

By Donna Krug, Cottonwood Extension District  
Director and Family & Consumer Science 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 and have high amounts of antioxidants and other healthful phytochemicals, as well as fiber. This lesson is designed to help participants improve health by finding 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, and fruits to their diet may help reduce consumption of solid fats and added sugars.
- Identify a number of plant foods that can contribute protein to the diet.
- Increase knowledge about cooking techniques for preparing whole grains, beans and legumes, and fruits and vegetables.
- 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.
- Before the lesson, consider these suggestions:
- Read the *More Plants on the Plate* leader's guide (MF2978) and fact sheet (MF2977) and recipe guide. Familiarize yourself with terms and charts in them.



- Prepare one or more plant-based recipe(s) to share with participants.
- Purchase samples of whole grains, legumes, and beans to show the audience.
- Become familiar with nutrition facts labeling on both canned and dry beans and legumes.
- In the weeks leading up to teaching the lesson, purchase and prepare several vegetables that 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 state Extension sites. Another good site with several excellent programs may be found at: <http://lancaster.unl.edu/food>

### Presenting the lesson:

There are notable health benefits when a person increases their intake of whole grains, vegetables, and fruits, and limits the amount of fat and highly processed foods in their daily menu plan. Plant-based

foods are naturally low in calories and high in fiber, which can help a person maintain a healthy weight and digestive system. Since a healthy digestive system translates to a healthy immune system, overall health benefits are noticeable.

Consider asking the following questions prior to teaching the lesson and then revisit them at the conclusion.

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- \_\_\_ \_\_\_ 1) Dark green vegetables provide many nutrients, including 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 too many complex carbohydrates is a reason for the rise of obesity rates in our country.
- \_\_\_ \_\_\_ 5) Brown rice, millet, barley, popcorn, and oatmeal are all examples of whole grains.
- \_\_\_ \_\_\_ 6) A juicy steak has more fiber than a serving of popcorn.
- \_\_\_ \_\_\_ 7) Nuts and seeds are good sources of protein.
- \_\_\_ \_\_\_ 8) Lentils must be soaked before cooking for best results.
- \_\_\_ \_\_\_ 9) Most plant-based foods are naturally low in calories and fat.
- \_\_\_ \_\_\_ 10) A nutrient-dense food has lots of vitamins and minerals in relationship to the number of calories it provides.

*Since many people may have questions about eating a more plant-based diet, review the Q and A section in the participant's fact sheet. Reviewing these will help reinforce the answers to the questions above.*

## The need for protein

A common misconception about dietary protein is the belief that large amounts of it are needed for good health. The DRI (Dietary Reference Intake) is 0.36 grams of protein per pound of body weight. This amounts to: 63 grams per day for the 175-pound sedentary man and 46 grams per day for the 130-pound sedentary woman.

## Affordability of eating a healthy diet

Many people complain about the high cost of fresh produce and grain products. Common arguments are: "I can't afford to eat lots of fruits and vegetables," or "Healthy foods are expensive." This is not always the case, and there are many tips shoppers can use to save money. A cup of coffee or one 20-ounce soda and a pastry can cost up to \$6 or \$7. In contrast, a container of pre-washed salad greens and a 2-pound package of brown rice would cost around the same amount. These items can be consumed over several days by multiple people. Doing whatever is in your power to prevent chronic diseases by making healthy food choices can save money in the long run.

*Encourage your audience to:* Choose nutrient-dense foods at every meal and at snack time. Foods that provide substantial amounts of vitamins and minerals and relatively fewer calories are nutrient-dense. Nutrition experts agree that most Americans are overweight yet often undernourished; most 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 remaining calories becomes essential.

So, if you crave a serving of French fries once in a while, what should you do? Think about what you are really craving. 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 or herb seasoning. All you need are the right ingredients, a few trusted recipes, and a desire to eat healthful food. (See recipe handout that accompanies this lesson.)

If time allows, introduce the audience to MyPlate Kitchen, a USDA resource that gives the user the chance to save recipes into their own cookbook. Register for a free account at <https://www.myplate.gov/myplate-kitchen/recipes>. Then search recipes for ones you want to use for your family. Click the plus sign on the recipe to add it to your cookbook.

## Conclusion

Many people simply live to eat. For improved health, now is the time to eat to live. Adopting a more plant-based diet requires a change in thinking. As research in nutrition has advanced, it has become apparent that there is room for improvement with the typical American plate. Consider including generous portions of vegetables, fruits, whole grains and lean protein choices at each meal. This gradual transition to a plate with less high-fat and more nutrient-dense choices seems to be central in managing many of the health problems that concern people most.

## Transitioning to a healthier diet

Eat this	Instead of
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 meal in a box
Air-popped popcorn	Cookies

## Resources:

Academy of Nutrition and Dietetics Complete Food and Nutrition Guide, 5th edition. Book by Duyff, Roberta Larson, MS, RD, FADA, CFCS, 2017, pages 52-59, 614, 775.

A Comprehensive Review of the Benefits of and Barriers to the Switch to a Plant-Based Diet, MDPI, Feher, Andras; Gazdecki, Michal; Veba, Miklos; Szakaly, Mark; and Szakaly, Zoltan. Abstract published May 2020.

American Institute for Cancer Research, The New American Plate Cookbook, University of California Press, 2005.

Bulsiewicz, Will, MD, MSCI, Fiber Fueled, 2020.

Campbell, T. Colin, Ph.D. and Campbell, Thomas, The China Study, second edition, 2016.

Collins, Karen, MS, RD, CDN, American Institute for Cancer Research, Nutrition Wise Newsletter, October 19, 2009.

Find contact information for your local extension office at: <https://www.ksre.k-state.edu/about/stateandareamaps.html>

Demas, Antonia, Ph.D., Food is Elementary Curriculum, 2001. <https://www.foodstudies.org/>

Harvard Health Publishing, Why people become overweight, June 24, 2019. <https://www.health.harvard.edu/staying-healthy/why-people-become-overweight>

K-State Research and Extension publications related to food and nutrition: <https://bookstore.ksre.ksu.edu/Category.aspx?id=24&catId=389&Page=1>

Krug, Donna. 2018. Healthy Cooking Styles, Fact Sheet. K-State Research and Extension publication MF3350. <https://bookstore.ksre.ksu.edu/pubs/MF3350.pdf>

National Institute of Health website with Dietary Reference Intakes. [https://ods.od.nih.gov/HealthInformation/Dietary\\_Reference\\_Intakes.aspx](https://ods.od.nih.gov/HealthInformation/Dietary_Reference_Intakes.aspx)

O'Connor, Nancy, Rolling Prairie Cookbook, 1998. Published by: Spring Wheat Nutrition Education Services, Lawrence, KS 66046.

U.S. Department of Agriculture and U.S. Department of Health and Human Services. Dietary Guidelines for Americans, 2020-2025 9th Edition. December 2020. Available at [DietaryGuidelines.gov](http://DietaryGuidelines.gov)

MyPlate Kitchen. Visit MyPlate Kitchen, a USDA resource that gives the user the chance to save recipes into their own cookbook. Register for a free account at <https://www.myplate.gov/myplate-kitchen/recipes>. Then search recipes for ones you want to use for your family. Click the plus sign on the recipe to add it to your cookbook.

## Answers to the test:

- |      |       |
|------|-------|
| 1) T | 6) F  |
| 2) F | 7) T  |
| 3) F | 8) F  |
| 4) F | 9) T  |
| 5) T | 10) T |

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**MF2978 rev. July 2021**

## Evaluation: More Plants on the Plate

Thank you for participating in our program. To help us improve this program, we would like to gather your responses to the questions below. Your participation is voluntary. This information will only be used for evaluation purposes, and you will not be identified in any way by the information you provide.

For each of the items below, please indicate your level of agreement with each statement.

### After participating in this program, I gained knowledge about:

	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree
1. The health benefits of eating a more plant-based diet.					
2. Good sources of protein that come from plants.					
3. Choosing nutrient-dense foods that do not have added solid fat and sugar.					
4. Cooking techniques to create delicious plant-based recipes.					
5. As a result of this program, I have also learned:					
<b>As a result of this program, I will :</b>					
6. Add more plant-based options to my daily menus.					
7. Choose to eat a nutrient-dense food at every meal or snack.					
8. Prepare food using a healthy cooking method that is new to me.					
9. Share this information with someone else.					
10. If you agree above, please describe the actions or changes planned:					

11. I am an adult:  18-29 Years  30-39 Years  40-49 Years  50-59 Years  60-69 Years  70+ Years  
 Prefer not to respond

12. Gender:  Female  Male  Prefer not to say

13. What is your race/family roots? (Check all that apply):  African American, African, Black  American Indian, Native American  Asian  Native Hawaiian, Pacific Islander  Other  
 Prefer not to answer

14. Check the ethnicity that you identify with:  Hispanic/ Latino  Non-Hispanic/ Non-Latino  
 Prefer not to respond

15. Marital Status (please check only one):  Married  Divorced  Separated  Single/cohabitating  
 Widowed  Prefer not to respond