Good Gut Health

K-STATE Research and Extension
Family and Consumer Sciences

Leader's Guide

2026 Annual Lesson Series

Introduction

Your gut health is a delicate balance between trillions of microorganisms — bacteria, viruses, fungi, and yeast — living together in your gastrointestinal (GI) tract. Strong evidence supports the critical role that gut health plays in overall physical and mental health and well-being. Research has shown poor gut health to be linked to gastrointestinal, metabolic, and neurological disorders.

The gut is often called the "second brain" because of its two-directional communication with the brain and nervous system. When the gut microbiome is no longer balanced, diseases and illnesses may develop or symptoms may worsen. Many factors influence your gut health, including birth, where you live, and what you eat. Although you cannot change some factors, like your genetics, many other factors are within your control. Focusing on a fiber-rich diet, reducing stress, and getting adequate sleep are a few ways to support a healthy gut.

Lesson Objectives

After participation in this program, participants will be able to:

- Describe how their gut health may influence overall health. Participants will learn what diseases and conditions have been associated with poor gut health.
- Identify the difference between prebiotics and probiotics, and list foods in each category.
- Prepare a day of meals and snacks that meet dietary guidelines based on their recommended intake.
- Identify the various factors that influence gut health and determine which of those they can control and which of those they cannot control.
- Identify other lifestyle behaviors that can influence gut health outside of diet.

Intended Audiences

The intended audiences for this program are primarily older adolescents, adults, and older adults. These individuals may be:

- interested in improving their overall health,
- interested in improving their gut health, or
- interested in learning how food impacts physical and/or mental health.

This program can be presented to professionals who support individuals with chronic disease or mental health challenges, organize worksite wellness programs or lunch and learns, or provide health-

related information and education. It can also be used to educate policymakers and other community leaders working to improve health outcomes. The program can be presented to these individuals with an emphasis on nutritious foods that support good gut health (e.g., fruits, vegetables, whole grains, nuts, and seeds), which is correlated with better physical and mental health and should be prioritized to be made available and affordable in communities.

Lesson Preparation

1. Read the Good Gut Health Fact Sheet (MF3693) and familiarize yourself with the content, terminology, and pronunciation of words.
2. Review the PowerPoint presentation, including the resources and talking points included in the notes section of the PowerPoint slides.
3. Research and gather information about your target audience, partnering organization, etc. Consider how you will adjust the program delivery, messaging, and points of emphasis based on their needs and interests.
4. Print copies of the fact sheet and print evaluations for participants. If participants will be completing the evaluation electronically, make sure to have at least a couple of printed evaluations for participants who may not be able to access the electronic survey. *
5. Identify what teaching aids and tools you will use during your lesson, such as presentation slides, videos, and interactive activities.

**Extension Agents can create a program activity in PEARS and attach the corresponding evaluation for this program. If participants will submit evaluations electronically, download the QR code and print copies to distribute or attach the QR code to a slide in your presentation.*

Lesson Delivery

Use the fact sheet and the corresponding presentation to provide the introduction and context for participants. During the presentation, teach to accommodate the various adult learning styles, and provide opportunities for discussion and reflection among the participants.

Suggested Activities

Meeting Dietary Fiber Goals

This activity will allow participants to apply the knowledge gained regarding dietary fiber recommendations, which can be done in a group or individually. Fiber content of commonly consumed foods can be found at Food Sources of Dietary Fiber from the *2020-2025 Dietary Guidelines for Americans*.

Group Activity: Provide food models or printed photos of food pictures and the amount of fiber in each item. Ask volunteers to come to the front and build a fiber-rich meal, working toward meeting their recommended daily intake. Ask a few participants to do this to show how many combinations of foods can help them meet their fiber goals.

Individual Activity: Provide the meal plan worksheet to each participant. Ask participants to use the tables in the fact sheet to identify their daily fiber needs and create a day of meals and snacks that meet dietary needs. Once participants have made their meals, have them partner up or work in small groups and share their meals. Ask participants the following questions:

- How easy or difficult was it to prepare high-fiber meals?
- How can you ensure you are getting adequate fiber every day? Was the fiber content in any of the foods listed in Table 2 surprising to you?

After the participants have done either the group or individual activity, provide other examples of high-fiber meals. If resources and time allow, preparing a plate or other visuals, such as photos of meals, can be helpful and provide additional meal ideas for participants.

Taste Testing Probiotic and Prebiotic Foods

Purchase or prepare probiotic or prebiotic-rich foods for participants to sample during the program. Many participants may have never heard of or tried kimchi, kombucha, artichoke, or other less common grains, fruits, and vegetables. Providing a small sample is a great way to allow participants to try a new food in a low-pressure environment.

Confirm how many participants will be in attendance no more than one week in advance to ensure you have enough samples. Plan and purchase enough food and/or beverages and disposables for serving so that all participants have a small sample of each item. Ask participants the following questions:

- Did any new food surprise you regarding how they tasted, good or bad?
- How can we try to incorporate new foods into our diet?

Key Terms

Amino acids: building blocks of proteins.

Antioxidants: a substance that protects cells from damage.

Fructooligosaccharides (FOS): substances that occur naturally in plant foods.

Inulin: a white mildly sweet plant polysaccharide that resists digestion in the stomach and small intestine, is extracted commercially especially from the roots and rhizomes of composite plants (as chicory).

Leaky gut: a condition that happens when the barrier between the gut and bloodstream breaks down due to inflammation in the small intestine.

Microbiome: a community of microorganisms (such as bacteria, fungi, and viruses) that inhabit a particular environment, especially the collection of microorganisms living in or on the human body.

Microbiota: the specific microorganisms found in a particular environment.

Prebiotic: a substance, especially a carbohydrate (such as inulin), that is nearly or wholly indigestible and that, when consumed (usually in food), promotes the growth of beneficial bacteria in the digestive tract.

Probiotic: a microorganism that, when consumed (in a food or as a dietary supplement), maintains or restores beneficial bacteria to the digestive tract.

Psyllium: the seed of a plant that has the property of swelling and becoming gelatinous when moist and helps treat constipation.

Resistant starch: a type of carbohydrate that ferments in the large intestine and feeds "good" gut bacteria.

Short-chain fatty acids: the end products of fermentation of dietary fibers.

Evaluation

After the lesson, ask participants to complete the evaluation electronically or use the paper version. The local Extension Office should manually enter paper evaluation responses into PEARS after the event.

References

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Authors

Chelsea Reinberg, *MPH, RDN - Nutrition, Food Safety, and Health Agent, Johnson County, K-State Research and Extension*

Priscilla Brenes, *MPH, Ph.D. - Extension Assistant Professor and State Extension Specialist Department of Food, Nutrition, Dietetics, and Health*

Reviewers

Christina Holmes, *MS, RD, LD - Extension Specialist, Family and Consumer Sciences*

Bonnie Brewer, *Family & Consumer Sciences Agent, Butler County*

Kathleen Hoss-Cruz, *PhD, MPH, RDN, Instructor Department of Food, Nutrition, Dietetics and Health*

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Evaluation

K-STATE Research and Extension

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Please take a moment to respond to the questions below.

Date and location of presentation: _____

My county of residence: _____

Gender: ☐ Female ☐ Male ☐ Non-binary ☐ Prefer not to answer

Race: ☐ American Indian or Alaska Native ☐ Asian ☐ Black or African American
☐ Native Hawaiian or Pacific Islander ☐ White ☐ Prefer not to respond

Ethnicity: ☐ Hispanic/Latino ☐ Non Hispanic/Latino ☐ Prefer not to respond

Age: ☐ 18-29 years ☐ 30-59 years ☐ 60-75 years
☐ 76+ years ☐ Prefer not to answer

1. I increased my knowledge of how my gut health can impact my overall health.

Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
1	2	3	4	5

2. I increased my knowledge of factors that influence gut health.

Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
1	2	3	4	5

3. I increased my knowledge about prebiotics and probiotics.

Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
1	2	3	4	5

4. I am confident I can include high-fiber foods daily in meals.

Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
1	2	3	4	5

5. Please list 2 dietary or lifestyle behaviors you plan to modify because of this program to improve your gut health.

6. Please share any additional comments or suggestions.