

# More Plants on the Plate Leader's Guide

**Donna Krug**, Family and Consumer Sciences Agent

## Introduction

Research supports eating a variety of plant-based foods to promote health, but most people do not get enough of these nutrient-dense foods. Most plant-based foods are naturally low in calories and fat, but have high amounts of antioxidants and other healthful phytochemicals, as well as fiber. This lesson is designed to help participants improve health by finding more ways to put more plants on the plate.

## Educational goals

As a result of participating in this educational program, the learner will be able to:

- describe several health benefits associated with eating a more plant-based diet;
- understand how adding more whole grains, vegetables, legumes, fruits, nuts, and seeds to the diet may help reduce consumption of solid fats and added sugars;
- identify a number of plant foods that can contribute protein and calcium to the diet;
- increase knowledge about cooking techniques to prepare whole grains, beans and legumes, and fruits and vegetables; and
- discover how eating a diet rich in plant-based foods can be satisfying and delicious.

## Intended audiences

Adult groups of any age, community groups, WIC parents, young parent groups, Family Community Education groups, and others.

Before the lesson, consider these suggestions:

- Read the *More Plants on the Plate* Fact Sheet and Leader's Guide. Familiarize yourself with terms and charts in them.
- Prepare one or more plant-based recipe(s) to share with participants.
- Purchase samples of various whole grains and beans to show the audience.
- Become familiar with nutrition facts labeling on canned and dry beans and legumes.
- In the weeks leading up to teaching the lesson, purchase and prepare several vegetables you have not eaten before. Try different methods of preparation and see which your family likes best. Share this information with participants.
- Visit the K-State Research and Extension website at [www.ksre.ksu.edu/humannutrition](http://www.ksre.ksu.edu/humannutrition) and navigate several links. Become familiar with information available on this site. If time allows, look at other states' extension sites. The University of Nebraska has a good site with several excellent programs and may be found at: <http://lancaster.unl.edu/food>

## Presenting the lesson

Health benefits are gained when people increase their intake of whole grains, vegetables and fruits, and nuts and seeds, while limiting the amount of saturated fat, added sugars, and highly processed foods.

*Since many people may have questions about eating a more plant-based diet, review the questions and answers in the participant's fact sheet. Information here may help answer questions about the amount of calcium and protein recommended for adults.*

### How much calcium do we need?

The recommended level of calcium for adults ages 19 through 50 is 1,000 mg per day. An intake of 1,200 mg per day is recommended for women ages 51 and older and for men ages 70 and older.

### How many grams of protein do we need?

Most people living in the United States get more than enough protein daily. Based on nutrition surveys, Americans eat about 75 grams per day on average. According to the Institute of Medicine, recommended protein intakes range from about 40 to 70 grams each day, depending on gender, age, body weight, and activity level.

Calcium content of selected plant-based foods:		
Food	Serving size	Amount of calcium
Blackstrap molasses	2 tablespoons	400 mg
Collard greens, cooked	1 cup	357 mg
Calcium-fortified orange juice	8 ounces	300 mg
Soy or rice milk, commercial	8 ounces	200 to 300 mg
Kale, cooked	1 cup	179 mg
Bok choy, cooked	1 cup	158 mg
Tahini	2 tablespoons	128 mg

### Aren't beans considered an incomplete source of protein?

Beans are sometimes referred to as an incomplete protein because they do not provide one of the essential amino acids needed to build protein in the body. In reality, this is not a concern. Grains (which lack a different essential amino acid) provide the amino acid missing from dry beans, and vice versa. Together, they complement each other. Examples of common complementary proteins include beans and rice, a bean burrito (beans in a tortilla), and beans and corn. Complementary sources of protein should be consumed over the course of a day, but not necessarily at the same meal.

### Are lentils as nutritious as dried beans, such as kidney, black, or garbanzo beans?

Absolutely! Like all dried beans and peas, lentils are high in fiber. Just ½ cup of cooked lentils provides nearly as much fiber as 2 cups of cooked oatmeal, and much of it is soluble fiber, which helps lower blood cholesterol. Cooked dry beans and lentils are low in fat and high in protein, dietary fiber, B vitamins (such as niacin, thiamin, folate, and B6), and minerals (such as iron, zinc, magnesium, potassium, and selenium). Lentils are the highest in folate of all legumes. Folate is important for producing and maintaining healthy DNA. Like other legumes, lentils provide protein and antioxidant phytochemicals, such as flavonoids. Lentils are easy to prepare since they don't require soaking and can go from pantry to table in about half an hour. Red lentils take less time to cook and become puree-like, so they are great for thickening soups. Green and brown lentils hold their shape. Use them in salads, soups, or entrees.

### Affordability of eating a healthy diet

Common complaints are: "I can't afford to eat lots of fruits and vegetables," or "Healthy foods are expensive." While people argue that the cost of fresh produce and grain products is high, it depends on perspective. A cup of coffee or 20-ounce soda and a pastry can cost \$6 or \$7. In contrast, a container of pre-washed organic salad greens and a 2-pound package of brown rice would cost about the same amount, but the salad and rice can be consumed over several days by several people.

## Practical aspects of eating a healthy diet

Encourage your audience to choose nutrient rich foods at every meal and at snack time. Nutrient-rich foods provide substantial amounts of vitamins and minerals in relationship to the number of calories and the amount of added sugars and fats. Nutrition experts agree that most Americans are overweight, yet undernourished: People consume too many foods that are high in calories but low in nutrient value. As the nation turns its attention to reducing calories, getting the most nutrients from those calories becomes essential.

### A simple chart to help make a person's transition to a healthier diet realistic

(Note to leaders: This would be a good place to share nutrition facts labels from some of the food choices, looking at ingredients as well as fiber, fat, and sugar content.)

<b>Eat MORE often</b>	<b>Eat LESS often</b>
Brown rice	White rice
Stone-ground 100% whole-wheat bread	Enriched white bread
Rolled oats	Refined grains and sugary cereals
Whole fruits	Fruit juice
Baked sweet potato	French fries
Whole grain flour tortillas	White flour tortillas
Legumes: lentils, peas and beans	Highly processed snack foods

What can be done if someone craves a pastry or french fries every day? Think about what is really being craved. Perhaps it is the texture or the saltiness of the fries. Try roasting thin wedges of a sweet potato, tossed with a little extra virgin olive oil, and spiced up with a little garlic powder and sea salt. All you need is the right ingredients, a few foolproof recipes, and a desire to eat wholesome food.

Before people can change their way of eating, they must change their way of thinking. Be adventurous and open-minded. With a diet rich in plant foods, there is no such thing as typical. Consider a sample menu suitable for a cool fall evening: grain-stuffed butternut squash, steamed kale, coleslaw, and baked apples with walnuts. Part of the joy of eating is discovering new things that you love — new flavors you have never tasted and mouthwatering new dishes and meals you can make for yourself and family.

## Conclusion

It is not easy to change eating habits. But gradually, as more vegetables, fruits, grains, and legumes are added to your daily menu, you will discover or rediscover how “real food” looks, smells, and tastes. Reconnect with what you eat and savor each bite for all of the benefits you gain from eating whole food.

### Answers to the pre/post test:

- |      |       |
|------|-------|
| 1. T | 7. F  |
| 2. F | 8. T  |
| 3. F | 9. F  |
| 4. F | 10. T |
| 5. T | 11. T |
| 6. T | 12. T |

## Resources

Institute of Medicine, 2005. *Dietary Reference Intakes for Energy, Carbohydrate, Fiber, Fat, Fatty Acids, Cholesterol, Protein, and Amino Acids (Macronutrients)*. Washington, DC: National Academy Press.

Institute of Medicine, 2011. *Dietary Reference Intakes for Calcium and Vitamin D*. Washington, DC: National Academy Press.

Duyff, Roberta Larson, MS. RD, FADA, CFCS, 2006. *American Dietetic Association Complete Food and Nutrition Guide*, 3<sup>rd</sup> edition, pages 226-227, 241-242, 505-522. Hoboken, NJ: Wiley.

USDA, 2005. *Composition of Foods*, Nutrient Data base for standard reference, [http://www.ars.usda.gov/main/site\\_main.htm?modecode=12-35-45-00](http://www.ars.usda.gov/main/site_main.htm?modecode=12-35-45-00).

## Pre-test and post-test for participants

**Leaders:** Make two copies of these questions, circling pre-test on one and post-test on the other, staple together, and number. Give to participants as they arrive.

- | T   | F   |   |
|-----|-----|---|
| ___ | ___ | 1. Some dark green vegetables are a good source of calcium.   |
| ___ | ___ | 2. Beans must be eaten with rice in the same meal to make the protein in them complete.   |
| ___ | ___ | 3. Quinoa is a fruit grown in the Middle East.  |
| ___ | ___ | 4. Eating lots of complex carbohydrates is one reason for the rise in obesity rates in our country.                                       |
| ___ | ___ | 5. Brown rice, millet, barley, popcorn, and oatmeal are all examples of whole grains.   |
| ___ | ___ | 6. There are virtually no nutrients in animal-based foods that are not adequately provided by plants.                                     |
| ___ | ___ | 7. A juicy steak has more fiber than a serving of popcorn.  |
| ___ | ___ | 8. Nuts and seeds are good sources of protein.  |
| ___ | ___ | 9. Lentils must be soaked before cooking for best results.  |
| ___ | ___ | 10. Most plant-based foods are naturally low in calories and fat.   |
| ___ | ___ | 11. A nutrient-rich food has lots of vitamins and minerals compared to the number of calories it provides.                                |
| ___ | ___ | 12. A person with a chronic disease could alleviate symptoms by eating more plant-based foods and fewer fats, sugars, and refined grains. |

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