

## Protein

**Main objectives:** To explain why protein is important. To describe different sources of protein with particular emphasis on animal vs. plant sources. To demonstrate the appropriate serving size of protein and what it should look like on your plate.

### Essential Discussion Topics:

- *What is protein?* Start off the discussion by asking the students if they know what protein is and why it might be important. Ask for students to give examples of foods with protein. The focus here should be on the fact that protein is one of the main building blocks of our bodies, and is necessary in our diets. Bring in a necklace with different colored beads to demonstrate. When you eat protein, the protein is broken down into individual amino acids, or beads. Your body then builds new proteins out of the amino acids that you can use. You're building something new, like a new necklace from old beads.
- *Why do we need protein?* Emphasize that protein makes up much of the structure of our bodies, like our skin, hair, organs, etc. If we don't eat protein, we can't grow, because our bodies need the amino acids to build skin and muscle and other parts of our bodies. Discuss how weightlifters grow muscles – they need to eat protein to build up muscle. What happens if we don't eat enough? This is rarely a problem in our society, but for kids and teenagers it's important to eat enough since they are growing rapidly. Muscles would shrink, your immune system would suffer, and you would have less energy.
- *Which foods have protein? What are healthy sources of protein?* Animal versus plant sources.
  - **Meat** is very dense with protein, so eating small portions of meat will probably get you to consume enough protein in a day. Of course, meat is also accompanied by a good amount of fat, especially saturated fat, which is our main concern here. What meats have more and less saturated fat? There are some types of meat that are lower in saturated fat (especially white meat chicken and some fish). These are very good sources of protein. Others, like most cuts of beef and pork, are higher in saturated fat, so they should be eaten less frequently (this will be covered in more depth in the fats lesson).
  - **Plants** provide a separate source of protein, which can be one's only source if a vegetarian. Foods like beans and nuts are especially high in protein, though most grains also contain a good amount. They do not contain high levels of saturated fat which is a plus. However, most of the time they are not as 'dense' with protein as animal sources AND individual plant sources often do not contain all of the amino acids we need. It's very important if someone is choosing to be a vegetarian to eat enough protein from good sources like beans, seeds and nuts.

- For most people, it's good to have a balance between leaner meats and vegetable proteins, though it's always important to eat the foods you like (like fattier meats), as well.
- *How much protein do we need to eat?* Portion sizes can be confusing for protein. In general, Americans consume plenty of protein per day and reaching the recommended daily value is not a concern. Daily value can be thought of as servings or "ounce equivalents". Recommend intake is about 5 "ounce equivalents" per day. What counts as an ounce equivalent? 1 ounce of meat, poultry or fish, ¼ cup cooked beans, 1 egg, 1 tablespoon of peanut butter, or ½ ounce of nuts or seeds. The recommended amount of protein in servings is 2-3, with each serving equaling about 3 oz of meat or the size of a deck of cards.

### Activities:

- *Get Up and Move!* Since we discussed a lot about how protein helps your body to grow, its important to talk about how it helps give you strength and energy to be active. The instructors should participate in this activity (students are usually impressed if you can do a lot of pushups, etc.). Have the class spread out in the room and do different activities, like jumping jacks, pushups, and sit-ups. Remind the class that it's possible to do these things because they have muscles (made up of protein) and energy to do so from the foods they eat.
- *Who am I?* Put a sticky note with a source of protein (i.e. chicken, black beans, etc.) on each student's forehead. Have students ask their classmates questions to figure out what protein they are. Sample questions include: Do I have a lot or a little protein? Do I have a lot or a little saturated fat? Do I come from an animal? Do I come from a plant?
- *How much of your plate should meat take up?* Have the students draw their own plate of food. Remind them that we have now discussed all of the main food groups: fruits, vegetables, whole grains and healthy protein. Have the students share their pictures and then show them what it should really look like using the Healthy Eating Plate diagram. When you go to McDonalds, what is the main dish that you eat? Meat is usually a pretty central part of our diet, but it should actually only take up one fourth of your plate! In general, you should aim for 2-3 servings per day (1 serving is about the size of a deck of cards). Bring in a deck of cards for a visual aid - a lot smaller than you generally would think. The point is not to get the students to measure their food with a deck of cards, but to help them realize that eating really large amounts of meat is generally unnecessary.

### Snack Ideas:

- *Mango black bean salsa.* Chop ingredients in advance, allow students to add them to a large bowl and mix them together. Serve with whole grain crackers or whole grain tortillas (brush with oil and bake in a 350 degree oven for a few minutes).
  - 2 mangoes chopped finely, 3 cans of black beans (low-sodium), 1 medium sized white onion (after chopping, soak in ice water for about 10 minutes to make it less sharp), a red and yellow bell pepper, a jalapeño pepper (seeded and chopped), about ½ tsp dried chipotle chili powder, 1/4 tsp cumin seed (ground), a good sized

handful of fresh cilantro, chopped, a smashed/chopped clove of garlic, the juice of two limes and about 1/8C olive oil (drizzle it on until it seems like enough) then salt and pepper.

- *Ants on a Log.* Bring back this classic snack. Spread peanut butter on celery sticks and add raisins to look like ants! Talk about how peanut butter is a good source of protein, but should be eaten in moderation. Peanut butter is a great addition to snacks (such as this one or with an apple, etc.) to provide more protein and keep you fuller longer.
- *Greek Yogurt with Fruit:* Greek yogurt is a great option for a snack given the amount of protein packed into each serving. Consider serving a plain yogurt (less sugar!) with fresh fruit. This snack will keep you fuller longer as well!