



From the Heart

Discover what hearts really have to do with love!

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From heart emojis to heart-based phrases ("cross my heart!"), love seems like it has a lot to do with hearts. Read on to discover whether love really comes from the heart!

In Your Feelings

When it comes to feelings, your brain—and not your physical heart—reigns supreme. At every moment, the human brain takes in lots of information. This information can include physical information, such as touch. It can also include conversations you have, things you see, noises you hear—and much, much more.

While the brain sorts all of this information, it often reacts by sending messages to the rest of your body. Some of these messages can be physical reactions. Your heart rate, or the number of times your heart beats each minute, can increase. Or you might start sweating, or maybe even start blushing. Other brain messages are sent in the form of chemicals.

Different combinations of these

 $chemical\ messages\ cause\ the\ emotions\ you\ feel!$

DID YOU KNOW?

Today, we often use the phrase "cross my heart" to say we are telling the truth. Historians think this saying first appeared in the early 1900s, when people used to make the sign of the cross over their hearts to swear a religious oath.

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An ink drawing of the internal structure of the human heart.

At the Heart of It

If the brain is in charge of emotions, why do we talk about our hearts so much? This idea that the heart creates emotion has been around for more than 6,000 years. In ancient Mesopotamia, a region between the Tigris and Euphrates rivers in the Middle East where humans first formed civilizations, people believed that the human heart was in control of the body. And ancient Egyptians thought that the heart was so important that it would be weighed in the afterlife to judge whether a person had been good or bad. (However, they believed that the brain was pretty unimportant. They even threw it away during mummification!) Later, in ancient Greece, some famous philosophers also claimed that the heart was in control. This belief was actually reinforced by people who studied the human body. Doctors in ancient times knew that the heart pumps blood throughout a person's whole body. They figured that, because the heart drives our blood flow, it must also control our feelings.

Over time, these beliefs led the heart to become the symbol for human emotions. When people talked about their heart, they weren't necessarily talking about the organ in their body. Instead, they meant their emotions as a whole. Over the centuries, scientists and doctors learned more and more about the human brain. They began to understand that most emotions were created there, and not in the heart. However, ancient peoples may not have been completely wrong! When a person experiences a strong emotion, they often feel it physically in their chest.

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Recently, scientists made a surprising discovery that may help explain this. Your body is made up of many tiny organs that act as building blocks, known as cells. The heart contains many

FUN FACT

An adult human's heart beats more than 100,000 times every day.

of the same kind of special cells that make up the brain, called neurons. Neurons are cells that send and receive messages. Because both the heart and brain have neurons, this might show that the two organs can send messages back and forth. Scientists don't yet know exactly what this means, but it might show that the heart is involved in emotions after all!