

Lifestyle Intervention Program

Fiber and Whole Grains



Carbohydrates

- Carbohydrates are the body's main source of energy.
- The idea that “carbs are bad” has left many people confused.
- Carbohydrates are a broad category – not all carbs are the same. The type, quality and quantity of carbohydrates in the diet is what is important.

3 Types of Carbohydrates

1. Simple Carbohydrates have single or double sugar molecules bound together, allowing for quicker digestion and entrance into the blood stream and cells.
 2. Starch. A complex carbohydrate, meaning they have 3 or more sugar molecules bound together, allowing for slower digestion.
 3. Fiber. Also a complex carbohydrate. Naturally occurring in fruits, vegetables, whole grains, beans, peas, lentils.
- * Foods often contain a combination of these forms.

Simple Carbohydrates

- Found in processed and refined foods.
 - Candy
 - Syrups
 - “White” breads, pastas, and rice
 - Refined crackers, cereals, etc.
- Naturally occurring in fruits and vegetables but paired with fiber!

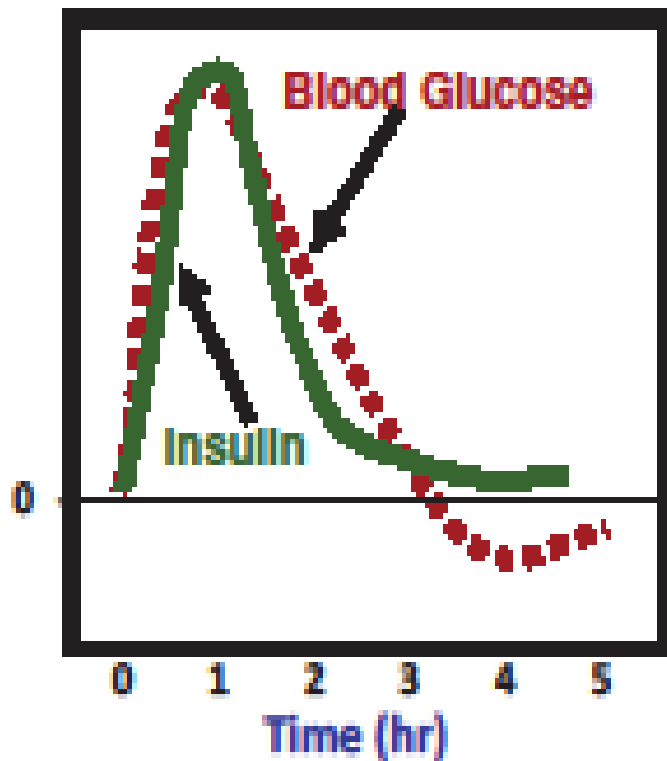
Complex Carbohydrates

- Naturally occurring in:
 - Legumes
 - Vegetables
 - Beans, lentils, peas
 - Whole grains
 - Wheat, oats, brown rice, etc.
 - Whole grain products
 - Whole grain breads, pastas, etc.

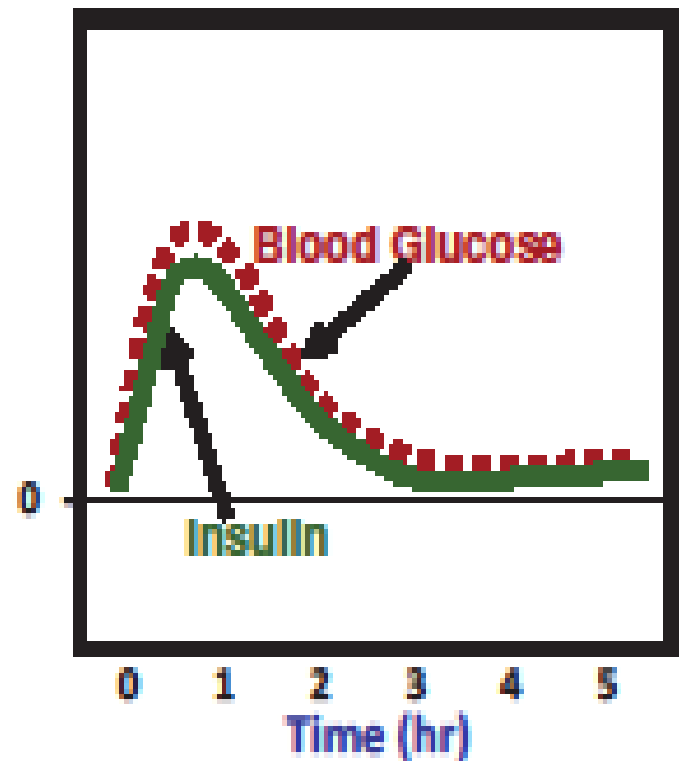
Fiber

- Aids in digestion by adding bulk and “roughage”.
 - Parts of plant foods that your body can’t digest or absorb. It passes relatively intact through your stomach, small intestine, colon, and out of your body.
- Helps maintain a healthy weight.
- Lowers risk for diabetes and heart disease.

Easily Digested Carbohydrate



Slowly Digested Carbohydrate



By courtesy of Dr. W. Willett

Group Activity

As a group, put in order the selected food models from the most fiber to the least.

Handout:

-Fiber the Body's Scrub Brush

What's your guess



- How much fiber, in grams, do you think the average American gets in a day?
- What do you think the daily recommendation for fiber is?

Daily Fiber Recommendations

- Academy of Nutrition and Dietetics: 25-35g
- Nutritionfacts.org: Minimum of 31.5g
- Institute of Medicine: Men at least 30-38 g, Women at least 21-25g

Increase fiber in your diet gradually to ease digestive discomfort. ~5 daily grams added per week

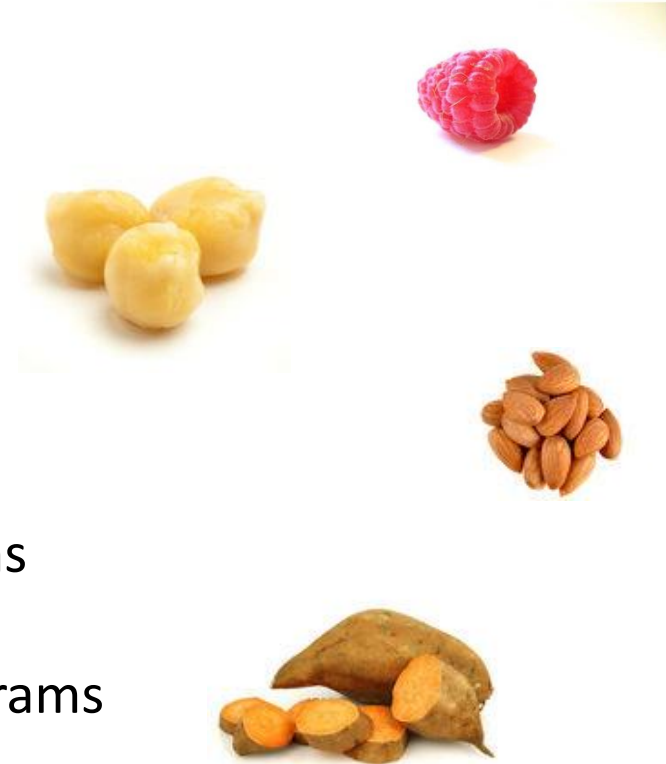
Soluble vs. Insoluble Fiber

- **Soluble fiber.** This type of fiber dissolves in water to form a gel-like material. It can help lower blood cholesterol and glucose levels.
 - Found in oats, peas, beans, grains, rye, apples, citrus fruits, carrots, and barley.
- **Insoluble fiber.** This type of fiber promotes the movement of material through your digestive system and increases stool bulk, to aid with constipation or irregular stools.
 - Found in fruits and vegetables such as cauliflower, green beans and potatoes, Whole-wheat flour, wheat bran, nuts, and beans.

*Most foods have a combination of soluble and insoluble fiber!

Other good fiber sources:

- 1 Cup Raspberries – About 8 grams
- 1 Cup Lentils – About 16 grams
- 1 Cup Chickpeas – About 12 grams
- 1 Cup Cooked Spinach – About 6 grams
- 1 Cup Edamame – About 16 grams
- ½ Avocado – About 7 grams
- 1 oz Chia Seeds – About 10 grams
- 2 Tbsps. Ground Flaxseed – About 5 grams
- 1 oz Almonds – About 4 grams
- Small/Medium Sweet Potato – About 4 grams
- 1 Cup Cooked Quinoa – About 5 grams



Fiber Supplements?

- Do not contain the variety of fibers, vitamins, minerals, and other nutrients that food does.
- Check with your doctor before taking fiber supplements.
- Fiber supplements come in a wide variety of forms and flavors -- from powders, oils, and wafers to capsules and chewable tablets. They are usually made from “functional” fibers, which is fiber that is isolated or extracted from plants or animals.
 - Too much can cause loose stools, abdominal discomfort, gas, and bloating.
 - Possible drug interactions – talk with your doctor before taking.

What about Fruit Juice?



Whole Grains



Wheat berries: Add to salad, pasta, bread



Quinoa: Add to hot cereal, soup, salad



Bulgur: Add to pilaf, lentils, & breakfast dish



Brown Rice: Add to any entree, rice pudding



Oats: Enjoy as oatmeal, use in baking & granola.



Barley: Add to soup, stew, or entree



Rye: Use in porridge, rye berries as a side, or rye flour for breads



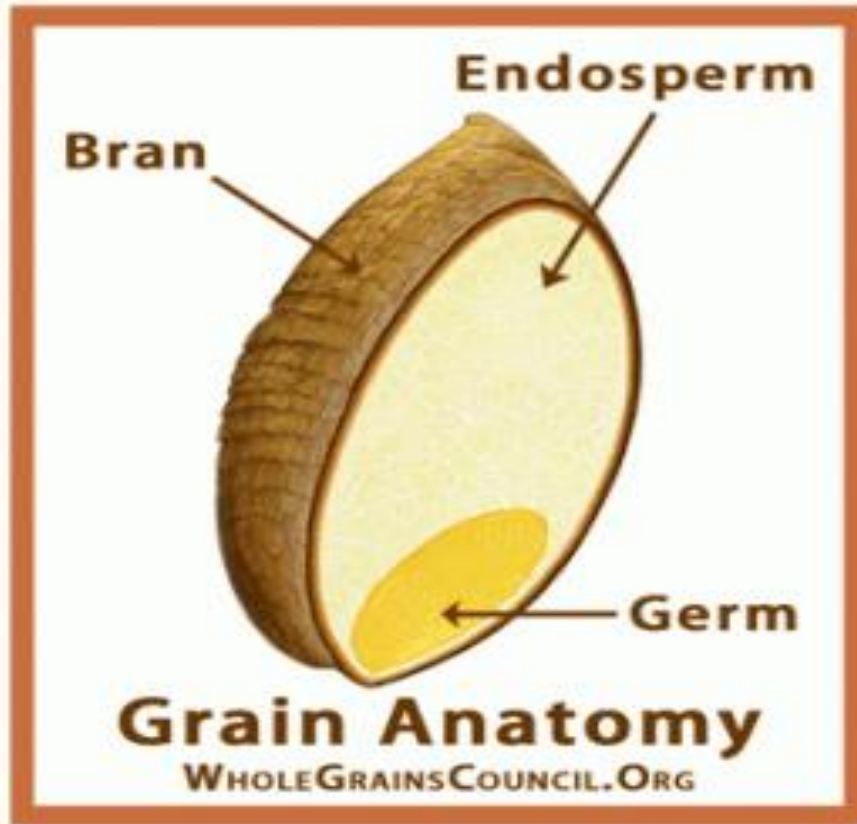
Millet: Use for breakfast with nuts and fruit, or as rice or potato alternative

All grains begin as whole grains.

This seed (which industry calls “kernel”) is made up of three key parts: The bran, the germ and the endosperm.



What happens when a grain is refined?



Whole grains contain all three parts of the kernel. Refining normally removes the bran and the germ, leaving only the endosperm. **Without the bran and germ, about 25% of a grain's protein is lost, along with at least seventeen key nutrients.**



THE BASIC STAMP



THE 100% STAMP

<http://www.wholegrainscouncil.org/>

What Does a Serving of Whole Grain Look Like?

1/2 cup cooked brown rice or other cooked grain

1/2 cup cooked 100% whole-grain pasta

1/2 cup cooked hot cereal, such as oatmeal

1 ounce uncooked whole grain pasta, brown rice or other grain

1 slice 100% whole grain bread

1 small (1 oz.) 100% whole grain muffin

1 cup 100% whole grain ready-to-eat cereal

Breads/Pastas – some “better” options

Breads

- Ezekiel Sprouted Breads
- Natural Ovens Whole Grain
- Festival Foods Sprouted Grain
- Angelic

Pastas

- Hodgson Mills 100% whole wheat
- Barilla whole Grain
- Ronzoni 100% whole grain
- Brown Rice Noodles
- Bean-based pasta- black bean, soybean, chickpea
- Lentil-based pasta

REMEMBER: Always look at the label. Products change

Whole Grain Snack Foods

Chips/Crackers and other high carbohydrate snack foods should be eaten on occasion - “bang for your buck” philosophy.

Look for the following:

- Few ingredients
- Whole grain ingredients
- Lower amounts of added sugar and sodium
- A product without or with lower amounts of hydrogenated and partially hydrogenated oils (saturated and trans fats)

A whole grain triscuit cracker might be an example

Dietary Fiber 3g	11%
Total Sugars 0g	
Includes 0g Added Sugars	0%
Protein 3g	
Vitamin D 0mcg	0%
Calcium 10mg	0%
Iron 1.4mg	8%
Potassium 116mg	2%

* 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.

INGREDIENTS: WHOLE GRAIN WHEAT, CANOLA OIL, SEA SALT.
BUT ADDED TO THE PACKAGING MATERIAL

Drinking Enough WATER

- Helps with passage of fiber, which absorbs water
- Lubricates joints
- Regulates body temperature and energy
- Important for cell, tissue, and organ function



Men ~15.5 Cups

Women ~About 11.5 Cups

*Recommendation includes both food and beverages. About 20% comes from food intake.

Requirements may vary on an individual basis based on physical activity levels, environment, individual health factors, pregnancy, etc.

Recap: Action steps you can take now!

- Track your fiber intake for a couple days. Examine how you can add an additional 4-5 grams a day for the next week.
- Focus on adequate water intake
- Identify and purchase only whole grain products