

# The Truth about Carbohydrates!

- Carbohydrates fuel the muscles and brain
- Carbohydrates should provide about half of our daily calories
- Carbohydrates fit into three categories:
  - Starch
  - Sugar
  - Dietary Fibre



## Reading labels for Carbohydrates

- Carbohydrates are always included on the Nutrition Facts Label. Fibre and sugar are indented and listed underneath carbohydrates as they are part of the total carbohydrate content of a food product.
- Starch makes up the rest of the total amount of carbohydrates but because it does not have to be included on the label, you often won't see it listed.

Nutrition Facts	
Per 1 1/4 cup cereal (55 g)	
Amount	% Daily Value
Calories 210	
Fat 1 g	2%
Saturated 0.2 g	
+ Trans 0 g	1%
Cholesterol 0 mg	
Sodium 190 mg	8%
Carbohydrate 47 g	16%
Fibre 11 g	44%
Sugars 4 g	
Protein 4 g	
Vitamin A 0%	Vitamin C 0%
Calcium 20%	Iron 50%



## Carbohydrate Foods

Choose More Often	Choose Less Often
Fruits & Vegetables	Sugar, jam, honey, syrups
Peas, beans & lentils	Candy, chocolate, cakes, cookies, pies, pastries
Whole grain breads and pastas, brown or wild rice, quinoa, oats, barley, bulgur, buckwheat	White breads, pastas and rice
High fibre, low sugar cereals	High sugar, low fibre cereals
	Sugar sweetened drinks such as pop, lemonade, iced tea

## Acceptable Macronutrient Distribution Range (AMDR) for Carbohydrates (CHO)

Nutrient	AMDR
Carbohydrate	45-65% of Calories



## Sugar and Fibre Nutrient Content Claims

<b>SUGAR</b>	<ul style="list-style-type: none"><li>➤ Low or light in sugar</li><li>➤ Reduced sugar or lower in sugar</li></ul>	<ul style="list-style-type: none"><li>➤ Less than or equal to 2 g sugars per serving</li><li>➤ Must have a 25% reduction in sugar compared to the original product</li></ul>
<b>FIBRE</b>	<ul style="list-style-type: none"><li>➤ Very high source of fibre</li><li>➤ High source of fibre</li><li>➤ Source of fibre</li></ul>	<ul style="list-style-type: none"><li>➤ Greater than or equal to 6 g fibre per serving</li><li>➤ Greater than or equal to 4 g fibre per serving</li><li>➤ Greater than or equal to 2 g fibre per serving</li></ul>

# Fibre

- Fibre is the indigestible part of plant foods with many health benefits.
- Carbohydrates with higher fibre content provide longer lasting energy than carbohydrates with little to no dietary fibre.
- Choose carbohydrate foods with higher dietary fibre content more often for improved blood sugar control and to feel more satisfied from a meal.
- Health Canada recommends that adult Canadians get 21 to 38 grams of total fibre each day for good health.
- There are 2 types of fibre: **Soluble and Insoluble**. Both types of fibre play an important role in our health.



- **Soluble fibre** dissolves in the water in our digestive tract and forms a gel that can slow down the rate of food passage. It can help to reduce blood sugar and cholesterol levels and keep us feeling full longer.

Good sources of soluble fibre include oats, legumes, barley, fruits, vegetables, psyllium, ground flax and nuts.

- **Insoluble fibre** absorbs water and increases bulk in our digestive tract. It speeds up the rate of food passage and helps to prevent constipation

Good sources of insoluble fibre include whole grain products, brown rice, bran cereals, vegetables and fruit.



## Quick Tips to Add Fibre:



- Do it gradually
- Add fibre to the foods that you already eat
- Fibre and fluids work together! Be sure to drink plenty of water when increasing your fibre intake.

**What are some ways that you can add fibre to the foods you already eat?**

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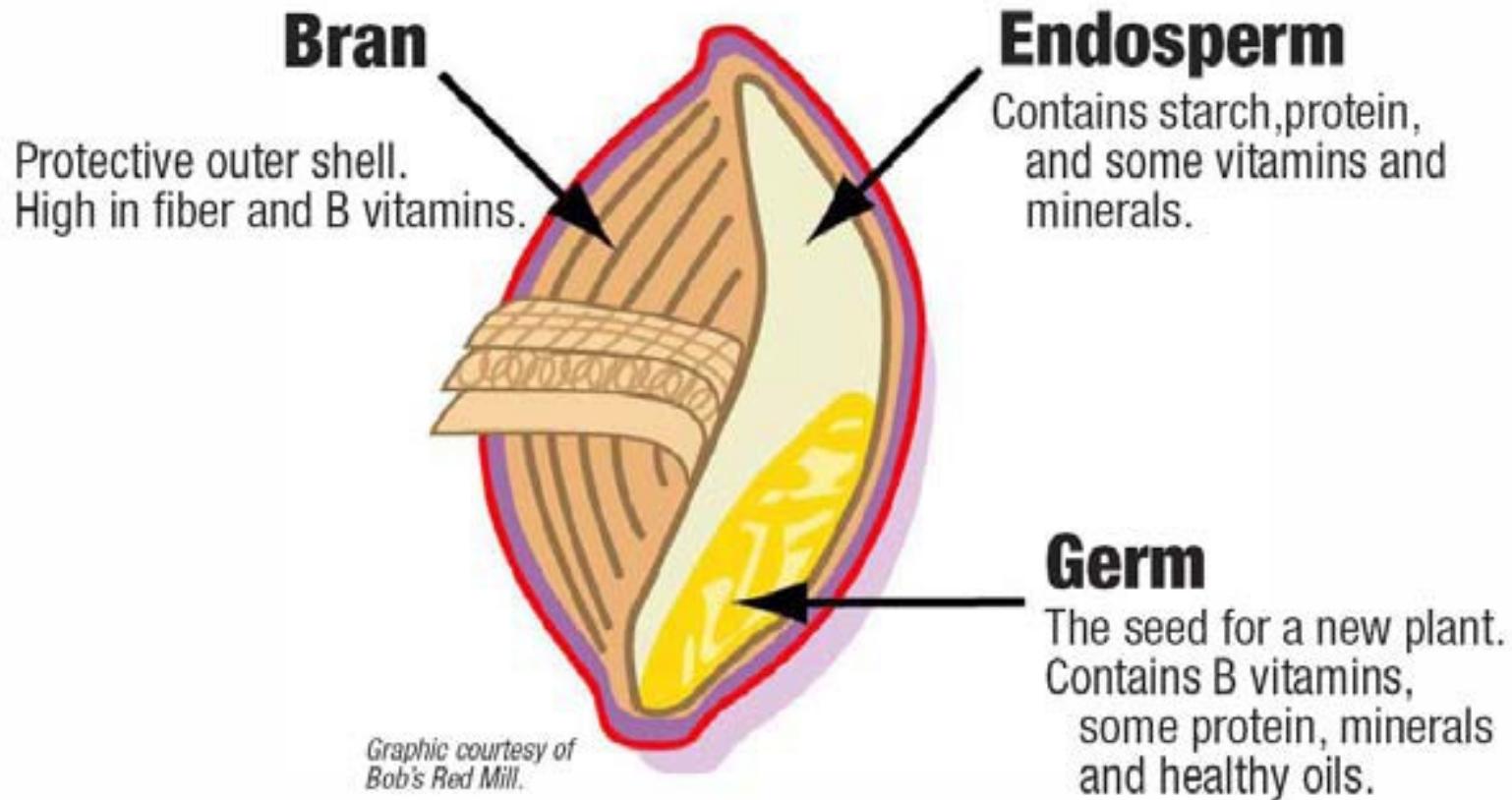
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## Whole Grains



With whole grain products, the entire grain is left intact throughout the manufacturing process. This ensures that you get all of the available nutrients when you consume the product.

## Grain Brain Quiz

With all the grain options available at the grocery store, making whole grain choices can sometimes be challenging.

Below, choose which products would be considered a whole grain by placing a check mark ( ✓ ) underneath the appropriate product.



Multigrain  
Pasta



Brown and  
Wild Rice



Couscous



Amaranth



Enriched  
Wheat Bread



Cream of  
Wheat



Rice crackers



Whole  
Grain  
Crackers

**Answer Key:** Whole grain products include: brown & wild rice, amaranth, and whole grain crackers

# Carbohydrate Myths & Facts

## **MYTH #1: Whole Wheat and Multigrain are the same as Whole Grain**

**Fact:** Whole Wheat and multigrain products may not be 100% whole grain. Whole wheat flours may be partly refined. Multigrain products may include a variety of different grains, but may not contain any whole grains. Look for products that are "100% Whole Grain".

## **MYTH #2: All foods contain some carbohydrates.**



**Fact:** Major sources of carbohydrates include fruit, starchy vegetables, grains, milk & alternatives, legumes, and added sugars (i.e. table sugar and sugar-sweetened beverages). A small amount of carbohydrate is found in vegetables. Carbohydrates are not found in meats or fats.



## **MYTH #3: Whole grains are ALWAYS high in fibre.**

**Fact:** Whole grains are not always high in fibre. To be considered a 'source of fibre', a food must provide at least 2g of fibre per serving. A 'high fibre' food must contain at least 4g of fibre per serving. A product can be called a 'very high source of fibre' if it contains at least 6g of fibre per serving.

## **MYTH #4: There is only one type of dietary fibre.**

**Fact:** Fibre is the part of the plant that is not digested by the human body. There are 2 types of fibre: Soluble and Insoluble. We need a balance of both types of fibre for optimal health.

## **MYTH #5: Fibre is found in foods from all 4 food groups.**



**Fact:** Fibre is found only in plant based, carbohydrate foods, including vegetables, fruits, grains products, legumes, nuts & seeds. Fibre is not naturally found in milk & alternatives, meats or fats. \*\*Yogurts that claim to be a source of fibre (ie. Activia), have had dietary fibre added during processing.

# Easy Ways of Adding Whole Grains to Your Diet



- ✓ Substitute half the white flour with whole grain whole wheat flour in your regular recipes for cookies, muffins, quick breads and pancakes.
- ✓ Try whole grain breads. Kids especially like whole grain pita bread.
- ✓ Mix different whole grain cereals in your bowl and enjoy with milk.
- ✓ Add a spoonful of unprocessed bran or bran cereal to oatmeal for added fibre.
- ✓ Have whole grain breads, pita or tortillas for sandwiches, wraps and quesadillas.
- ✓ Use whole grain pasta or couscous in place of regular pasta and enjoy the great taste.

## Cooking Grains



- ✓ Whole grains can be cooked in many different ways: stove top, pressure cooked, baked or microwaved.
- ✓ Be sure to choose a pot that will allow the grain to expand during the cooking. Millet, barley and quinoa expand to 4 times their original size while other grains usually expand to 2-3 times their original size.
- ✓ Cooking time can be cut in half by presoaking the grains for several hours or overnight in about twice the volume of water.
- ✓ For a fluffier product, cook the grain as directed and remove from heat and allow it to sit covered for 5-15 minutes.

## Keep Grain Products Fresh and Safe to Eat:



- ✓ Use bakery products by the "best before" date or keep in the freezer until you are ready to use them.
- ✓ Store dry goods such as flours, cereals, rice and pasta in
  - dry airtight containers away from heat and light.
- ✓ Keep whole grain flour and wheat germ in a cool dark place or the refrigerator to prevent them from spoiling.

# Recipes

## Quinoa Pilaf

Yield: 6 servings

2 Tsp	olive oil
1 Bunch	green onions
1	diced carrot
1/2	diced red pepper
1	chopped celery stalk
1 Cup	thoroughly rinsed quinoa
2 Cup	low-sodium chicken or vegetable broth

1. Heat oil in a medium saucepan. Sauté vegetables for 5 minutes.
2. Add rinsed quinoa and continue to cook for 2-3 minutes. Add broth, bring to a boil, cover and simmer for 15 minutes, or until all the water is absorbed and the quinoa is tender.

Nutrients per serving	
Calories	143
Fat (g)	3
Protein (g)	3
Carbohydrates (g)	31
Fibre (g)	5
Sodium (mg)	24

## Barley Vegetable Soup

Yield: 8 servings (1 serving = 1 Cup)

Preparation time: 15 mins

Cooking time: 65 min

1 Can (19oz)	diced tomatoes
6 Cup	low-sodium chicken or vegetable broth
1/2 Cup	diced celery
1/2 Cup	diced onion
1/2 Cup	diced carrot
1/2 Cup	barley
	fresh ground black pepper

Nutrients per serving	
Calories	78
Fat (g)	0
Protein (g)	3
Carbohydrates (g)	15
Fibre (g)	1
Sodium (mg)	20

1. In a large saucepan, over medium heat, combine tomatoes, broth, celery, onion, carrot, barley and pepper to taste; bring to a boil. Reduce heat, cover and simmer for 1 hour or until barley is soft.

## **Wheat Berry Salad**

Yields: 4 servings as main dish or 8 servings as a side dish

1 Cup	uncooked wheat berries
6 Cup	water
1 1/2 Cup	broccoli florets
5	medium chopped scallions
1	medium carrot, peeled and diced
1 Can (15-16 oz)	garbanzo beans (also called chick peas), rinsed and drained

Dressing:

1/3 Cup	apple cider or balsamic vinegar
1 Tbsp	olive or canola oil
1 Tbsp	chopped fresh or 1 teaspoon crushed, dry basil leaves
1/4 Tsp	paprika
1 Clove	garlic, minced
	dash of salt

1. Heat wheat berries and water to boiling in a large pot, stirring occasionally. Reduce heat, cover, and simmer for 50 to 60 minutes. Wheat berries should be tender but still firm.
2. Drain remaining water from wheat berries and let berries cool.
3. Combine dressing ingredients in a tightly lidded or covered container and shake to mix well.
4. Toss all salad ingredients together to mix.
5. Add dressing to salad & toss to coat salad. Chill for one hour in refrigerator and serve cold.

Nutrients per serving	
Calories	175
Fat (g)	1
Protein (g)	5
Carbohydrates (g)	28
Fibre (g)	5
Sodium (mg)	5