

# 1 Activity

Reproducible Master

# THE PROTEIN ADVANTAGE

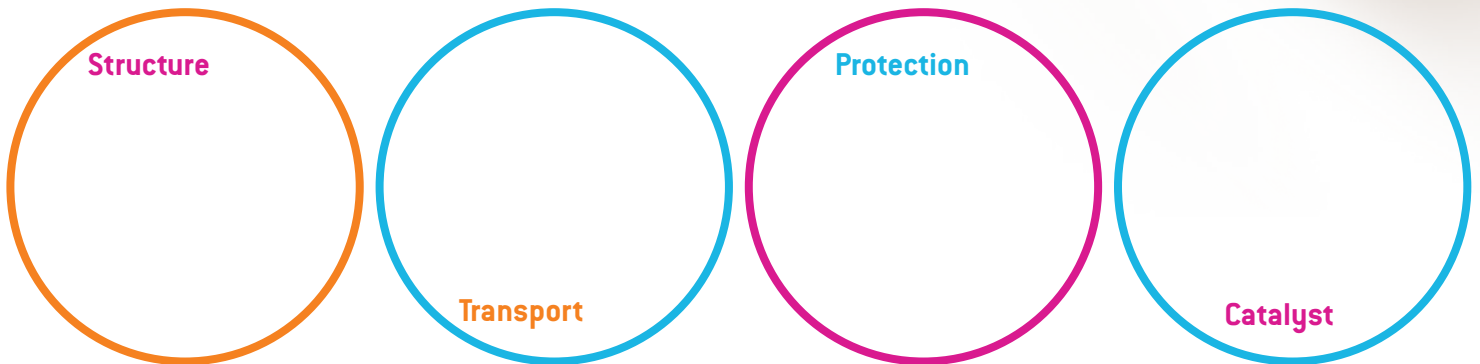
MILK [+ BREAKFAST]



Along with carbohydrates and fats, protein is one of the three macronutrients, or nutrients that provide energy (or calories), in your diet. You may not know that proteins are the building blocks of our bodies. From muscles to hair, bones to teeth, the body needs protein to be healthy and strong.

**PART 1** Our bodies need protein in our diets in order to make protein. When we eat protein in our food, our bodies break it down into molecules called amino acids and then recombine those amino acids to produce the different kinds of protein we need to be healthy.

Read about how different proteins function in the body. Then use this chart to organize different proteins based on the type of function each performs. Write the name of each protein into the appropriate circle.



**Keratin** forms fingernails and toenails.

**Hemoglobin** helps carry oxygen throughout the body.

**Antibodies** fight infections caused by bacteria and viruses.

**Enzymes** carry out most of the chemical reactions in our cells.

**Hormones** help regulate our growth and development.

**Actin** helps muscles contract.

**Collagen** holds our muscles, bones, organs, and skin together.

**Channel proteins** let molecules into and out of cells.

**PART 2** All the proteins in your body are made from different mixtures of just 21 kinds of amino acids. Your body can produce most of these amino acids on its own, but there are 9 amino acids that we must get from the protein we eat. These are called the *essential amino acids*, and when all 9 are found together in a particular protein, that protein is called a *complete protein*.

Complete proteins primarily come from animal sources, like milk, eggs, fish, and meat. The quality of a protein is evaluated based on the mix of amino acids and how easily it can be digested and absorbed. To be considered “complete,” a protein must contain a full mix of the essential amino acids our bodies need. Most plant-based protein sources are not considered complete protein, which means you may miss some of the building blocks your body needs, but vegetarians who mix different plant foods, like whole grains and nuts, or choose foods like milk and eggs, can get the 9 essential amino acids they need.

Are you getting the right amount of protein in your daily diet? On the back of this sheet, list the foods and portions you eat in a typical day, then based on your list, see whether you’re getting your recommended daily amount of protein.



Our bodies can store carbohydrates and fats, but not proteins. That’s why it is important to make protein part of every meal. And milk’s 8 grams of high-quality protein in every 8-ounce glass makes it a perfect protein partner, so drink milk with every meal to help get the protein your body needs!



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