



THE AMAZING HUMAN BODY

by Kevin E. Voss

IT seems that more people today are careful about their health. They tend to exercise more and try to eat right as compared with 20 years ago. We also live in a society that fears making health-related missteps, like exposure to substances that once were thought safe such as BPA in water bottles, asbestos, lead pipes and cigarette smoke. Some believe that the best way to protect our lives is to eat organic foods and avoid man-made chemicals and drugs like the use of pesticides on tomatoes and vaccinations for children. Unfortunately, we can't entirely avoid harm. One of my veterinary school professors said, "Everything on earth is toxic; it's only a matter of dose!" Even water, when

consumed in extreme quantities, can kill because the level of salt in the blood drops too low causing the cells of the body to swell and become damaged. So does that mean we need to live in fear of diseases and poisons?

Sometimes we forget that our Lord created our bodies to work in ways beyond our comprehension, and He gave us a magnificent world containing resources that enable us to lead healthy lives. Certainly we ought to care for our bodies because we are made in the image and likeness of God. Christians should exercise and eat right, not to draw attention to ourselves, but to glorify God and best serve our neighbors.

Fighting infection

In my practice, I was often utterly amazed at how resilient life can be. For example, our bodies fight infection in many ways. We touch a railing or shake hands with someone and can pick up a virus like the common cold. We cut our skin and bacteria quickly enter the wound. Without an amazing immune system, humans could not last long. Your body is able to recognize microscopic invaders, attack them and remember them for the next exposure. White blood cells and other chemicals are released to destroy those threats. During an infection, the body's "thermostat" is set higher (we get a fever), which makes it difficult for the infection to get a foothold.

Treating diseases

Only now, scientists are beginning to appreciate how our bodies fight viruses by studying microbes. One of the most recent discoveries is the CRISPR-Cas9 system, which occurs naturally and provides protection from viruses in certain bacteria. CRISPR basically is a DNA storage and removal system. It saves little bits of viral DNA in the genes of bacteria so viruses can be recognized and destroyed during future attacks. We might think of it as a genetic library! Using this stored information, a related protein such as "Cas9" scans and cuts out dangerous viral DNA, just like a pair of scissors. This method has drawn the attention of scientists because it is very precise. The CRISPR-Cas9 system can be used to edit the DNA of live cells or switch genes on and off, and it works on every type of cell. Hopes are that CRISPR can be used to treat many genetic diseases (like hemophilia), viral diseases (such as herpes or HIV-AIDS) and even cancer.

Using stem cells

The use of stem cells is another exciting area of study. Our bodies have about 100 trillion cells, with 210 different types. Every organ and tissue develops from cells in our bodies called "stem cells," which begin to form a few days after conception. From these potent cells "stem" all the parts of our body. Adult stem cells have been found in places like the bone marrow, heart, skin, and brain. They change into the kinds of cells that need replacing due to age or injury. Medical researchers have used adult stem cells to treat many severe diseases and injuries such as leukemia, Parkinson's disease, sickle cell disease, heart ailments and spinal cord injuries.

The most amazing thing about CRISPR and adult stem cells is that these cures were created by our Lord long ago, placed in nature for us to discover! Psalm 139:13-14 comes to mind: "For you formed my inward parts; you knitted me together in my mother's womb. I praise you, for I am fearfully and wonderfully made." Even in this world cursed due to sin (GEN. 3:17), evidence of a gracious God is clear. Even in a world full of setbacks, illnesses and toxins, "We know that for those who love God all things work together for good, for those who are called according to His purpose" (ROM. 8:28). **LW**

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