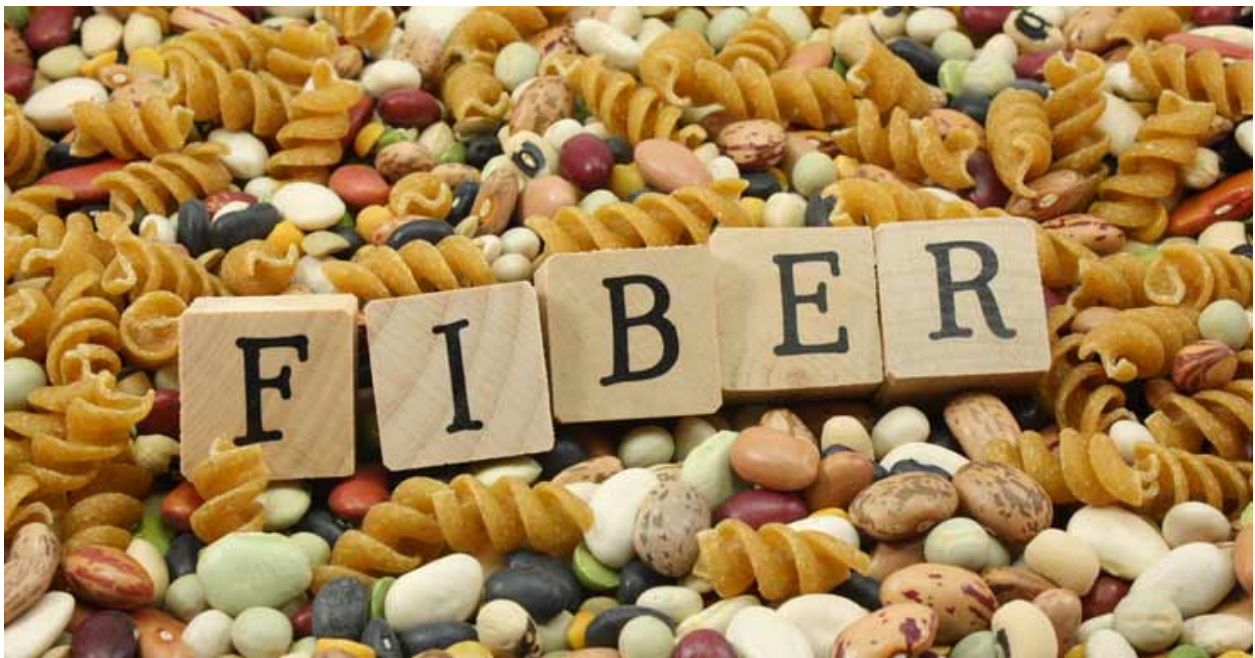


What is the High Fiber Diet?



High Fiber Dietary Handout Created For



Gastroenterology Associates of Columbus
Columbus, Mississippi



What is it?

Dietary fiber consists of soluble and insoluble fibers and come from a variety of foods including fruits, vegetables, legumes, and grains.

Soluble fiber

A group of substances made of carbohydrates that dissolve in water. Foods in this category include fruits, oats, barley, legumes, root vegetables and certain types of fruits. Soluble fiber serves as a food source for bacteria living in the colon. These bacteria provide many health benefits. Eating a diet with high amounts of soluble fiber has been shown to:

- Reduce the risk of coronary artery disease and stroke
- Reduce the risk of developing Type 2 Diabetes
- Help control blood glucose levels in those with diabetes

Insoluble fiber

This type comes from plant cell walls and doesn't dissolve in water. Foods in this category include wheat, rye, other grains, nuts, seeds, potatoes, and many green vegetables. Insoluble fiber isn't consumed by the bacteria in the colon, rather this type retains water and helps promote larger, bulkier, and more regular bowel activity. Eating a diet with high amounts of insoluble fiber has been shown to:

- Treat constipation, hemorrhoids, chronic diarrhea, and fecal incontinence
- Promote bowel regularity

In addition, research supports that consuming a high-fiber diet, with both soluble and insoluble fiber, is associated with weight loss. A diet that is higher in fiber is more likely to produce a sense of fullness earlier than diets based on meat and animal products, thus reducing the amount of calories consumed per meal.

Prebiotic Soluble Fiber

This is a relatively new category of soluble plant fibers, also called inulin or fructan. This type of fiber can be fermented by good colon bacteria and include foods such as asparagus, yams, onions, garlic, bananas, leeks, agave, wheat, rye, and barley. In addition, there is new research showing that prebiotic soluble fiber is associated with weight loss by changing the amount and type of hormones produced in the gut walls.^{1,2}

SOURCES OF DIETARY FIBER



How Much Fiber?

Current dietary fiber recommendations differ for men and women and based on age.

	<u>Under age 50</u>	<u>Over age 50</u>
Women:	25 grams per day	21 grams per day
Men:	38 grams per day	30 grams per day

Dietary Sources of Fiber

The amount of dietary fiber can be found on packaged and/or processed foods in the nutrition label under the total carbohydrates. In addition, many unprocessed foods like fresh fruits and vegetables contain dietary fiber. To the right is a list of some high fiber foods and the amount of fiber each one has.

- Whole Grains: wheat, oat, and wild or brown rice are the most product. Avoid purchasing white breads, pastas, or baked goods as most of the fiber and vitamins have been removed. Also avoid products made from enriched grains, this simply means that a few vitamins have been added but most of the fiber has been removed.
- Fruits: the skins contain most of the insoluble fiber while the pulp contains the soluble portion; it is important to eat a variety of fruits.
- Vegetables: focus on eating a variety of vegetables, both fresh and frozen types.¹

HIGH FIBER FOOD	SERVING	FIBER AMOUNT IN GRAMS
GRAINS, CEREAL AND PASTA		
WHOLE-WHEAT PASTA	1 CUP	6.2
PEARLED BARLEY	1 CUP	6.0
WHOLE-WHEAT BREAD	2 SLICES	6.0
QUINOA	½ CUP	5.0
WHOLE-WHEAT ENGLISH MUFFIN	1 WHOLE	4.4
OATMEAL	½ CUP	4.0
BROWN RICE	1 CUP	4.0
POPCORN, AIR-POPPED	3 CUPS	3.5
VEGETABLES		
ARTICHOKE	1 MEDIUM	10.3
LIMA BEANS	½ CUP	6.6
BROCCOLI	1 CUP	5.1
CAULIFLOWER	1 CUP	5.0
GREEN PEAS	½ CUP	4.4
BRUSSELS SPROUTS	1 CUP	4.1
COLLARD GREENS	½ CUP	4.0
SWEET CORN	1 CUP	4.1
SPINACH, FRESH	1 CUP	4.0
FRUIT		
RASPBERRIES	1 CUP	8.0
FIGS, DRIED	½ CUP	8.0
BLACKBERRIES	1 CUP	8.0
PRUNES, DRIED	½ CUP	6.0
PEAR WITH SKIN	1 MEDIUM	5.5
APPLE WITH SKIN	1 MEDIUM	4.4
BLUEBERRIES	1 CUP	4.0
LEGUMES, NUTS AND SEEDS		
WHITE BEANS, SMALL	1 CUP	19
SPLIT PEAS	1 CUP	16.3
KIDNEY BEANS	1 CUP	16
LENTILS	1 CUP	15.6
BLACK BEANS	1 CUP	5.0
GARBANZO (CHICK PEAS)	1 CUP	12
FLAXSEED (GROUND)	1 TABLESPOON	2
SUNFLOWER SEEDS	¼ CUP	3.9
ALMONDS	1 OZ.	3.5

Other Sources of Fiber

The best way to meet the recommended amounts of dietary fiber is through foods since these also have many nutrients. If you find that getting enough fiber during the day is difficult, fiber supplements can help boost your fiber intake. There are a lot of supplement options, most can be found at grocery stores or pharmacies.

Sample Meal Options

Breakfast:

- Rolled oats with berries, honey, and sliced almonds
- Breakfast sandwich on a whole grain English Muffin
- Whole-grain bran flake cereal with banana and skim milk
- Shredded wheat cereal with milk and a side of fresh fruit
- Blueberry bran muffins and scrambled eggs



Lunch:

- Turkey and cheese melt on whole-grain bread
- Southwestern salad with chicken, black beans, and corn
- Tuna salad on a whole grain pita bread with a side salad
- Whole grain pasta salad with cooked spinach
- Lentil soup in a whole grain bread bowl



Dinner:

- Grilled fish with vegetable-packed side salad
- Baked chicken with lima beans and brown rice
- Homemade pizza made with a whole grain crust
- Chili with whole grain bread
- Stuffed baked sweet potatoes with the skin on



Snacks:

- Fresh raspberries with ¼ cup unsalted dry-roasted almonds
- Sliced bell peppers and carrots with hummus
- Apple with nut butter
- Dried fruit and nut trail mix
- Air-popped popcorn



More Meal Ideas & Blogs

1. Fiber is the Future
<http://fiberisthefuture.com/>
A great blog highlighting the health benefits of dietary fiber with lots of fiber-related recipes.
2. High-Fiber Recipes from Food Network
<https://www.foodnetwork.com/topics/high-fiber-recipes>
They have a collection of over 500 high-fiber recipes to switch up your weekly meals.
3. Cooking Light
<https://www.cookinglight.com/>
They have great recipes and tips on how to make high-fiber meals to maximize the health benefits!



FIBER IS THE FUTURE

Apps

MyFitnessPal

Input your foods and it will tell you the amount of fiber you have eaten. You can also customize goals to change the amount of fiber intake you want to reach.

Cost: FREE

Kellogg's Fiber Tracker

There is both a mobile and a desktop version to track daily fiber intake.

Cost: FREE

GoodFatApp

This is a calorie counter and food tracker to monitor daily fat, protein, and fiber consumption.

Cost: FREE



High Fiber Brands

Bob's Red Mill Organic High Fiber Pancake Mix

Van's Organic Flax Frozen Waffles

Rudi's Gluten-Free Plain Tortillas

Fiber One cereals

Post Shredded Wheat cereal

Post Grape Nuts cereal

Fiber One protein bars and other snacks

Lara bars

KIND bars

Justin's Nut Butter Packs

SkinnyPop Individual Packages



High Fiber Swaps

Fresh Oranges vs. Orange Juice

Brown Rice vs. White Rice

Whole Grain Bread vs. White Bread

Hummus vs. Ranch

Unpeeled potatoes vs. peeled potatoes

Popcorn vs. A bag of chips

Whole-Wheat pasta vs. White pasta

Legumes vs. Meat

Whole fruits vs. Peel fruits

Oatmeal vs. Breadcrumbs

Whole-Wheat flour vs. White flour

Spaghetti Squash vs. Regular pasta

Sweet potato fries vs. White potato fries

Avocado vs. Mayo

Kale chips vs. Potato chips

Black bean brownies vs. Box brownie mix

High Fiber Swaps

EASY WAYS TO INCREASE
YOUR DAILY FIBER INTAKE



EAT WHOLE FRUIT



EAT ALMONDS/NUTS



EAT SWEET POTATOES



EAT BROWN RICE



EAT HUMMUS



INSTEAD OF JUICE



INSTEAD OF CANDY



INSTEAD OF WHITE POTATOES



INSTEAD OF WHITE RICE



INSTEAD OF REGULAR DIP



Tips

Have Support

Starting on this journey can be stressful so make sure you have support! Talk with your friends and family, having their support goes a long way towards sticking with a high fiber diet. Also be sure to talk with your physician about any concerns or questions you have!



Be Ready

Get the best, up to date resources to help you on this journey. There are so many grocery lists, apps, recipes, and blogs that have great information to help identify high fiber foods.

READ LABELS!

It is important to make sure you are reading all labels to look for foods that are high in dietary fiber!

Have Some Alternatives

Transitioning to a high fiber diet can be easier if you have some alternatives to swap out low fiber foods in normal recipes! Check out the swaps on the previous page for some ideas on how to increase your amount of dietary fiber during the day!

Nutrition Facts	
Servings Per Container 4	
Amount per serving ½ cup	
Calories 90	Calories from Fat 30
% Daily value	
Total Fat 3g	5%
Saturated Fat 0g	0%
Trans Fat 0g	0%
Cholesterol 0mg	0%
Sodium 300mg	13%
Total Carbohydrates 13g	4%
Dietary Fiber 3g	12%
Sugars 3g	12%
Protein 3g	4%
Vitamin A 80%	Vitamin C 80%
Calcium 4%	Iron 4%

Meal Plan

Making changes to your diet seem overwhelming and time consuming. Taking time at the beginning of the week to meal plan and write out a grocery list can save time later in the week and ensure you have all ingredients you need.

> LET'S EAT! <

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
BREAKFAST							
LUNCH							
DINNER							

GROCERY LIST:

References:

1. High Fiber Diet. Jackson Siegelbaum Gastroenterology. <https://www.gjcare.com/diets/high-fiber-diet/> Accessed September 10, 2018.
2. Patient Education: High-fiber diet. Up to Date. <https://www.uptodate.com/contents/high-fiber-diet-beyond-the-basics#H1> Accessed September 10, 2018.

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High Fiber RECIPE

Strawberry Shortcake



Ready in **25 minutes**

Serves **8**

Ingredients

For the Shortcake:

- 1 $\frac{3}{4}$ cups whole-wheat pastry flour, sifted
- $\frac{1}{4}$ cup all-purpose flour, sifted
- 2 $\frac{1}{2}$ tsp low-sodium baking powder
- 1 tbsp sugar
- $\frac{1}{4}$ cup margarine
- $\frac{3}{4}$ cup milk

For the Topping:

- 6 cups fresh strawberries, hulled and sliced
- $\frac{3}{4}$ cup plain fat-free yogurt

Preparation

1. Preheat oven to 425 degrees.
2. In a large mixing bowl combine flours, baking powder, and sugar. Then use a fork or pastry cutter to cut margarine into dry ingredients, mixture should resemble coarse crumbs. Add the milk and stir until a moist dough forms.
3. Turn the dough onto a floured surface and knead 6-8 times, until dough is smooth and manageable. Using a rolling pin, roll dough until $\frac{1}{4}$ -inch thick.
4. Cut into 8 circles and place on a baking sheet. Bake for 10-12 minutes or until golden brown.
5. Transfer biscuits onto cooling rack.
6. When ready to serve top each with strawberries and a dollop of yogurt.

Tips

Each shortcake has 6g of dietary fiber!

Recipe from Mayo Clinic

High Fiber RECIPE

Breakfast Quesadillas



Ready in **20 minutes**

Serves **8**

Ingredients

- 10 large eggs
- 1 tbsp milk
- ½ tsp salt
- ½ tsp garlic powder
- ½ tsp ground black pepper
- ½ tbsp olive oil
- 5 cups fresh spinach, either torn or chopped
- 15 ounce can of cannellini beans
- 1 ½ cups grated cheese
- 8 medium whole wheat tortillas

Preparation

1. In a large bowl whisk eggs, milk, salt, garlic powder, and pepper.

2. Add the olive oil to a large nonstick skillet and heat over medium heat. Add spinach and cook until it softens, about 1 minute. Add the beans, reduce heat to medium low, and then add the egg mixture. Cook eggs on low, occasionally moving them around the pan to cook evenly. Cook until eggs are scrambled, about 5 minutes.
3. Divide the shredded cheese between all the tortillas. Top each one with egg mixture, also evenly divided. Fold the tortillas in half.
4. Increase heat to medium and coat skillet with nonstick cooking spray. Cook quesadillas on both sides until golden brown and cheese is melted, about 5-6 minutes.
5. Cut into wedges and serve warm.

Tips

These quesadillas can be made ahead of time and frozen for an easy fiber-filled breakfast! Once frozen they can be warmed in the microwave for 2-3 minutes or until heated through.

Each quesadilla has 6 grams of dietary fiber!

Recipe from Well Plated

High Fiber RECIPE

Sweet Potato Tacos



Ready in **15 minutes**

Serves **2**

Ingredients

- 2 medium sweet potatoes
- 1 cup black beans
- 1 tsp cumin
- 1 tsp chili powder
- ¼ cup chopped green onion
- 1 tsp lime juice

Preparation

1. Wash potatoes and pierce with a fork.
2. Wrap potatoes in a damp paper towel and cook in microwave for 8-10 minutes or until cooked through.
3. Let cool slightly, then cut each potato in half and scoop out flesh, leaving just enough to keep skin intact. Set aside.
4. In a small saucepan, combine sweet potato insides, black beans, cumin, chili powder, and lime juice over medium heat. Cook until heated through, about 5 minutes.
5. Transfer sweet potato and bean mixture into sweet potato skins.
6. Top with desired toppings (sliced avocados, sour cream, chopped tomatoes) and serve.

Tips

Sweet potato skins are a great source of fiber, especially in this meal when combined with black beans for a whopping 11 grams of dietary fiber per serving!

Recipe from Sinful Nutrition

High Fiber RECIPE

Chicken and Sundried Tomato Orzo



Ready in **32 minutes**

Serves **4**

Ingredients

- 8 ounces whole-wheat orzo
- 1 cup water
- ½ cup sun-dried tomatoes
- 1 medium tomato, diced
- 1 clove garlic, minced
- 3 tsp fresh marjoram, chopped
- 1 tbsp red wine vinegar
- 1 ⅔ tbsp olive oil, divided
- 4 boneless, skinless chicken breasts
- ¼ tsp salt
- ¼ tsp ground black pepper
- 9 ounces artichoke hearts
- ½ cups Romano cheese, finely shredded

Preparation

1. Cook orzo in a large saucepan of boiling water until tender, about 8-10 minutes. Drain and rinse.
2. Meanwhile, place 1 cup water, ¼ cup sundried tomatoes, diced tomato, garlic, 2 tsp marjoram, vinegar, and 2 tsp oil in a blender. Blend until just a few chunks remain.
3. Season both sides of chicken with salt and pepper. Heat 1 tbsp olive oil in a large skillet over medium-high heat. Add the chicken and cook until golden brown and no longer pink in the middle. Transfer to a plate.
4. Pour the tomato sauce into the pan and bring to a boil. Measure out ½ cup sauce to a small bowl. Add the remaining ¼ cup sun-dried tomatoes to the pan along with the orzo, artichoke hearts, and 6 tbsp Romano cheese. Cook until heated through, 1-2 minutes while stirring constantly. Divide among four plates.
5. Slice the chicken. Top each portion of pasta with sliced chicken, 2 tbsp of the reserved sauce, and a sprinkling of cheese and marjoram.

Tips

Each serving as 10 grams of dietary fiber!

Recipe from Everyday Health

High Fiber RECIPE

Blueberry Bran Muffins



Ready in **35 minutes**

Serves **12**

Ingredients

- 1 ½ cups wheat bran
- 1 cup milk
- ½ cup unsweetened applesauce
- 1 egg
- ⅔ cup brown sugar
- ½ tsp vanilla extract
- ½ cup all-purpose flour
- ½ cup whole wheat flour
- 1 tsp baking soda
- 1 tsp baking powder
- ½ tsp salt
- 1 cup blueberries

Preparation

1. Preheat oven to 375 degrees. Line a muffin pan with muffin liners.
2. Mix together wheat bran and milk, let stand for 10 minutes.
3. In a large bowl, mix together applesauce, egg, brown sugar, and vanilla. Beat in bran mixture.
4. In another bowl combine all-purpose flour, whole wheat flour, baking soda, baking powder, and salt.
5. Stir flour blend into bran mixture until just blended. Fold in blueberries. Divide into muffin cups, filling each about ⅔ full.
6. Bake for 15-20 minutes, or until tops spring back when lightly tapped.

Tips

Each muffin has 4.3 grams of dietary fiber!

Recipe from All Recipes

High Fiber RECIPE

Double Chocolate Black Bean Cookies



Ready in **1 hour**

Serves **36**

Ingredients

- 15 ounce can black beans, washed and drained
- 4 tbsp butter, softened
- ½ cup plus 2 tbsp packed brown sugar
- ½ cup cocoa
- 2 eggs
- ¼ cup tapioca flour
- ¼ cup almond flour
- 2 tsp vanilla
- ½ tsp salt
- 1 tsp baking soda
- ½ cup chocolate chips

Preparation

1. Preheat oven to 400 degrees.
2. Combine all ingredients in a food processor, except the chocolate chips. Pulse until combined.
3. Stir chocolate chips into mixture.
4. Drop one tablespoon at a time onto parchment paper or a silicone lined baking pan.
5. Bake for 10-12 minutes.

Tips

Enjoy these fiber-packed cookies either fresh or freeze to enjoy later!

Recipe from The Nourished Seedling

High Fiber RECIPE

Oatmeal Pumpkin Waffles



Ready in **30 minutes**

Serves **3**

Ingredients

- 1 tbsp ground flax
- ½ cup milk
- 1 tsp apple cider vinegar
- 1 ½ cups oat flour
- 2 tsp baking powder
- 2 tsp cinnamon
- ¼ tsp baking soda
- ¼ tsp ground cloves
- ¼ tsp ground allspice
- ¼ tsp ground nutmeg
- ¾ cup pumpkin puree
- 1 tbsp molasses

Preparation

1. Preheat waffle iron and lightly grease with cooking spray.
2. In a small bowl, add ground flax and 2.5 tbsp water. Stir and let sit for 5 minutes. Then add the milk and apple cider vinegar.
3. In a medium bowl, add the oat flour, baking powder, cinnamon, baking soda, cloves, allspice, and nutmeg. Stir to combine.
4. Add the flax, milk, vinegar mixture. Stir until all ingredients are combined thoroughly. Let batter sit for 5 minutes.
5. Scoop ⅓ of batter into the center of the waffle iron; close and let cook for 5-7 minutes each, until cooked through and crispy on the outside.
6. Top each with maple syrup and other toppings.

Tips

These are perfect for a quick weekday breakfast or a weekend brunch!

Recipe from Emilie Eats

High Fiber RECIPE

Lentil Sweet Potato and Spinach Stew



Ready in **about 1 hour**

Serves **4**

Ingredients

- 1 ¼ cups green lentils
- 4 cups vegetable broth
- 1 cup water
- ½ yellow onion, diced
- 3 garlic cloves, minced
- 1 bay leaf
- Pinch of saffron
- ½ tsp turmeric
- 1 tsp ground ginger
- 2 medium carrots, peeled and diced
- 1 extra large sweet potato, peeled and cut into ¼-inch chunks
- 2 medium tomatoes, food processed or blended until smooth
- 5 cups baby spinach
- Salt and pepper to taste

Preparation

1. Combine the lentils, vegetable broth, water, onion, garlic cloves, and bay leaf in large soup pot and bring to a boil. Add saffron and turmeric to pot. Stir, reduce the heat, and simmer for 30 minutes.
2. Add remaining ingredients except spinach. Cover and simmer an additional 25-30 minutes, until lentils and vegetables are tender.
3. Stir the spinach into the hot stew for 5-7 minutes or until wilted.
4. Remove the bay leaf before serving and season with salt and pepper to taste.

Tips

Perfect for a fall evening when paired with a small side of brown rice or a slice of whole wheat bread. Each serving (1 ½ cups) has 13 grams of dietary fiber!

Recipe from According to Elle

High Fiber RECIPE

Chicken and Black Bean Enchiladas



Ready in **40 minutes**

Serves **4**

Ingredients

- 1 tsp olive oil
- ½ small yellow or white onion, finely chopped
- 2 cloves garlic, minced
- 2 boneless, skinless chicken breasts cut into strips
- ¾ tsp ground cumin
- ¼ tsp salt
- 1 cup low-sodium canned black beans, drained and rinsed
- ½ cup fresh or frozen yellow corn
- ¼ cup chopped cilantro
- ¾ cup tomatillo salsa or salsa verde
- 8 corn tortillas
- ½ cup cheddar cheese

Preparation

1. Preheat oven to 375 degrees. Coat a 9x13-inch baking dish with cooking spray, set aside.
2. Heat oil over medium heat in a large nonstick skillet. Add the onion, garlic, chicken, cumin, and salt. Cook, stirring often, for 3-5 minutes or until chicken is cooked through.
3. Stir in black beans and corn, cooking for 1 minutes. Remove from heat and stir in cilantro and 3 tbsp salsa.
4. Stack tortillas on a plate, cover with a damp paper towel, and microwave for 15-30 seconds until hot.
5. Spoon ⅓ cup of chicken mixture in the center of a tortilla. Roll up and arrange in baking dish. Repeat with remaining tortillas. Spoon remaining salsa over enchiladas.
6. Sprinkle evenly with cheese, then bake for 30 minutes or until hot and bubbly.

Tips

Serve with a side salad for a quick fiber-packed weekday dinner! There is 7 grams of dietary fiber per 2 enchiladas!

Recipe from MyFitnessPal

High Fiber RECIPE

Mac and Cheese with Collards



Ready in **30 minutes**

Serves **4**

Ingredients

- 8 ounces whole-wheat elbow noodles
- 4 cups chopped collard greens
- 1 $\frac{3}{4}$ cups low-fat milk, divided
- 3 tbsp all-purpose flour
- $\frac{1}{2}$ tsp salt
- $\frac{1}{4}$ tsp ground black pepper
- 1 cup shredded extra-sharp cheddar cheese
- 2 ounces reduced-fat cream cheese
- 2 tsp white-wine vinegar
- $\frac{1}{4}$ cup whole-wheat breadcrumbs
- 1 tbsp olive oil
- $\frac{1}{2}$ tsp paprika

Preparation

1. Bring a large pot of water to boil. Add pasta and collards, cook according to the pasta package directions. Drain.
2. Meanwhile, heat 1 $\frac{1}{2}$ cups milk in a large skillet over medium-high heat until simmering.
3. Whisk the remaining $\frac{1}{4}$ cup milk, flour, salt, and pepper in a small bowl until combined. Add the flour mixture to the simmering milk; reduce heat to medium-low and cook, stirring constantly until thickened, 1 to 2 minutes. Remove from heat and whisk in cheddar, cream cheese, and vinegar until the cheese is melted.
4. Stir the pasta and collards into the sauce. Transfer to a large casserole dish.
5. Preheat broiler to high.
6. Combine breadcrumbs, oil, and paprika in a small bowl. Sprinkle over pasta. Broil until golden brown, 1 to 3 minutes.

Tips

The collards add vitamins and fiber to this comfort food. Each serving has 7 grams of dietary fiber.

Recipe from Eating Well