

CARBOHYDRATES

Simple and Complex



Nutrients

- Nutrients are substances found in food that are essential for growth and energy.
- There are SIX basic essential nutrients:
 - Carbohydrates
 - Lipids (fat)
 - Protein
 - Vitamins
 - Minerals
 - Water



Can you live without sugar?

- Soda/Punch
- Cookies
- Candy
- Chocolate
- Desserts
- Sugary Cereals
- Ice cream



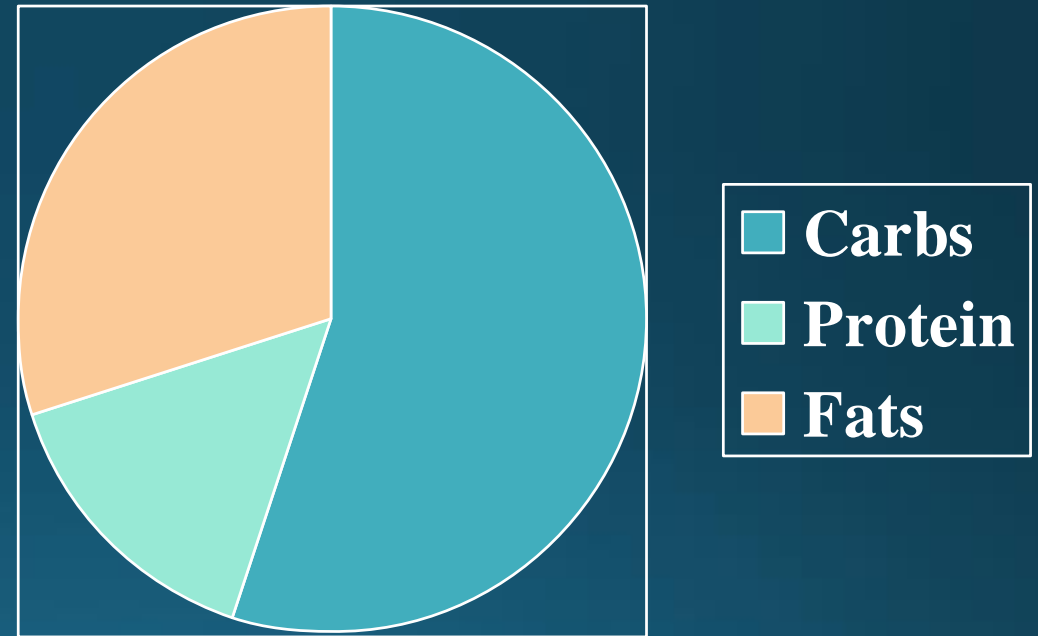
CARBOHYDRATES

Carbohydrates give the body energy. They are the best source of fuel for the body. Carbohydrates also help to digest protein and fat.



CARBOHYDRATES

45-65% of our food should come from carbohydrates.



Carbohydrates (Carbs)

- We get most of our carbs from the grains group.
- Almost all of our carbohydrates come from plant food sources.



Carbohydrates (Carbs)

- Carbohydrates provide 4 calories per gram.
- Fat provides 9 calories per gram.
- Protein provides 4 calories per gram.
- **If we eat more carbs than our bodies need for energy, they get stored as fat.**



Nutrition Facts

8 servings per container

Serving size

2/3 cup (55g)

Amount per 2/3 cup

Calories

230

% DV*

12%	Total Fat 8g
5%	Saturated Fat 1g
	Trans Fat 0g
0%	Cholesterol 0mg
7%	Sodium 160mg
12%	Total Carbs 37g
14%	Dietary Fiber 4g
	Sugars 1g
	Added Sugars 0g
	Protein 3g
10%	Vitamin D 2mcg
20%	Calcium 260 mg
45%	Iron 8 mg
5%	Potassium 235 mg

* Footnote on Daily Values (DV) and calories reference to be inserted here.

Carbohydrates = 4 cals per gram

Protein = 4 cals per gram

Fat= 9 cals per gram

$$37 \times 4 = 148$$

$$3 \times 4 = 12$$

$$8 \times 9 = 72$$

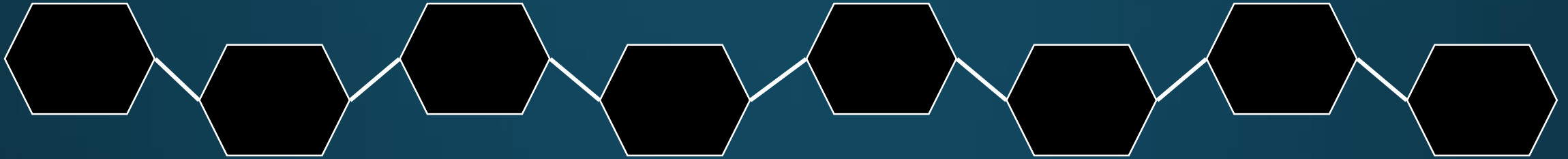
$$\text{Total} = 232$$

Let's Break Down Carbohydrates

- Carbohydrates are found in
 - grains, fruits, vegetables, legumes and sugar.
- Carbohydrates can be broken down into three categories:
 - Simple Carbs (Sugars)
 - Complex Carbs (Starches)
 - Fiber

Simple Sugars

- These are broken down and digested very quickly.

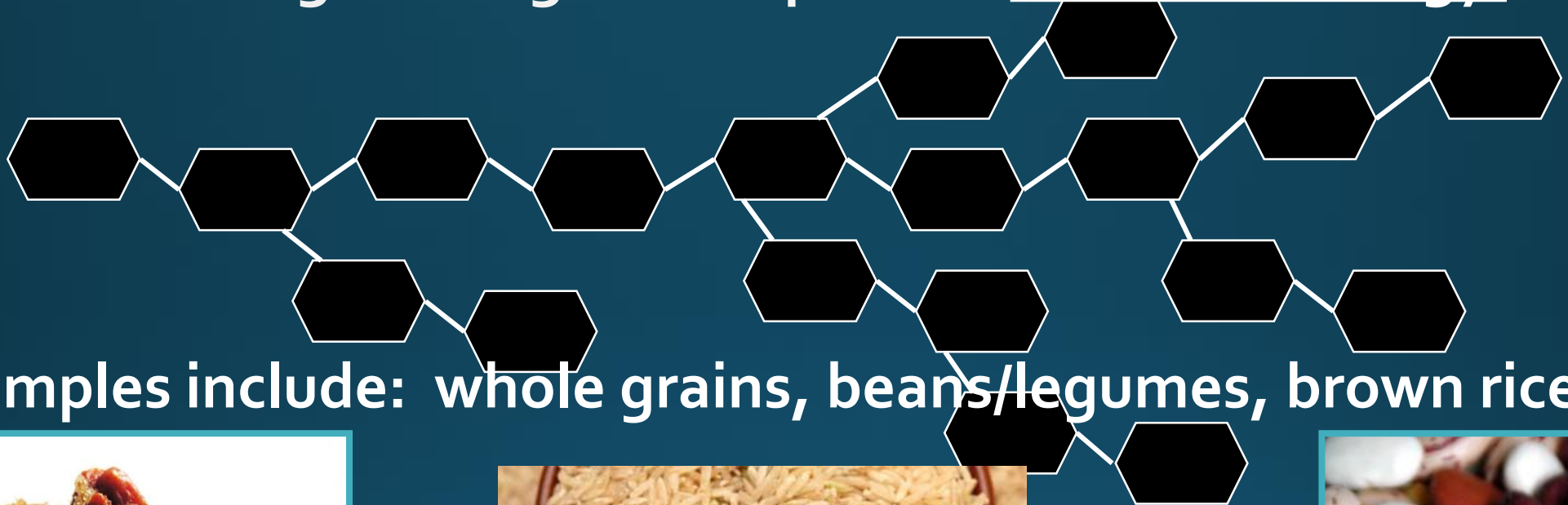


- Examples include: table sugar, fruit, fruit juice, sugary drinks, milk



Complex Starches

- These take longer to digest and provide sustained energy.



- Examples include: whole grains, beans/legumes, brown rice,



Fiber

- Complex carbohydrate that helps in the digestion process.
- Foods high in fiber include: fruits and vegetables (especially the skins or peels), whole grains, beans/legumes, bran cereals



Types of Sugar

SUGAR	OTHER NAME	FOOD SOURCES
Glucose	“Blood Sugar”	Fruit, Veggies, Grains
Sucrose	“Table Sugar”	Table Sugar, Sugar Cane
Fructose	“Fruit Sugar”	Fruit
Maltose	“Malt Sugar”	Grains
Lactose	“Milk Sugar”	Milk

What is a Roux?

- The base of any soup or sauce.
- Made using equal parts fat and equal parts flour

<http://www.foodnetwork.com/videos/how-to-make-a-roux-0154956.html>

