

## **Lesson: Macronutrients**

### **Supplies Needed:**

- 4.7\_LV\_Macronutrient-Visual

### **Goals:**

- Students will understand the three macronutrients.
- Students learn the importance of macronutrients and their health.
- Students will learn to identify foods and the macronutrients they contain.

### **Background:**

Macronutrients are nutrients that we need in large quantities for healthy growth: fats, protein and carbohydrates. These are the nutrients that give us energy. Micronutrients are nutrients that are important but needed in very small amounts such as vitamins and minerals.

It is important to know that fats include the healthy fats. While we do not need a large amount of fat, the amount needed is significantly higher than our micronutrient requirements. We want to have little to no trans fat in our diets and be watchful to limit the amount of saturated fats we consume. Nutrition labels only need to list trans fat if there is 0.5 grams or more per serving. It is important to know if there is even a little bit of trans fat in a product because if you eat more than one serving the consumption of trans fat increases.

Healthy carbohydrates are good sources of energy. Some carbohydrates are better choices because they are more nutrient dense than others. To be healthy, an individual should eat carbohydrates in moderation, using MyPlate as a guide. Carbohydrates are in all five food groups; some plant proteins, milk, fruit, vegetables and grains.

### **Lesson:**

Can anyone remember why we need to have some salt in our diet?

*(Salt helps maintain the right balance of fluids in our bodies. It also helps carry nerve impulses that make our muscles contract and relax.)*

It is true that our bodies need salt, but we only need a very small amount every day. Can anyone remember how much we need? *(No more than 2300mg or a little less than ½ teaspoon each day)*

What happens if we eat too much salt? *(Having too much salt, overtime, can contribute to high blood pressure, heart disease and stroke.)*

Where can we look to see how much salt is in the food we are eating? *(The nutrition label, under or next to the word sodium)*

**(Show slide 1.)** Today we're going to talk about Macronutrients. Macronutrients provide the best energy for our body to grow and stay healthy.

Does anyone know what macro means? (*Large*)

And what are nutrients? (*Found in Go Foods that help our bodies grow and stay healthy*)

Macronutrients are large nutrients, the nutrients we need in the biggest amount. There are three macronutrients: fats, protein and carbohydrates.

Each macronutrient provides different types of energy and health benefits.

Does anyone remember why fat, the first macronutrient we will discuss is an important part of our diet? (*It gives us energy, helps us feel full, and it keeps our skin and nerves healthy.*)  
**(Show slide 2.)**

What are the three types of fat we discussed? (*Unsaturated, saturated, and trans fat*)

And which one is the Go fat? (*Unsaturated- remember because it starts with 'u' it is the good fat for "you"*)

Saturated fat is a Slow fat and is listed on the nutrition label. Does anyone remember what percent of the daily value for saturated fats that we want to stay below? (*10%*)

If there is a small amount of trans fat, less than 0.5 grams, companies can say the product has 0 grams of trans fat on their nutrition label, but it is still important for us to know, because this is a fat that is not good for our bodies. What is another way we can find out if the food has trans fats? (*Look at the ingredients for the words partially hydrogenated*)

Is there a section on MyPlate for fats? (*No*)

Does anyone know why? We need only a small amount of fat every day. If you are eating a balanced diet, including the food groups on MyPlate, then you will be getting the fat that your body needs. What food groups on MyPlate do you think may have healthy fats? (*Mostly the protein, grain or dairy groups and some fruits like avocados*)

The second macronutrient is protein. Who can tell me what protein does for our bodies? (*Long lasting energy, repairs tissues and builds strong muscles*)

**(Show slide 3.)** Is there a spot for protein on my plate? (*Yes*)

Do you think there are any other food groups that may contain protein? (*Mostly dairy and grains*)

What are some proteins that you all like? (*Chicken, meat, beans, nuts, cheese*)

Protein is a macronutrient that we need at each meal because it helps us stay full for a long time and gives us energy until our next meal.

**(Show slide 4.)** The third macronutrient is carbohydrate. Can anyone give me an example of a food that has carbohydrates in it and what food group it is part of? (*fruits, vegetables, grains, bread, milk, beans, potatoes, spaghetti*)

Carbohydrates can be found in all of the food groups! While all three macronutrients: fat, protein and carbohydrates, give us energy, carbohydrates are a source of quick energy. This is because our bodies can convert carbohydrates into energy much faster than it can convert fats and proteins into energy.

When is a time you may need quick energy?

(*When you are running around a lot at the park or playing a sport*)

Yes, this is a time when you may find that snacking on fruits and vegetables is a good way to maintain your energy during the games. It might be a good idea to eat a few orange slices during a long soccer game or tennis game to keep up your energy level. What do you all snack on while playing sports, besides, of course, drinking water?

Carbohydrates digest into sugar, which we use for energy. If we use sugar for energy why do we say to eat less sugar? We are really talking about eating fewer foods that have a lot of added sugars. We can get all of the energy our bodies need without eating any candy, cookies, cakes or sugary sodas. These are Slow Foods that have added sugars that are not found naturally in our foods. When we eat carbohydrates like grains, fruits and vegetables, the body getting the sugar it needs for energy and many other nutrients as well such as fiber and vitamins. Candy, cookies, and other sugary treats do not usually have these beneficial nutrients.

There is something else that we have talked about in past lessons and it is very important for us to eat every day. It keeps us full and keeps our digestive tract healthy.

Can anyone think of what this is? (*Fiber*)

What macronutrient would fiber be found in? (*Carbohydrates*)

We don't get much energy from fiber but it plays a very important part in keeping us healthy. Most Americans don't consume enough fiber, so we want to pay special attention to make sure we get fiber in every meal.

**(Show slide 4.)** If you remember to build your meals using MyPlate, you will be sure to get a healthy and balanced amount of foods containing all the macronutrients you need.

Let's do a quick review of the macronutrients. What are the three macronutrients?

(*Fat, protein, carbohydrates*)

What type of energy do we get from fats and proteins? (*Long lasting*)

What type of energy do we get from carbohydrates? (*Quick energy*)

What is the other nutrient in carbohydrates that keeps our digestive tract healthy? (*Fiber*)

Let's break into three groups. Each group will be a macronutrient. I want you to come up with as many examples of your macronutrient as you can in one minute and write them down. Ready, go! **(Time the groups for 1 minute. After time is up, have each group**

**share their answers. Show slides 6-8 for additional examples. Note that many foods fall into more than one macronutrient category i.e. peanut butter has both protein and fat. It is okay to have repeats between groups.)**

**If time allows:**

Now that we have heard so many great examples of each macronutrient, let's think about making Go snacks.

Who remembers the guidelines for Sensational Snacks? *(Two food groups, two handfuls)*

Now that you've learned so much, the reason for this guideline is to build balanced snacks. The carbohydrates will give you immediate energy and the fats and protein, which digests more slowly, will help you feel energized and satisfied over a longer time. **(Choose one example, i.e. an apple from the carbohydrate group. Ask the protein and fat groups if they can think of any foods that they could combine with the apple to make a healthy snack, i.e. peanut butter. Repeat with a couple more examples.)**

What are some important things to remember about fats?

*(Saturated fats are Slow fats, trans fats are trouble, unsaturated fats are for you – they are Go fats. Fat is not a separate food group but can be found in many foods like milk, meats, nuts, seeds avocados, etc.)*

How can we limit saturated and trans fats in our diets?

*(Cut away fat, take skin off chicken, read nutrition labels)*

What are some important things to remember about proteins?

*(Protein is a macronutrient that gives us long lasting energy and helps us build strong muscles. Protein has its own section on MyPlate and can also be found in dairy and grains. Some foods that are good sources of protein are fish, chicken, beans and nuts.)*

What are some important things to remember about carbohydrates?

*(They give us quick energy because they are converted to sugar quickly. They are important to eat when we are physically active. Fiber is a carbohydrate that makes us feel full and keeps our digestive tract healthy.)*

Can anyone tell me what food groups you will find carbohydrates in?

*(Dairy, plant protein, grains, fruits and vegetables)*

That's right, you might find carbohydrates in any one of the five food groups. So if we eat a balanced meal, our bodies can get the energy we need. That is why Slow Foods; candy, cake, sugary drinks are once in a while treats. Our body doesn't need them. We just like the taste.