



FIBER, FOOD, AND MOOD:

WHAT CAN FIBER DO
FOR YOU?

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What does this look like?

Question

- 1.** What really is fiber and where does it come from?
- 2.** Will fiber really affect my mood and how?
- 3.** How do you know how much fiber you really need?
- 4.** How can we add fiber to our diets?
- 5.** What does a day of adequate fiber look like?

Scan here for Pre Survey



<https://tinyurl.com/np23-fiber-pre>



FIBER OVERVIEW

01

Day in the Life: College Edition



Breakfast 3 gm

1 Cup Honey Nut Cheerios
and ½ cup skim milk



Snack

Less than 1 gm

1 oz Flamin' Hot Cheetos



Snack 2 gm

1 pack of Nature Valley
Granola Bars



Dinner

6 gm

1 box Kraft mac and cheese



Lunch 3 gm

1 frozen burrito



Dessert

0 gm

⅔ cup chocolate Ice cream

Total grams of fiber:14

What is Fiber?

According to the Mayo Clinic:

Dietary fiber, also known as, roughage or bulk, includes the parts of **plant foods** your body can't digest or absorb . . . fiber **isn't digested** by your body. Instead, it passes relatively intact through your stomach, small intestine and colon and out of your body.

Fiber is:

- found in plant foods, not animal products or meats.
- not digested or absorbed, instead it passes through your body.



DIETARY FIBER



What is Fiber?



Image: <https://www.nugofiber.com/blog/two-types-of-dietary-fiber/>

Soluble vs. Insoluble

Soluble fiber

- Dissolves in water to form a gel-like material
- Can help lower blood cholesterol and glucose levels.

Insoluble fiber

- Promotes movement of food through the digestive system
- Increases stool bulk, so it can help with constipation or irregular stools



FOODS WITH FIBER



02



Where can you find fiber?



Fruits



Vegetables



Grains



Whole-Grain
Bread




Beans, Nuts
and Seeds




Fiber
Supplements

Insoluble Fiber-Rich Foods	Soluble Fiber-Rich Foods
Whole-wheat/whole-grain products (brown rice, quinoa)	Oatmeal
Leafy greens, root vegetables (parsnips, potatoes, carrots), cauliflower, green beans	Nuts
Seeds (fruits with edible seeds)	Beans, lentils, chia seeds
Avocado	Apples, blueberries, citrus fruits
Skin of fruits and vegetables	Barley



BENEFITS OF FIBER



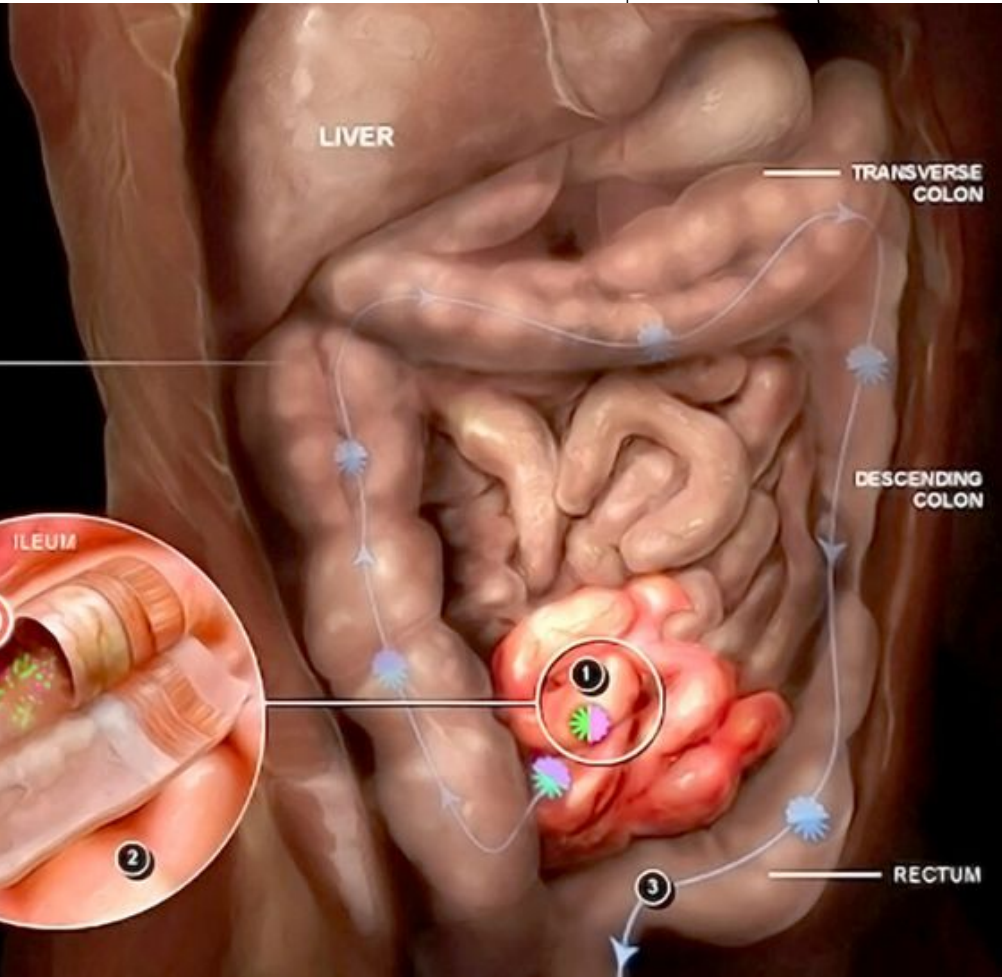
03



Benefits of Fiber

- Helps add bulk to your stool
- Makes feel full longer
- Aids in achieving healthy weight
- Promotes a healthy gut microbiome
- Lowers bad cholesterol levels
- Helps control blood sugar levels

DIGESTIVE SYSTEM

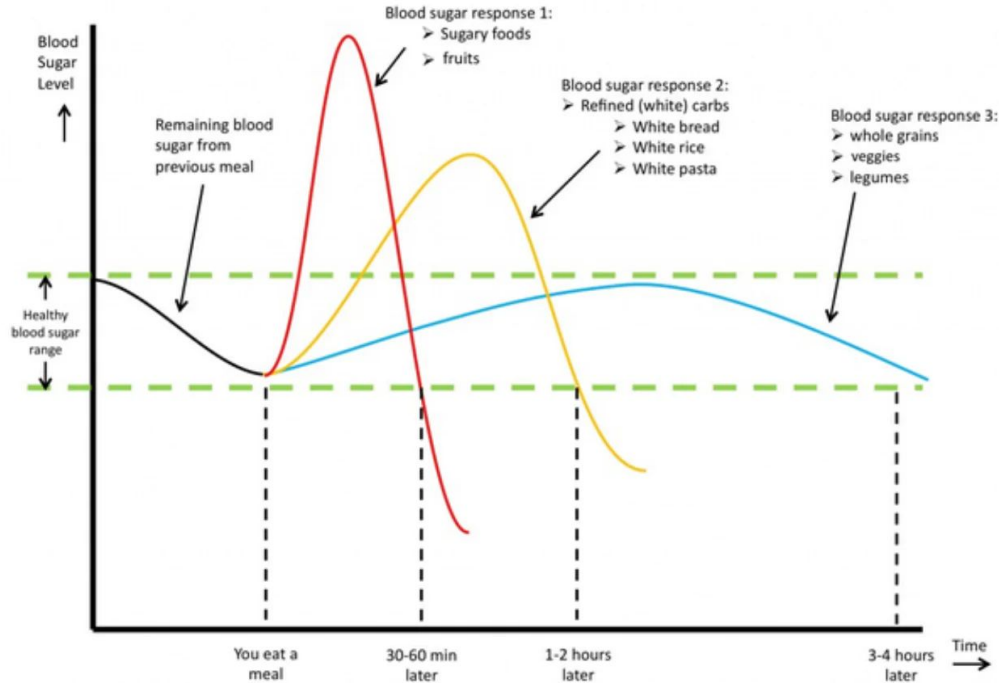




FIBER AND MOOD

04

Fiber, Blood Sugar, and Mood



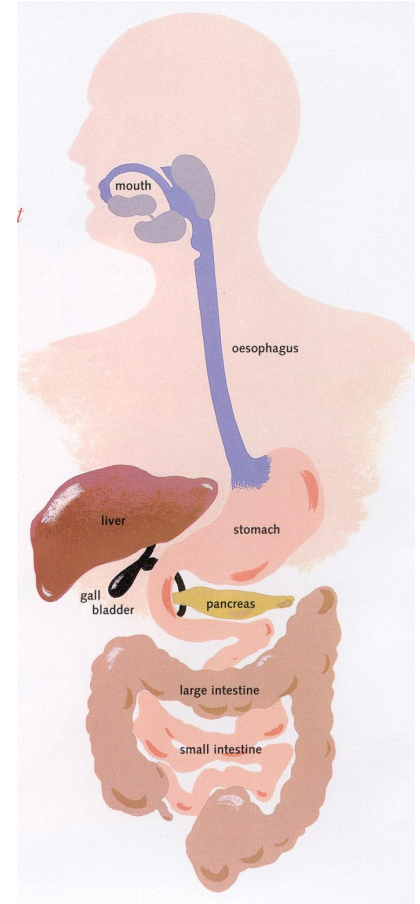
Fiber, Blood Sugar, and Mood

- Foods with fiber help stabilize blood sugar
- Stable blood sugar levels that avoid spikes and dips support consistent energy and mood, rather than highs and lows
- Eating carbohydrates that contain fiber consistently throughout the day is one way to support your mood through consistent blood sugars

Fiber and the Gut

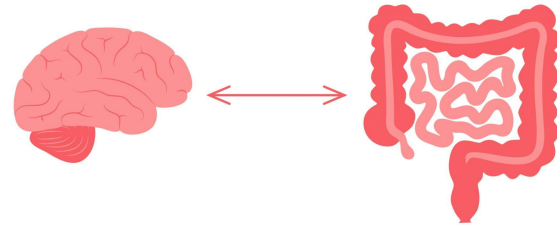
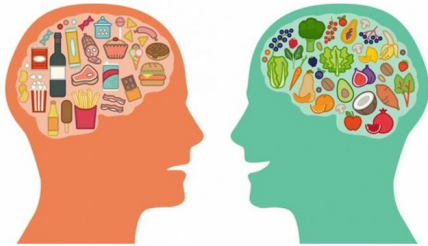
Gut: gastrointestinal (GI) tract

- The gut is filled with trillions of both good and bad bacteria
 - Good bacteria (probiotics) supports immunity, decreases inflammation, and helps with digestion
 - Bad bacteria may cause chronic disease, obesity, and inflammation
 - The gut microbiome
- **Fiber promotes the growth of good bacteria in your gut**
 - Some fiber such as insoluble fiber can act as a prebiotic (food for the bacteria in your gut)



Connection Between the Gut and Brain

- The gut and brain are connected/constantly sending signals to each other
 - Some ways they are connected include hormones that let your gut tell your brain that you are hungry
 - Significant data showing that gut bacteria influences the interactions between the gut and brain
 - Imbalance in the gut and inflammation



The Research


- Based on our analysis of the research, most studies looking at fiber's effect on the brain utilized surveys of participants' typical eating patterns and mental health quality of life or patient health questionnaire

"A prospective analysis of dietary fiber intake and mental health quality of life in the Iowa Women's Health Study" (2019)

- 14,129 post-menopausal women in the Iowa Women's Health Study
- Examine association between dietary fiber intake and mental health-related quality of life (QOL) scores
- Used the **Harvard Food Frequency Questionnaire (FFQ)** to determine dietary intake for the previous year and mental health-related quality of life (QOL) scores as a proxy for depressive symptoms
- Found dietary fiber was positively associated with mental health quality of life scores later in life

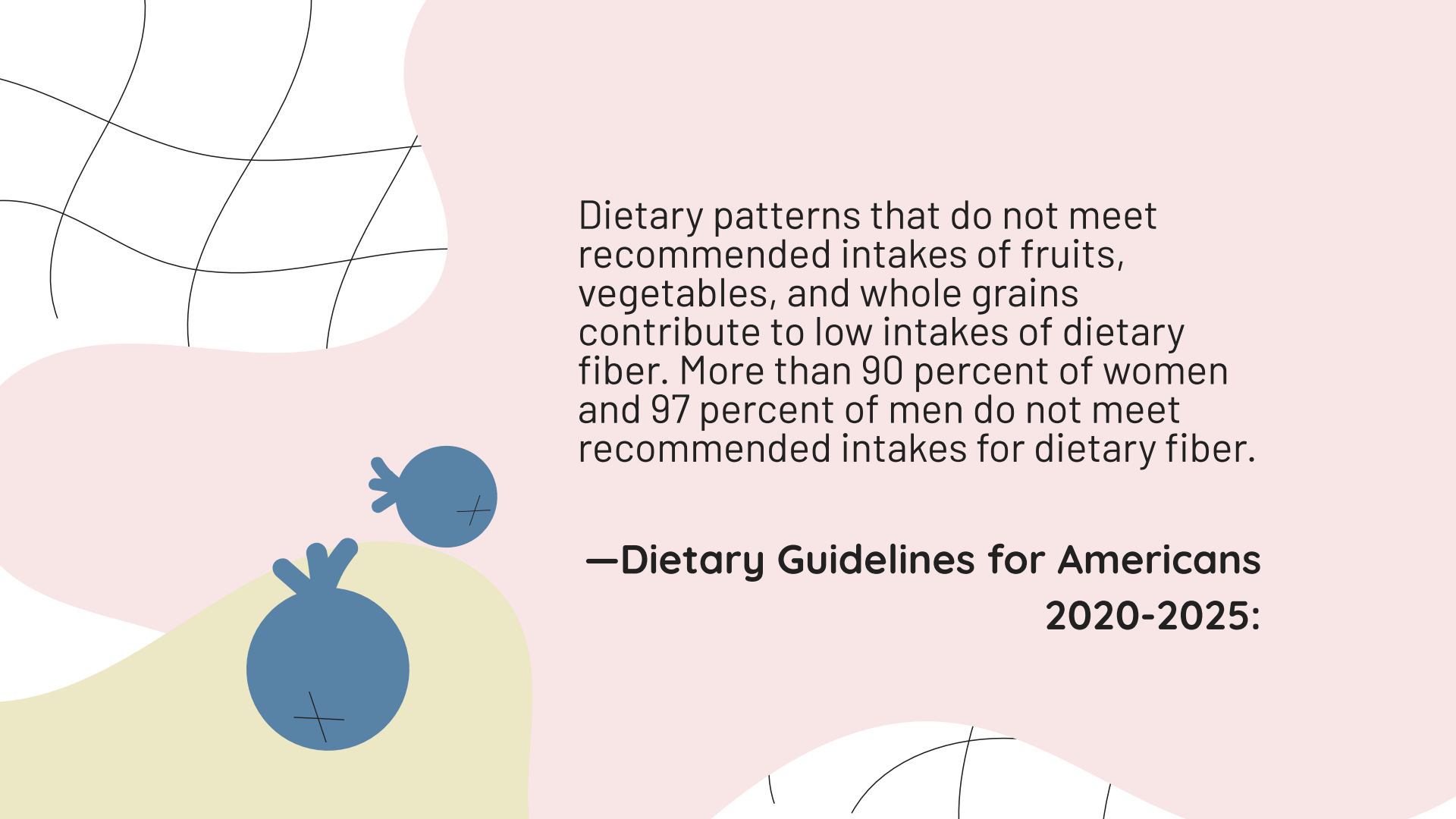
Research Summary

- Since many of these findings are based on surveys, they cannot prove causation and may not accurately capture the relationship of fiber and mood
 - “A fiber-deprived diet causes cognitive impairment and hippocampal microglia-mediated synaptic loss through the gut microbiota and metabolites”
 - fiber-deprived diet leads to cognitive impairment through altering the gut microbiota-hippocampal axis
- Findings indicate that eating certain foods that contain dietary fiber could be positively associated with scores for depression and patient mental health
 - This could mean that not all types of fiber from all foods have the same impact on mood.



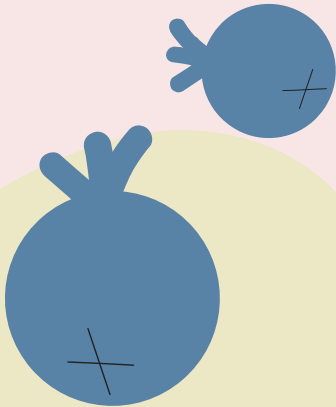
HOW MUCH FIBER?

05



Dietary patterns that do not meet recommended intakes of fruits, vegetables, and whole grains contribute to low intakes of dietary fiber. More than 90 percent of women and 97 percent of men do not meet recommended intakes for dietary fiber.

—**Dietary Guidelines for Americans**
2020-2025:



Fiber Recommendations

Table A1-2
Daily Nutritional Goals, Ages 2 and Older

MACRONUTRIENTS, MINERALS & VITAMINS		Age-Sex Groups												
		M/F 2-3	F 4-8	F 9-13	F 14-18	F 19-30	F 31-50	F 51+	M 4-8	M 9-13	M 14-18	M 19-30	M 31-50	M 51+
Calorie Level Assessed	Source of Goal ^a	1,000	1,200	1,600	1,800	2,000	1,800	1,600	1,400	1,800	2,200	2,400	2,200	2,000
Fiber (g)	14g/ 1,000 kcal	14	17	22	25	28	25	22	20	25	31	34	31	28

Getting the Right Amount of Fiber

- **Space out portions;** try to include fiber-rich foods in every meal and snack
- **Increase slowly;** give your gut the chance to get used to the new amounts of fiber
- **Hydrate;** the more fiber you eat, the more fluid you need

Nutrition Facts	
8 servings per container	
Serving size	2/3 cup (55g)
Amount per serving	
Calories	230
% Daily Value*	
Total Fat 8g	10%
Saturated Fat 1g	5%
Trans Fat 0g	
Cholesterol 0mg	0%
Sodium 160mg	7%
Total Carbohydrate 37g	13%
Dietary Fiber 4g	14%
Total Sugars 12g	
Includes 10g Added Sugars	20%
Protein 3g	
Vitamin D 2mcg	10%
Calcium 260mg	20%
Iron 8mg	45%
Potassium 235mg	6%
<small>* The % Daily Value (DV) tells you how much a nutrient in a serving of food contributes to a daily diet. 2,000 calories a day is used for general nutrition advice.</small>	



Tips for Adding Fiber



06



Increasing Fiber in Your Diet

1. Add a fruit or vegetable with meals or as snacks
 - a. Fruits/vegetables on the go
2. Choose whole grain foods: whole-grain breads, whole-grain pasta, oatmeal, brown rice, quinoa
3. Leave the peel on fruits and vegetables
4. Snack on high-fiber foods: nuts, whole-grain crackers, fruits, vegetables, hummus



Our Recommendations

- Add fiber in gradually
 - Increased fiber can cause bloating, gas, diarrhea, or constipation
 - Make changes for a lifetime
- Choose foods that you enjoy or try new ones
 - Make it fun and enjoy the whole foods you eat
- Food first, before supplements
 - Whole foods offer benefits that not all supplements can replicate

Day in the Life: Bulked Up



Breakfast 10 gm

1 packet of Instant High Fiber Oatmeal



Snack

5 gm

Whole grain crackers with 2 tablespoons of hummus



Snack 6 gm

1 oz of mixed nuts and an orange



Dinner

4 gm

½ cup brown Rice and 3 oz California stir fry vegetables



Lunch 12 gm

Southwestern Salad



Dessert

8 gm

½ cup of chocolate chia seed pudding

Total grams of Fiber: 45

Conclusion

1. Fiber can be found in a variety of plant-based foods
2. Fiber containing foods increase the good bacteria in your gut
3. The health of your gut is deeply connected to how your brain functions
4. Good bacteria in your gut has been shown to aid in the treatment and prevention of mental health illness such as anxiety and depression



Resources

www.dietaryguidelines.gov/

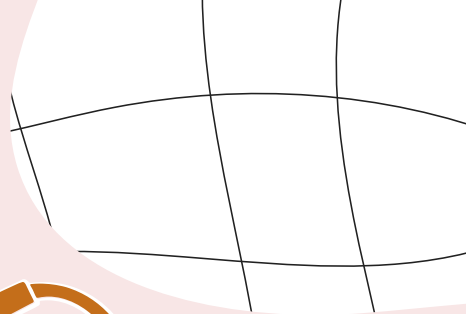
Dietary Guidelines for Americans 2020-2025

www.fda.gov/food/nutrition-education-resources-materials/new-nutrition-facts-label

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4425030/#:~:text=However%20%20gut%20bacteria%20can%20be,cancer%20%5B8%2C9%5D>

<https://pubmed.ncbi.nlm.nih.gov/31787141/>

PANEL DISCUSSION



OUR TEAM



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Scan here for Post Survey



<https://tinyurl.com/np23-fiber-post>



THANKS!

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