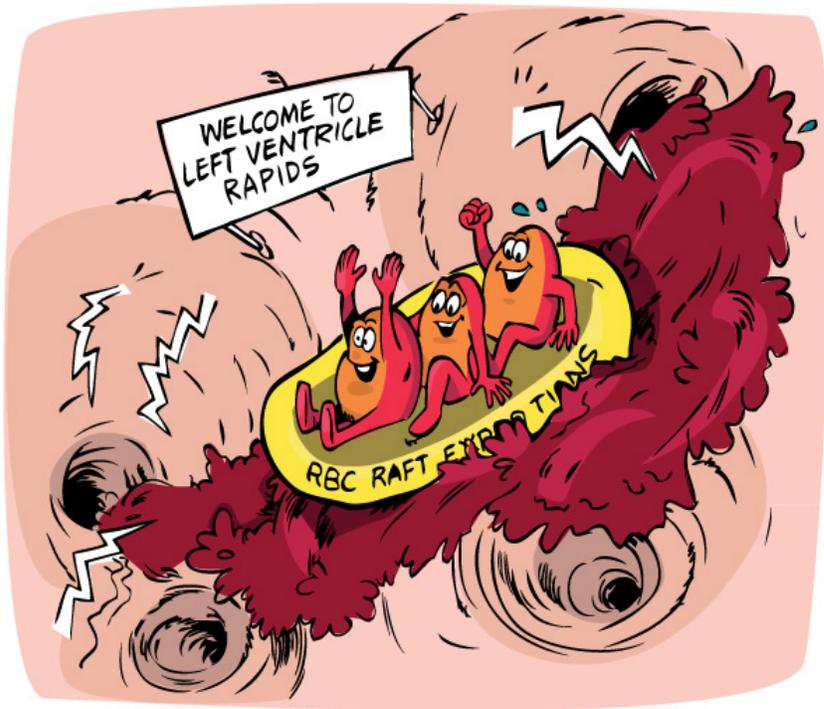




RIDING THE RAPIDS OF THE HEART

Thump, thump, thump. Hear Human's heart beat.

The heart is the size of Human's fist and weighs about one pound or nearly one-half of a kilogram. There are four chambers separated by paper-thin valves. Blood always enters the heart through the two upper chambers and leaves from the lower two chambers. Our first pass through the heart gives us a boost on our way to the lungs. The red blood cells (RBCs) need to dump the carbon dioxide they picked up from us and load up with oxygen to keep us functioning in top shape. Having come from the liver, the blood plasma is loaded with nutrients.



Human's heart cells have lots of exciting news to pass along. The first thing they want me to

tell you is the heart is much more than a pump. In fact, even though there are lots of strong muscle cells to form the heart, it isn't simply a mechanical pump. It would probably wear out much sooner than it does if these muscle cells were solely responsible to keep 7,700 quarts or 8,000 liters of blood rushing through here every day.

The rapid flow of blood is a result of the twisting motion of the walls of the blood vessels and the heart. The layering of the muscle cells in the vessel walls is designed to keep the blood flowing by a spiral or vortex movement. This spiral movement started Human's blood flowing in the womb—before the heart was fully formed. Yes, blood has a life of its own!

Blood gives the heart muscle its start. The heart relies on the blood for movement as much as the blood relies on the heart for a boost. Gives us a new respect for the importance of keeping the blood vessels clean.

Get ready for the rush and roar as we enter the mighty heart. Watch to see how this electrically active blood strengthens the heart's beat. Look at those heart cells sing! The electrons boost both the muscle and nerve cells in the heart—bolstering the twisting and turning of the blood vessels. Come on let's cha cha cha! I could dance all night, I could climb with might, I can feel delight ... okay, okay, I might be a bit off key but I feel like singing and dancing.

HEART LANGUAGE

“The heart has its reasons which reason knows nothing of.”

Blaise Pascal 1623–1662

We're in the upper right chamber along with blood returning in the other major vein—the one that brings blood back from the cells in the upper body. Listen to the roar and feel the pulsing—as awesome as a mighty waterfall. We'll course through here and be expelled very quickly so hang on. Human's heart beats steadily at about 80 times a minute—anywhere from 60 to about 100 beats a minute is considered normal. Each beat propels us into the heart, on to the next chamber and then out of the heart. The valve to the lower right chamber opened easily—not sticky anymore now that Human's blood has been cleaned up. That valve may be thinner than tissue paper but it's stronger than steel. Relax and go with the motion.

Ready! We're out and on our way to a lung. We'll have to squeeze through a capillary to enter an air sac in the lungs along with a red blood cell (RBC). A capillary is about 1/10 the diameter of one of Human's hairs! We depend on these capillaries to keep traffic moving so the RBCs can dump carbon dioxide (CO₂) to be expelled by the lungs and fill up on oxygen to bring to us. Watch for the change in color. As the enzymes assist the iron in the RBCs to pick up oxygen, notice how red this RBC becomes! Love that oxygen.

It's a short ride back to the heart. This time we'll enter the top left chamber to meet

A heart transplant patient, Claire Sylvia, wrote *A Change of Heart*, a book in which she describes how she and others have adopted personality traits from their donors.

A Change of Heart,
Claire Sylvia & William Novak, 1997

the flow of blood returning from the other lung. Hear the roar from the rhythmic contracting and expansion of the heart's beat. Notice how some blood always stays behind in each chamber. The movement of the remaining blood helps the heart muscles retain their steady rhythm. This keeps the muscle cells from having to strain to boost the blood flow. The valve to the lower left chamber is open so let's go.

Ready, here we go again! One more mighty boost from the heart's twisting and untwisting pulse and ... we're launched! Woooweeee! That was a great boost. We're propelling along the main artery heading to cells everywhere in the body ... so the RBCs can deliver their life-giving oxygen and the blood plasma can unload all the nutrients we're flowing with.

The heart cells want me to pass along a secret. They're not all muscle cells—at least 60% of them are nerve cells! Nerve cells that are the same as brain cells! Those electrons keep these nerve cells firing so the heart brain stays sharp. Yes, Human communicates from the heart as well as the head. These neural heart cells translate messages from all over the body as well as keeping in constant touch with the brain to keep Human's body running harmoniously. What a relief since Human has learned to listen to both the heart and the head.

Human now asks two questions: "How do I feel about this?" for the heart and "What do I think about this?" for the head. Makes a big difference. Human is learning as well that it's good to tap into feelings of sadness and anger rather than avoid them and leave them unresolved. Unresolved and suppressed feelings or emotions hamper our work so we don't function as well as we should. Human finds special delight and upliftment in feelings of joy and love. Human is learning to listen to both the head and the heart. This brings a balance of thoughts and feelings to help Human make decisions. When the head ruled, Human often got into trouble by ignoring the warning signs from the heart. Human is learning to listen to the heart as a guide to love and happiness.

VORTEX MOVEMENT

The vortex or spiral is the motion of nature. In addition to blood vessels, vortexes are noticeable in free flowing water, ocean waves, tornadoes, fetal development, the motion by which a baby is birthed, the DNA spiral, the movement of fish and birds and the growth of plants.

In addition to fetal development, the ability of blood to control flow was noticed during open-heart surgeries.

It feels soooo good ... when Human shifts to both feeling and thinking positively! Nerve cells in both the heart and brain respond to create a shower of electrical, hormonal and biochemical connections that cascade to the rest of us—including the concentration of nerve cells in the gut. Human relaxes, thinks more clearly and feels energized. A balance between heart and head has made Human happier!

Delivery time. We'll exit in a capillary to deliver nutrients and oxygen. Take note of the sea of fluid in which each cell is bathed. The blood capillaries float in this sea. The tiniest lymph vessels or lymph capillaries also float in this sea. Let's look at the crucial role of the fluid surrounding each cell.

The oxygen carried by each RBC is transferred through the wall of the blood capillaries to this fluid that supports us. At any one time over half of Human's blood is in the many miles of these thread-like capillaries. It really helps when Human's food, emotions and thoughts are healthy. This allows the negative electrical charge on the RBC to stay slightly less than the negative charge on the walls of the blood capillaries. The difference in charge repels the RBC to keep it moving through without sticking to the capillary walls.

In addition to oxygen oozing through the blood capillary wall, vital nutrients from the blood plasma are transferred to this supporting fluid. Yummy, we're being well fed. See how those vital enzymes escort the nutrients through the blood capillary wall to our cellular fluid. The minerals are particularly important. The minerals keep our surrounding fluid like sea water—lots of electrolytes or mineral ions to keep the voltage up and spark nerve and muscle cells ... keeps Human humming.

As well as feeding us cells, our surrounding fluid carries away our wastes. The cells expel carbon dioxide (CO_2) and other wastes into this sea. There are two different routes to carry wastes back to the heart. The CO_2 and some of the smaller waste molecules migrate back into blood capillaries that lead to veins headed to the liver, then to the kidneys, the skin and the lungs for Human's body to expel them. Of course, it's the RBCs that are responsible to pick up the CO_2 as it enters the capillaries to ensure this gas gets to the lungs so Human can get rid of it.

LISTENING TO THE HEART

My mission in life is not merely to survive, but to thrive; and to do so with some passion, some compassion, some humor, and some style.

Maya Angelou

The purpose of human life is to serve, and to show compassion and the will to help others.

Albert Schweitzer

Another route carries our larger waste molecules. Larger molecules migrate to lymph capillaries that are lying in our surrounding fluid. Actually this fluid surrounding us cells is part of the lymph system. The flow of nutrients in and out of us cells depends on electricity—electricity from photons or light absorbed from sun light and electricity from foods grown on mineral-rich soils.

We've seen how we cells rely on the blood and lymph to feed us, carry away our wastes and keep Human's immune system strong. And, remember how we were expelled with solid wastes at the end of that awesome trip down the digestive tract. Next, we'll look at more ways Human's body functions ... and gets rid of wastes.

REFERENCES

“Vortexian Mechanics & Your Health,” Rhetta Jacobson Baumgartner, *the american raum & zeit*, (forerunner to *Explore!*) Vol. 2, No. 4, 1991.

“The Forces of Healing...,” John Barnwell, *Explore!* Vol. 7, No. 4, 1996.

Living Water, Olof Alexandersson, 1976, ISBN#0 946551 57 X

The Liver, Heinz-Hartmut Vogel, 1988.

HeartMath® Institute, www.heartmath.org

The Golden Seven Plus One, C. Samuel West, DN, ND, 1981. 81-86099

Micro-Magnetic Medicine, Prof. Dr. med. Et. Rer. Nat. W. Langreder.