Patient Stories: Problems with Body Systems

With every breath and every bite of food, the human body takes in millions of molecules. These molecules are so small that they can’t be seen under a common microscope, but the body can’t live without them. How can something so tiny be so important to the health of the whole body? When everything works properly, the body gets certain molecules from food and from the air. The molecules enter the cells of the body and provide everything the cells need to be healthy. Healthy cells make up healthy organs, and healthy organs work together in systems to keep the body breathing, moving, thinking, and releasing energy. The relationship between molecules and health isn’t just a cool idea: tiny molecules can actually make a person feel better or worse!

Sometimes people get sick because their cells aren’t getting the molecules they need. When this happens, we say the person has a medical condition. Doctors often look for medical conditions when a patient’s symptoms don’t seem to be caused by something like bacteria or a virus. In many cases, people can manage medical conditions by taking medicine to make sure their bodies get the molecules they need. Read the following story to find out about a person whose body systems didn’t provide his cells with everything they need.

Anemia: Red Blood Cell Shortage

My Story

A few months ago, I was feeling tired all the time. I tried taking it easy and getting extra sleep, but that didn’t help. I even started feeling like I was going to faint sometimes. My dad took me to the doctor, and she tested my blood. She said my red blood cell count was lower than normal, and the amount of oxygen in my blood was also lower than normal. Based on the blood test, the doctor gave me a diagnosis: anemia. I asked the doctor about anemia—I wanted to know what it was and how I got it! She said anemia means having fewer red blood cells than a healthy person does.
How Anemia Affected My Body

With each breath, oxygen molecules go into our lungs, which are part of the respiratory system. The oxygen molecules move from the lungs through tiny structures called alveoli (al-VEE-oh-lie) and into the circulatory system. The circulatory system is filled with red blood cells, and these red blood cells quickly pick up the oxygen from the lungs and move it all around the body. Through this process, oxygen molecules are delivered to cells all over the body. Cells need oxygen to function well.

My anemia was affecting my red blood cells. Even though my respiratory system was taking in plenty of oxygen, I didn’t have enough red blood cells to carry the oxygen around in my circulatory system. Because I had fewer red blood cells to carry oxygen, there was less oxygen in my circulatory system. Because of this, my cells were not getting as much oxygen as a healthy person’s cells. My cells were not getting enough oxygen, so they were not doing well—and neither was I!

The doctor said my anemia was probably caused by not getting enough iron in the food I was eating. Not getting enough iron is the most common cause of anemia. Your body needs iron to make red blood cells: if your body doesn’t have enough iron, it won’t have enough red blood cells.

How I Stay Healthy

The doctor must have been right about the iron, because as soon as I started taking iron pills, I started feeling more energetic. Now I feel fine! I don’t need to take iron pills anymore, because I’m making sure to eat plenty of beans, meat, and greens like spinach—those are all foods with lots of iron in them. With these changes, I have plenty of energy.