

Lesson 2: Protein and Dairy

Power up with Protein

Protein Sources — How Do They Compare?

Animal-Based—Proteins from animals provide all nine essential amino acids we need to be healthy. Here are the animal-based foods with the most protein:

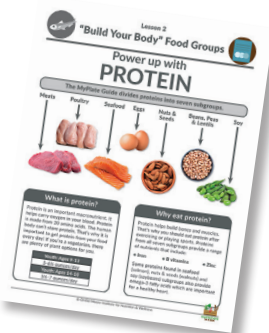
- chicken
- turkey
- beef (lean)
- pork
- ground beef
- salmon
- halibut
- tilapia
- tuna fish
- eggs
- shrimp
- lamb

Plant-Based—You can also find protein in some other food groups. Dairy, grains and vegetables can have protein. Here's a list of the plant-based whole foods with the most protein:

- beans
- lentils
- nuts
- seeds
- quinoa
- tofu
- edamame
- seaweed
- broccoli
- green peas
- nut butters
- chickpeas

What's Up With Protein Drinks?

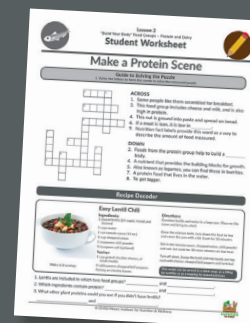
Protein drinks can be an easy way to add protein to your diet. But, don't replace your daily protein amounts with protein drinks. It's best to think of protein drinks as an add-on. Protein drinks are made from whey or pea protein, but can include many other ingredients, like added sugar. While that may sound healthy, these drinks are highly processed.



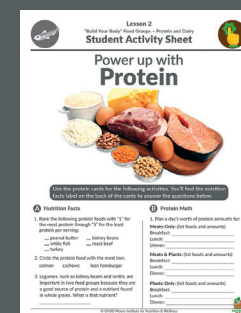
Check the Protein Handout for more !

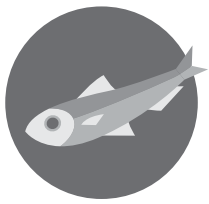
From Paper to Plate Activities this Week

1. Take the “Make a Protein Scene” challenge with the Protein worksheet. Try the easy lentil chili for a delicious way to add protein.



2. Complete the Protein activity sheet.





Lesson 2

"Build Your Body" Food Groups – Protein and Dairy

Student Activity Sheet



Power up with Protein



Use the protein cards for the following activities. You'll find the nutrition facts label on the back of the cards to answer the questions below.

A Nutrition Facts

- Rank the following protein foods with "1" for the most protein through "5" for the least protein per serving:

___ peanut butter	___ kidney beans
___ white fish	___ roast beef
___ turkey	
- Which protein food has the most iron?
salmon cashews lean hamburger
- Legumes, such as kidney beans and lentils, are important in two food groups because they are a good source of protein and a nutrient found in whole grains. What is that nutrient?

B Protein Math

- Plan a day's worth of protein amounts for:

Meats-Only: (list foods and amounts)

Breakfast: _____

Lunch: _____

Dinner: _____

Meats & Plants: (list foods and amounts)

Breakfast: _____

Lunch: _____

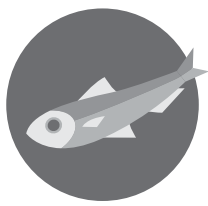
Dinner: _____

Plants-Only: (list foods and amounts)

Breakfast: _____

Lunch: _____

Dinner: _____



Lesson 2

"Build Your Body" Food Groups – Protein and Dairy

Student Activity Sheet



Fact Box — Protein

- The protein food group is named for a specific nutrient instead of a group of foods. That's because the protein nutrient comes from many different foods, including animal and plant sources.
- Protein is needed for growth, development, building and repair of body cells and tissues. Protein foods provide key nutrients such as iron, zinc, and vitamin B12. Try for leaner proteins—foods with low fat content in the meats and dairy subgroups.
- Youth ages 10-18 should get around five to seven ounces of protein foods per day.
- To build muscles, you need protein and physical activity. Physical activities and the foods you eat work together to build a strong heart, muscles, and bones.

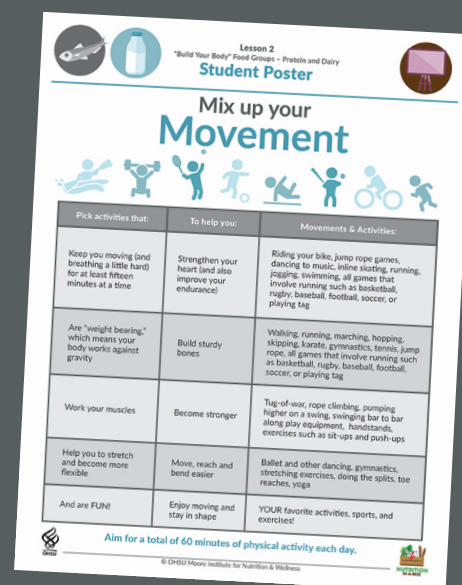
Action Steps

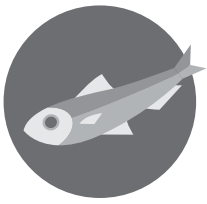
The list below includes action steps for getting more lean protein and physical activity. Which actions would you be willing to work on? Have your own idea? Let's hear it!

- ✓ Choose low-fat cottage cheese and 1% milk for lunch or dinner.
- ✓ Select more proteins from plant-based sources.
- ✓ Walk an extra 15 minutes at least three times this week.
- ✓ Do sit-ups and push-ups for at least 10 minutes on two days this week.
- ✓ My idea for adding healthy protein to my diet (describe):

Mix Up Your Movement

Looking for ideas to be more active? Check out the "Mix Up Your Movement" guide for fun ways to get your body moving.





Lesson 2

"Build Your Body" Food Groups – Protein and Dairy

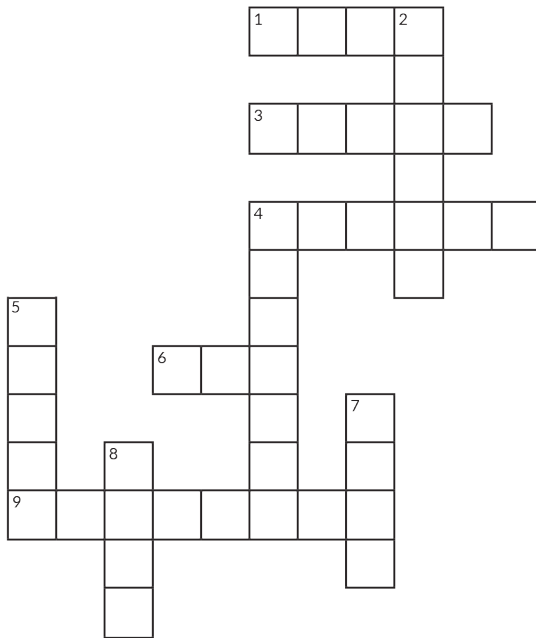
Student Worksheet



Make a Protein Scene

Guide to Solving the Puzzle

1. Write the letters to form the words to solve the crossword puzzle.



ACROSS

1. Some people like them scrambled for breakfast.
3. This food group includes cheese and milk, and is also high in protein.
4. This nut is ground into paste and spread on bread.
6. If a meat is lean, it is low in _____.
9. Nutrition fact labels provide this word as a way to describe the amount of food measured.

DOWN

2. Foods from the protein group help to build a _____ body.
4. A nutrient that provides the building blocks for growth.
5. Also known as legumes, you can find these in burritos.
7. A protein food that lives in the water.
8. To get bigger.

Recipe Decoder

Easy Lentil Chili

Ingredients:

- 1 pound lentils (2¼ cups), rinsed and drained
- 5 cups water
- 1 can tomato sauce (15 oz.)
- ½ cup chopped onion
- 3 teaspoons chili powder
- ½ teaspoon salt (optional)

Toppings:

- 1 cup grated cheddar cheese, or small chunks
- 6 tablespoons chopped bell peppers
- Parsley or cilantro leaves

Directions:

Combine lentils and water in a large pan. Place on the stove and bring to a boil.

Once the mixture boils, turn down the heat to low and cover the pan with a lid. Cook for 30 minutes.

Stir in the tomato sauce, chopped onion, chili powder and salt. Let cook for 30 more minutes on low heat.

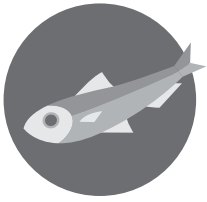
Turn off stove. Scoop the lentil chili into bowls and top each with cheese, chopped bell peppers and herb leaf.

This recipe can be served as a thick soup, as a filling for tortillas or as a topping for baked potatoes.



Makes 6-8 servings

1. Lentils are included in which two food groups? _____ and _____.
2. Which ingredients contain protein? _____ and _____.
3. What other plant proteins could you use if you didn't have lentils?
_____ and _____.



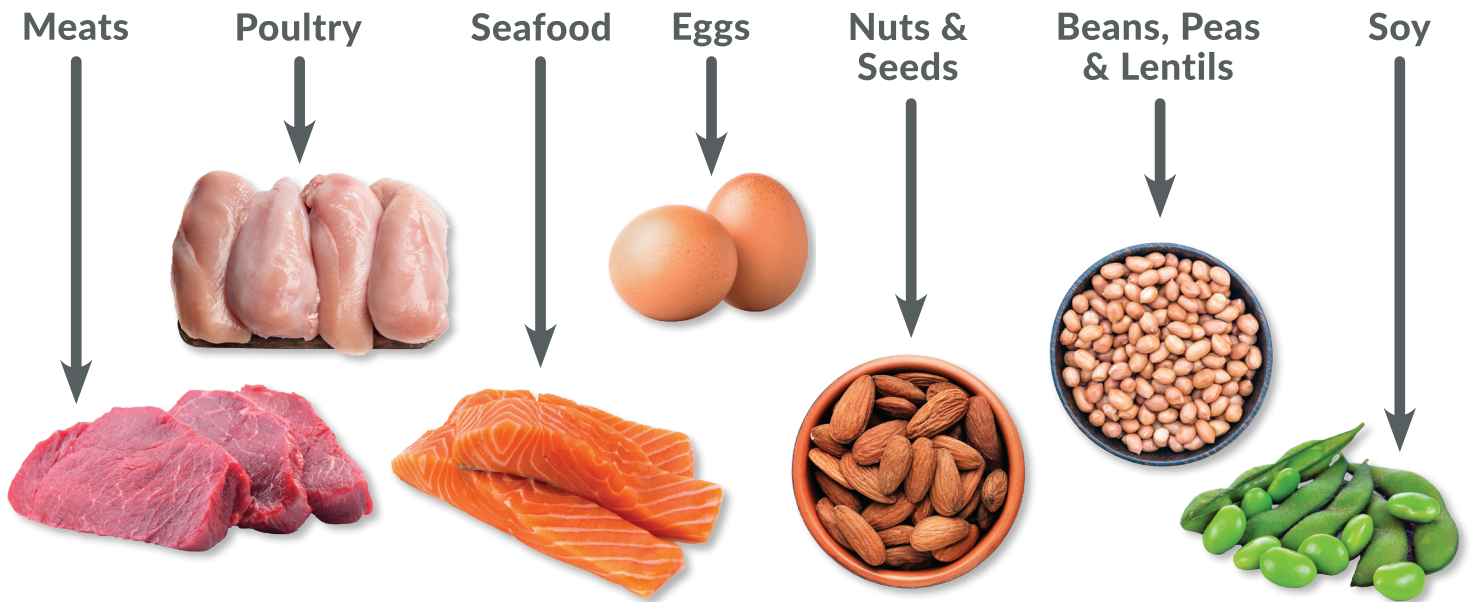
Lesson 2

“Build Your Body” Food Groups



Power up with **PROTEIN**

The MyPlate Guide divides proteins into seven subgroups.



What is protein?

Protein is an important macronutrient. It helps carry oxygen in your blood. Protein is made from 20 amino acids. The human body can't store protein. That's why it is important to get protein from your food every day! If you're a vegetarian, there are plenty of plant options for you.

Youth: Ages 9-13

5-6½ ounces/day

Youth: Ages 14-18

5½-7 ounces/day

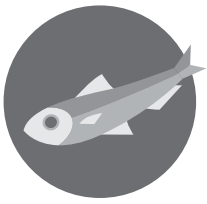
Why eat protein?

Protein helps build bones and muscles. That's why you should eat protein after exercising or playing sports. Proteins from all seven subgroups provide a range of nutrients that include:

- Iron
- B vitamins
- Zinc

Some proteins found in seafood (salmon), nuts & seeds (walnuts) and soy (soybeans) subgroups also provide omega-3 fatty acids, which are important for a healthy heart.





PROTEIN

Protein Challenge: Where Do They Fit?

Use the nutrition cards to sort the proteins into their subgroups.

Meats

Poultry

Seafood

- pinto beans
- cod
- almonds
- kidney beans
- clams
- turkey
- hamburger
- eggs
- peanut butter

- lentils
- chickpeas
- tuna
- tempeh
- beef
- edamame
- ham
- tofu
- bacon

- shrimp
- peanuts
- lamb
- pumpkin seeds
- walnuts
- chicken
- salmon
- black beans
- hummus

Eggs

Soy

Beans, Peas

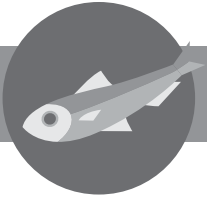
Nuts & Seeds

BONUS

Beans, Peas & Lentils are also part of which other food group?



"Build Your Body" Group

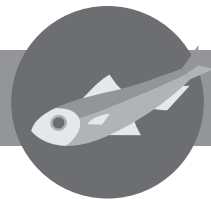


PROTEIN PURSUIT





“Build Your Body” Group

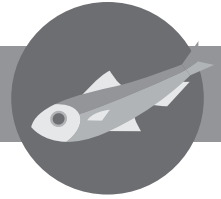


Take the Protein Pursuit challenge!

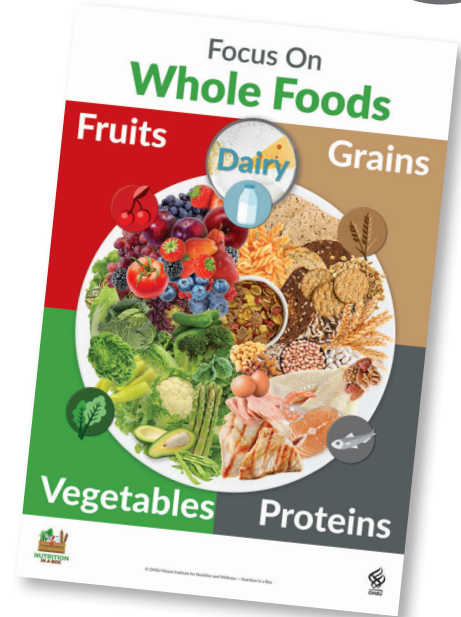
Answer the following questions to see how much you know about this body building nutrient.



“Build Your Body” Group

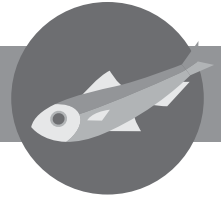


In the MyPlate guide, one food group is actually the name of a nutrient, not a food. Can you name this group?





“Build Your Body” Group

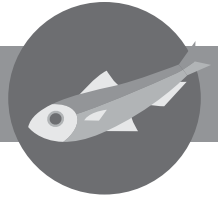


The protein group.





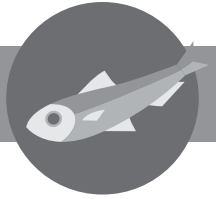
“Build Your Body” Group



Why do you think one MyPlate group is named “protein” (a nutrient) instead of a food like all the other MyPlate groups?



“Build Your Body” Group

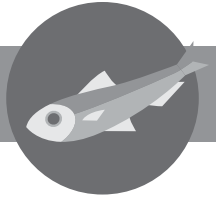


*It's because
many foods
from plants
and animals
have protein.*





“Build Your Body” Group



**Which group of foods can be
a protein and a vegetable?**



“Build Your Body” Group

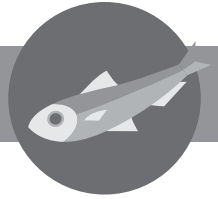
A

All dried beans and legumes such as pinto beans, black beans, split peas, lentils and edamame are both vegetables and proteins.





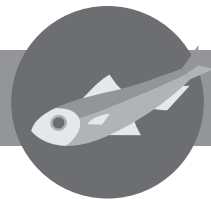
“Build Your Body” Group



**Name three protein foods
that are vegetables.**



"Build Your Body" Group



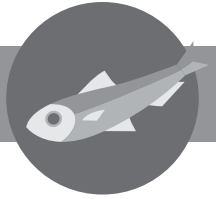
Some include:

- *beans*
- *lentils & split peas*
- *nuts*
- *seeds*
- *tofu*
- *edamame*
- *peanut butter*
- *almond butter*





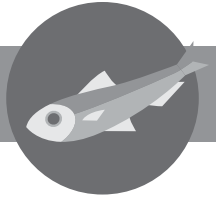
“Build Your Body” Group



**Name another food
group that has protein.**



"Build Your Body" Group

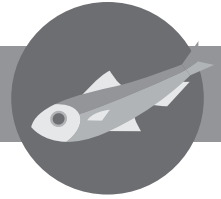


***The dairy
group
also has
protein.***





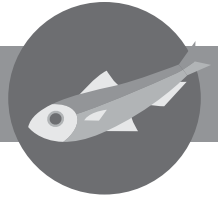
“Build Your Body” Group



**Who may need more
protein in their diet?**



“Build Your Body” Group

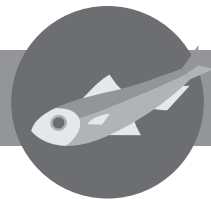


Who may need more protein:

- ***athletes***
- ***anyone who exercises a lot***
- ***workers who do manual labor***
- ***pregnant women***
- ***people over 65 years old***
- ***dancers***
- ***people focused on weight control***



“Build Your Body” Group

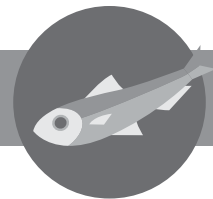


**How many ounces of protein
do you need each day?**

- a. As much as I can eat**
- b. 1 to 2 ounces**
- c. 5 to 7 ounces**
- d. 16 to 20 ounces**

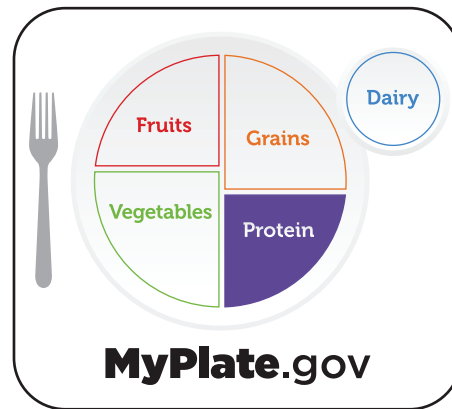


“Build Your Body” Group



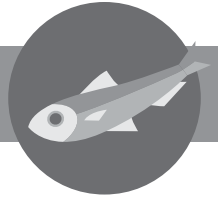
*The answer is “c.”
You need 5–7 ounces
of protein each day.*

**Visit [MyPlate.gov](https://www.MyPlate.gov) to find
out more about protein.**





“Build Your Body” Group

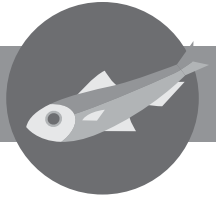


True or False?

**You need to eat a lot of
protein to get big muscles.**



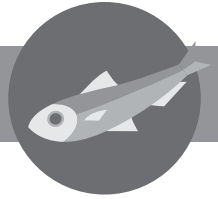
“Build Your Body” Group



False!
***While protein is an
important nutrient for
muscles, it’s exercising
that builds muscles.***



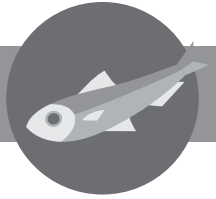
“Build Your Body” Group



**Which nutrient helps
develop, grow and repair
body cells and tissues?**



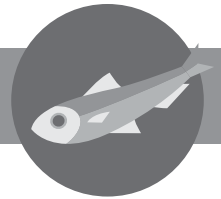
“Build Your Body” Group



Protein is an important nutrient for developing, growing and repairing body cells and tissues.



“Build Your Body” Group

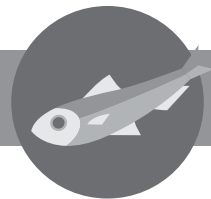


After a long, hard sports workout, you need a protein snack. Which three choices are best?

- a. string cheese and apple slices
- b. chicken soup with vegetables
- c. bananas and raisins
- d. carrots and celery sticks
- e. trail mix with sunflower seeds, almonds & dried fruit



“Build Your Body” Group



***A: string cheese
and apple slices***



***B: chicken
soup with
vegetables***

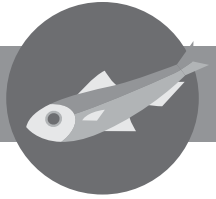


***E: trail mix
with sunflower
seeds, almonds
& dried fruit***





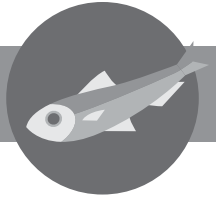
“Build Your Body” Group



True or False?
**You should eat your
main protein at your
evening meal.**



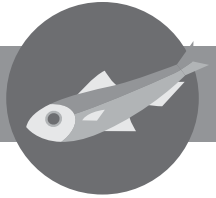
“Build Your Body” Group



False!
***It's better to include
protein in each meal
throughout your day.***



“Build Your Body” Group

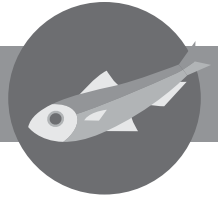


Protein is made of?

- a. carbohydrates**
- b. ascorbic acid**
- c. amino acids**
- d. fiber**



“Build Your Body” Group

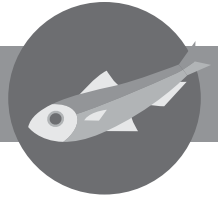


*The answer is “c.”
Protein is made of amino acids.
There are 20 different kinds.
Nine amino acids are called
“essential” because they are
the most important.*

The nine essential amino acids are: tryptophan, valine, threonine, isoleucine, leucine, lysine, phenylalanine, methionine and histidine.



“Build Your Body” Group

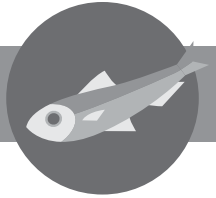


True or False?

Foods in the protein group also have other nutrients, such as iron, zinc and Vitamin B12.



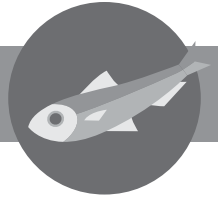
“Build Your Body” Group



True!
***Protein has iron, zinc
and Vitamin B12, plus
other nutrients.***



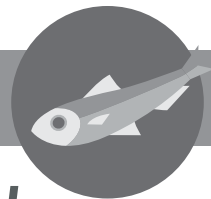
“Build Your Body” Group



**Name at least three
protein foods from
animal-based sources.**



“Build Your Body” Group



Proteins from animal sources include:

tuna fish



eggs



cheese



chicken



milk

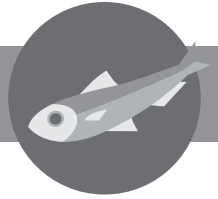


hamburger (beef)





“Build Your Body” Group



**What protein foods will
you aim for?**