DV; Vitamin C (47mg), 78% DV.



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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).*

"I have always extolled the virtues of beans/legumes when talking with a patient about the best ways to increase their fiber intake."

Heidi Kiehl, RDN  
Pleasanton, CA

"I LOVE the recipes on the site (BeanInstitute.com)! I actually gave the website a shout-out during one of my corporate wellness lectures."

Beryl Krinsky, RDN  
Philadelphia, PA

"I always recommend beans as an economical source of protein, fiber, and vitamins."

Mary Jo Nottke, RDN  
Wheaton, IL

"As a renal dietitian, I'm always looking for ways to offer more high-quality protein to my dialysis patients. Dry beans are an excellent, inexpensive way to meet the challenge."

Melissa Ocasio, RDN  
Redlands, CA

*If you would like to share your experiences with other DBQ readers, please respond to any or all of these questions to [DBQ@mail.com](mailto:DBQ@mail.com).*

- ◆ How do you include beans in your breakfast menu?
- ◆ What is your favorite dry bean recipe?
- ◆ Can you tell us your best success story that involves beans?

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