



Jr. Animal Scientist

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**ANIMALS NEED
PROTEIN, AND
SO DO WE!**

What is protEIn?

Hotdogs, ice cream and pork chops all have something in common—they contain protein! Protein is a **nutrient**. You eat protein every day. It is something in food that your body needs to grow and stay healthy.

Protein is just one word for a huge group of tiny **molecules** we call proteins. These molecules do many jobs in the body. They make cells work. Proteins also help cells send messages to each other.

Eating protein helps the body grow strong muscles and repair itself after injuries. Protein is also an important part of skin, blood and bones. Hair, fingernails and animal hooves are made out of protein too!

Protein and animal nutrition

Farm animals need protein too. While cows, horses and pigs don't eat ice cream, their food does contain protein. Many animal scientists study animal nutrition, and it's their job to make sure livestock get the protein and other nutrients they need. Pets need protein too! Dog and cat foods contain meat ingredients to get pets the protein they need!



Eggs are a great source of protein! An egg contains around 6 to 8 grams of protein, making it more protein-rich than many other foods.

Photo: Colorado State University Extension



Animal scientists work to make sure pigs get all 10 essential amino acids they need from the protein in their feed.

Photo by Lance Cheung / USDA

Fun fact: Some foods have a “complete” protein, meaning they contain building blocks called essential **amino acids**. Foods with complete protein are meat, poultry, fish, dairy products, eggs, and soy.

Word Watch

Look for these terms in this issue of Jr. Animal Scientist

NUTRIENT: A substance consumed by an animal to survive and grow.

MOLECULES: Very, very tiny particles that make up everything around you, from the air you breathe to the foods you eat.

AMINO ACIDS: The building blocks of protein. They connect to make the chains we call proteins.

LEGUMES: Plants that include all beans, as well as peanuts. Pronounced “lay-goom.”

Where do farm animals get their protein?

Livestock animals, such as cattle, goats and pigs tend to get most of their protein from plant sources. Soybeans are the most popular source of protein in animal feeds. Why? Soybeans are high in protein. Soybeans can also be grown in fields after farmers have harvested that year's corn crop.

Pigs, poultry and farmed fish are also fed fishmeal as a source of protein. Fishmeal is made of fish bones and other parts of the fish not eaten by humans.

And don't forget flowers! Sunflower meal is another common source of protein in animal feeds! Farmers also use the flowering canola plant as a source of protein for their livestock.



Soybeans / Photo by: Bruce Dupree/ ACES



Sunflowers / Photo by: USDA NRCS Montana

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Fun fact:

Soybeans are a kind of plant called a **legume**! All beans are legumes!
Alfalfa is another common legume in animal feed.

Kitchen protein hunt

Can you find protein in your own kitchen? Ask an adult if you can investigate the foods on the shelves and in the fridge! You'll need to look for grams of protein on the nutrition facts label.

Which plant-source foods have protein? (Hint, look for beans, nuts and even peanut butter)

How many grams of protein do they have per serving?

Which animal-source foods have protein? (Hint, look for milk, cheese, lunch meat and other meat products)

How many grams of protein do they have per serving?

Do you have a favorite food? How many grams of protein does it have?



Photo by: iStock/ Ekaterina Minaeva

Activity

Protein word search

Look for these animal nutrition terms!

O X Q K T Y H E N N B N L F Y
S V F M O W C L I U N R W F K
L G N B X N T U E Y Y D M Q G
X K W M Z X Q C T T E Z L T O
C L T J Z G P E O J X S E W T
H I I R A E G L R P L M Z T M
I M K V O F L O P M U F N I C
C X X S E D O M R G E U K C B
K I Q G D S S O E E T O F A U
E J G G T A T L D R E A T T G
N Z Y E A L Z O I T R X O T C
S L Q P E U A E C M U S C L E
N B T Q M U N S L K I L G E T
K A Y W P T Q C Z L S V C P Q
H H C Q H O E A B O B H N U F

PROTEIN
MUSCLE
MILK
CATTLE
MOLECULE

FEED
LEGUME
MEAT
CHICKENS
CELL

NUTRIENT
LIVESTOCK
EGGS
FARM
FOOD

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