

A Journey through the Body

Name:

Date:



The Adventure of a Leucocyte: Part 1

Hey there! I'm a leucocyte, but you can call me a white blood cell. My job is to keep your body safe from germs and infections. Let me take you on a journey through the first part of my day!

I start my adventure in the bone marrow, where I'm born. It's a cozy place inside your bones where many of my fellow leucocytes are created. Once I'm fully grown and ready to work, I enter the bloodstream, which is like a super-fast highway that takes me all around your body.

My first stop is usually the spleen. Here, I get a quick check-up to make sure I'm healthy and ready to fight off any invaders. The spleen is kind of like a training center where I learn new skills and get rid of any old or damaged leucocytes.

Next, I travel through the blood vessels to reach different parts of the body. Sometimes, I find myself in the lungs, where I help fend off germs you might have breathed in. The lungs are full of tiny air sacs that can easily get infected, so it's important for me to keep them clean and healthy.

Then, I might head to the skin. Your skin is like a suit of armor, but it can get cuts and scrapes. When that happens, bacteria can sneak in. If I spot any trouble, I quickly move to the area to help fight off the germs and start the healing process.

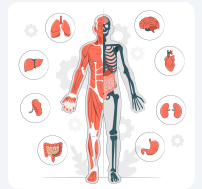
Occasionally, I get a signal from the lymph nodes, which are like little checkpoints scattered throughout your body. They alert me if there's an infection nearby. If I get the call, I move swiftly to the infected area, ready to battle any harmful invaders.

That's just the beginning of my journey! There's so much more to explore and protect in your amazing body. Stay tuned for the rest of my adventure as I continue to defend you from threats and keep you healthy!

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And what happens next? Listen to the brief update from our protagonist about their mission:



Audio Content

To listen to audio content just scan the QR code and listen to it on the digital worksheet.

<https://to-teach.ai/worksheet/D2vjqLMnCStUKjUAELG>

Tick the correct answer.

Where does the journey of a leucocyte begin?

- ☐ In the lymph nodes ☐ In the heart ☐ In the bone marrow ☐ In the bloodstream

What is the main role of leucocytes in the human body?

- ☐ To deliver oxygen ☐ To transport nutrients ☐ To produce energy
☐ To fight off invaders like bacteria and viruses

How do leucocytes move from the bloodstream to the tissues?

- ☐ By hitching a ride on red blood cells ☐ By dissolving in the plasma
☐ By swelling up and bursting ☐ By squeezing through the blood vessel walls

What action do leucocytes take when they spot a bacterium?

- ☐ They deliver oxygen to it ☐ They gobble it up ☐ They ignore it ☐ They carry it to the heart

What are leucocytes likely to do when they encounter an injury or infection in the tissues?

- ☐ They help in cleaning up the mess and start the healing process
☐ They transfer the injury to another part of the body ☐ They turn into red blood cells
☐ They signal red blood cells to stop delivering oxygen

What do leucocytes use the bloodstream for?

- ☐ To expel carbon dioxide ☐ To produce red blood cells ☐ To rest and conserve energy
☐ To patrol the body and look for signs of trouble

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The Adventure of a Leucocyte Continues

As I continue my journey through the body, I encounter different stations and tasks that keep me busy. My next stop is the lymph nodes. These are small, bean-shaped structures scattered throughout your body. They're like little checkpoints where I and other leucocytes gather and share information. Here, we get briefed on any new invaders that might be lurking around. It's also a place where we can rest and recharge before heading out again.

Leaving the lymph nodes, I find myself in the spleen. This organ acts like a filter for your blood, removing old or damaged cells and capturing invaders like bacteria and viruses. I help out by identifying and destroying any harmful intruders that get caught here. The spleen is an important ally in our mission to keep the body safe.

Next, I travel to the thymus, a small organ located in the chest. This is where a special type of leucocyte, called T-cells, gets its training. T-cells are like the elite soldiers of the immune system, and they play a crucial role in fighting off viruses and cancer cells. I often work alongside T-cells, combining our strengths to tackle the toughest challenges.

Sometimes, I make my way to the lungs. These are vital organs where oxygen is exchanged for carbon dioxide. The lungs are also a common entry point for pathogens, so it's important for me to be on high alert here. I patrol the lung tissues, ready to respond to any signs of infection. If I detect a virus or bacterium trying to invade, I quickly move in to neutralize the threat.

Another critical area I visit is the digestive tract. This long, winding tube runs from your mouth to your stomach and intestines. It's where your body breaks down food and absorbs nutrients. However, it's also a place where harmful bacteria can enter. I work hard to protect this area, ensuring that only the good bacteria stay while keeping the bad ones out.

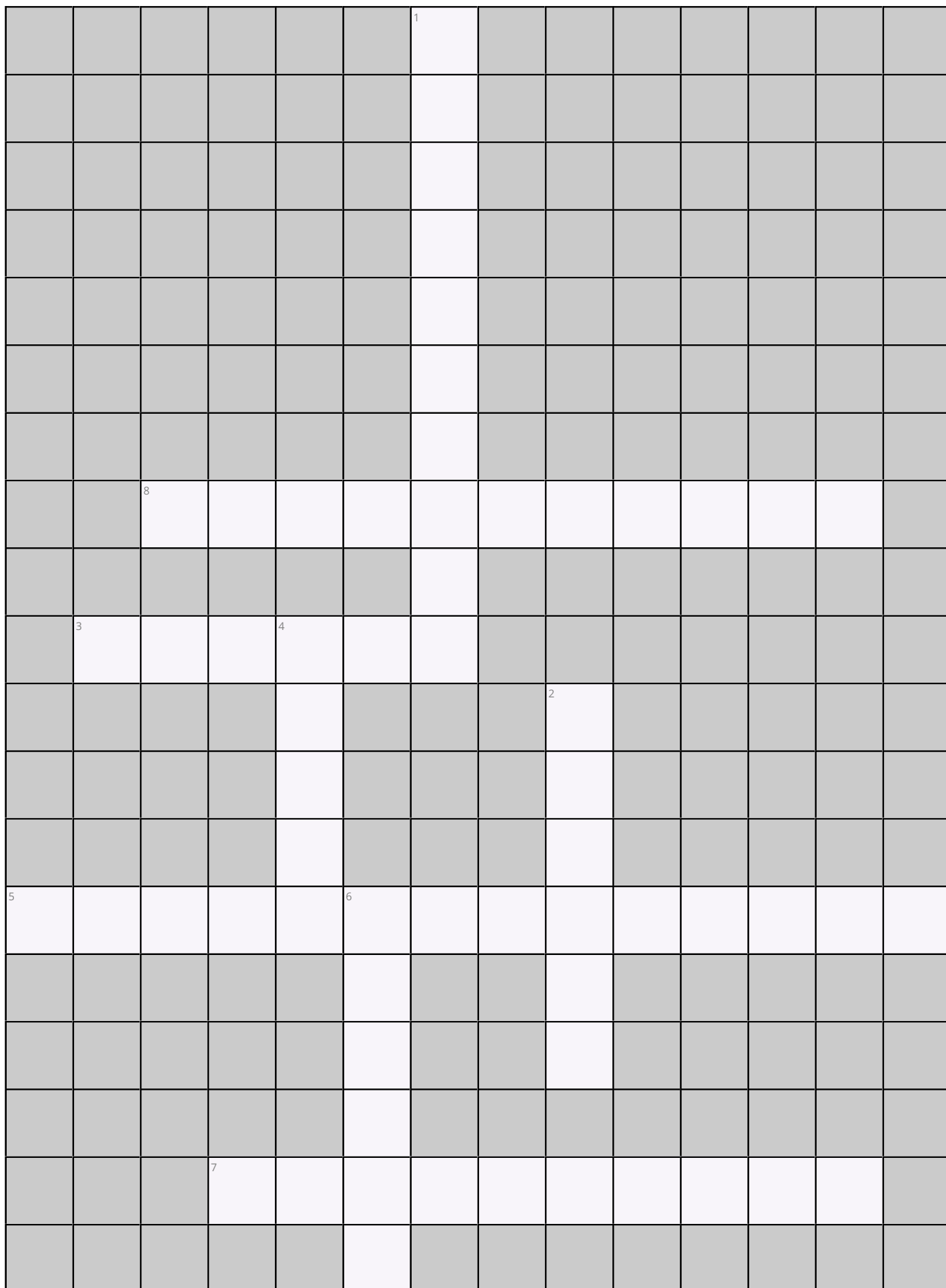
Throughout my journey, I often return to the bloodstream, moving swiftly to wherever I'm needed most. I encounter various challenges, from injuries that require immediate attention to infections that demand a coordinated response. But no matter what, I'm always ready to defend the body and keep you healthy. As my adventure continues, I look forward to exploring more of the body's incredible defenses. Each day brings new challenges and opportunities to make a difference. So, stay tuned for the next part of my journey, where I'll continue to protect and serve in the amazing landscape of the human body.

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Across

- 3 special type of leucocyte trained in the thymus (6)
- 5 long winding tube where food is broken down and nutrients are absorbed (14)
- 7 immune cells that help in identifying and destroying harmful intruders (10)
- 8 liquid that circulates through the body, carrying leucocytes to needed areas (11)

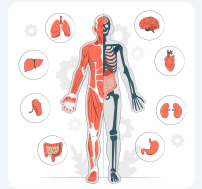
Down

- 1 bean-shaped structures where leucocytes gather and share information (10)
- 2 organ that acts as a filter for blood, removing old or damaged cells (6)
- 4 vital organs where oxygen is exchanged for carbon dioxide (5)
- 6 small organ located in the chest where T-cells receive training (6)

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Name the organs and checkpoints that a leucocyte visits during its journey to protect the body.

Describe the role of the spleen in the leucocyte's journey and the body's immune response.

Explain why the lungs and digestive tract are critical areas for leucocytes to patrol.

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What is the function of each station on the journey? Match them.

bone marrow

spleen

lymph nodes

lungs

skin

thymus

digestive tract

bloodstream

exchange oxygen and carbon dioxide, common entry point for pathogens

training center for T-cells, elite soldiers of the immune system

breaks down food, absorbs nutrients, and needs protection from harmful bacteria

filters blood and captures invaders

checkpoints that alert leucocytes to infections

birthplace of leucocytes

highway that transports leucocytes throughout the body

acts as a suit of armor, gets cuts and scrapes where bacteria can enter

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Were you paying attention? Sketch the journey through the body in the following illustration.

Mark the individual stations and then connect them to form a route.

