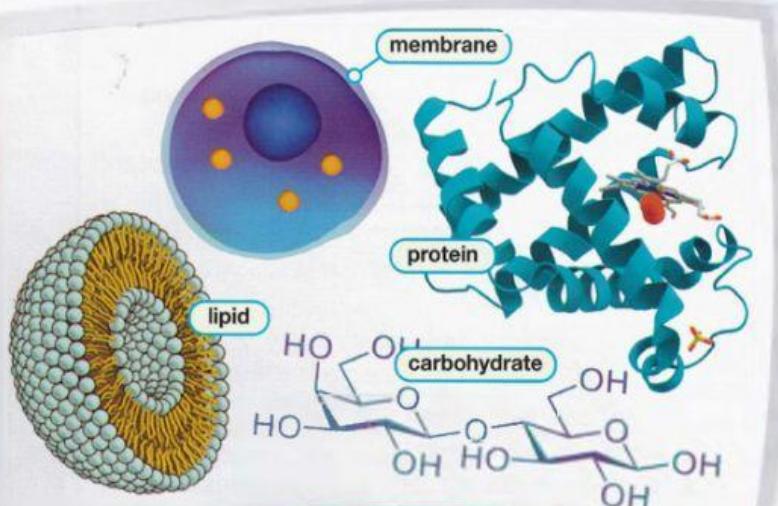


## Get ready!

1 Before you read the passage, talk about these questions.

- 1 What are carbohydrates?
- 2 How are biochemistry and biotechnology related?



## Science Monthly

## Volume 4, Issue 6

Just as in chemistry, **biochemistry** deals with matter and certain chemical processes. Biochemistry, however, focuses solely on living things. A majority of it involves the **interaction** of different substances. The structures and functions of common **biocompounds** are included as well. In particular, **carbohydrates**, **lipids**, and **proteins** are categories of biocompounds.

Biochemistry informs how a living organism sustains itself. Without biochemistry, food could not be turned into energy, which occurs during **cellular respiration**. When exercising, the human body utilizes **energy pathways** to convert food into fuel. **Phospholipids** enable consumed oils to combine with water in the body. Additionally, biochemistry plays a centralized role in the actions a body undertakes. The nervous system contains **ion channels** in the **membranes** of all biological cells. These channels regulate the flow of ions in the body.

Biochemistry is also used in **biotechnology** to make beneficial products. Resilient, hybrid crops and new kinds of medicine are possible through advances in biotechnology. So, while the subject is very technical, it has a wide range of uses.

Visit our website for more resources. There, you can ask questions and listen to interviews with notable biochemists.

## Reading

2 Read the magazine article. Then, choose the correct answers.

- 1 What is the purpose of the article?
  - to introduce a new magazine series on biochemistry
  - to inform readers about advancements in biotechnology
  - to notify readers about an upcoming lecture on biological concepts
  - to discuss biochemical processes
- 2 Which of the following is NOT a biocompound?
  - lipid
  - carbohydrate
  - membrane
  - protein
- 3 According to the article, what is an energy pathway used for?
  - combining oils with water
  - converting food into fuel
  - regulating the flow of ions
  - making beneficial products

## Vocabulary

3 Match the words or phrases (1-8) with the definitions (A-H).

1	protein	5	biotechnology
2	interaction	6	ion channel
3	biochemistry	7	phospholipid
4	biocompound	8	cellular respiration

A the process by which living things convert energy into food and release waste  
 B the use of living organisms to develop beneficial products  
 C the effect or influence one substance has on another substance  
 D a porous gateway in membranes of all biological cells  
 E a molecule found in foods that performs a variety of useful functions  
 F the study of the interactions, structures, and functions of living organisms  
 G a compound with carbon-containing molecules  
 H a fatty compound containing phosphorous

**4** Choose the sentence that uses the underlined part correctly.

- 1 A The chemical reaction occurred without any interactions.  
B Bread and cereal contain useful carbohydrates.
- 2 A Lipids store energy for the living cell.  
B The professor checked the ion channel for waste.
- 3 A Each cell was separated by a thin membrane.  
B During class, students measured the charges of biocompounds.
- 4 A The body's energy pathways aid in metabolism.  
B The phospholipid didn't react to the stimulus.

**5** Listen and read the magazine article again. What is the function of phospholipids?

## Listening

**6** Listen to a conversation between a journalist and a biochemist. Mark the following statements as true (T) or false (F).

- 1  The woman researched carbon molecules before the interview.
- 2  The man emphasizes the importance of biotechnology.
- 3  The woman recognizes examples of common biocompounds.

**7** Listen again and complete the conversation.

Journalist: Okay. Let's start 1 \_\_\_\_\_.  
What are biocompounds?

Biochemist: They are compounds with molecules that contain carbon.

Journalist: I'm afraid that doesn't help me much. You mentioned the readers would be familiar with them. What did you mean by that?

Biochemist: Of the four categories of biocompounds, 2 \_\_\_\_\_.

Journalist: 3 \_\_\_\_\_, \_\_\_\_\_? Please explain.

Biochemist: Well, there are carbohydrates, lipids, and proteins.

Journalist: Oh, I see! I didn't know those were biocompounds. But you're right. 4 \_\_\_\_\_ of them in foods.

Biochemist: Exactly. They use 5 \_\_\_\_\_ to convert food into heat and fuel.

Journalist: They sound essential to the human body.

Biochemist: They definitely are. 6 \_\_\_\_\_, \_\_\_\_\_ so difficult to understand.

## Speaking

**8** With a partner, act out the roles below based on Task 7. Then, switch roles.

USE LANGUAGE SUCH AS:

Let's start with ...

For instance ...

I didn't know ...

**Student A:** You are a journalist. Talk to Student B about:

- biochemistry
- types of biocompounds
- the role of biochemistry in the body

**Student B:** You are a biochemist. Talk to Student A about biochemistry.

## Writing

**9** Use the magazine article and the conversation from Task 8 to write a follow-up note from a reporter to a biochemist. Include: what you thought about the interview, topics you'd like to know more about, and your interest in future interviews.

