

The Supreme Controller - AKA the Heart

Found in the chest, between the lungs, being about the size of your fist, the heart is usually described as a hollow muscular organ comprising four chambers, being completely separate on the left and right sides.

When the anatomy of the heart was first being mapped and it was found that the heart is divided into two, this caused outrage amongst some physicians – to say that the heart was divided was heresy. It was a fork in the road, between the traditional ‘vital forces’ view and the emerging ‘body-as-machine’ paradigm.⁹² In the past, the British system of medicine, in common with Chinese and Indian systems, saw the heart as the ‘Supreme Controller’; the place of One-ness, the place of Self, or God within; the place where we connect with the

⁹² Graeme Tobin’s *Culpepper’s Medicine – A Practice of Western Holistic Medicine* discusses this in its introduction.

Divine. Such a place can only be whole, never divided. It's a mistake to see the upset of these healers – which included the famous herbalist Culpepper – as evidence of their holding a primitive and ignorant view. Perhaps they could foresee the terrible division of heart and mind that the worst excesses of Western science displays, with its resulting disconnection of people from self, from each other, from rational treatment of the planet which sustains us, from Source.

Interestingly, new work on cellular memories, in particular with regard to the heart, is emerging. It seems that sometimes when a person receives the heart of a donor, they acquire some of the feelings, memories and tastes of that donor (beginning to crave beer or Fried Chicken, for example). In one case the circumstances of the violent death of the donor were played on the memory screen of the recipient, as well as other cases where names of the donor and their family were remembered.⁹³ It seems that the heart is indeed much more than a 'hollow muscular pump'...more on this later.

Having said that, the textbook definition of the heart is as a hollow muscular pump, completely divided into two halves by a muscular wall known as the **septum**. Each side is further divided into two by a one way **valve**, leading from the smaller entrance halls – the right and left **atria** – to the larger and stronger **ventricles**. The valves are cusped, and the cusps are anchored to the wall of the heart by tough strings (those strings that can famously be pulled on by love perhaps?). Large veins enter the atria: on the right, the **inferior vena cava** brings deoxygenated blood to the heart from the lower part of the body, and the **superior vena cava** does the same for the head and upper body.

The blood is pumped into the right ventricle by the first part of the heartbeat or contraction – known as **atrial systole**. Immediately after this, the ventricle contracts – **ventricular systole** – and the blood enters the **pulmonary artery**. This leaves the right ventricle and straight away divides into a left and right branch, taking blood to the lungs. After this, the heart relaxes as it fills with more blood during **complete cardiac diastole**. In the **pulmonary capillaries** the blood lets go of its carbon dioxide and collects oxygen, then this now oxygenated blood returns to the left side of the heart. Four **pulmonary veins** enter the left atrium, two from the right and two from the left. This oxygenated blood is pumped into the left ventricle by atrial systole (at the same time as blood is pumped from the right atria and the right ventricle), and from the left ventricle into the largest artery in the body, the **aorta**.

The aorta and its branches carry oxygenated blood to every cell of the body. The blood spirals through the body making a kind of symbolic figure of eight (the infinity symbol) with the heart at the center.⁹⁴ Actually, the blood vessels expand and contract as the blood passes through them, and without this pulse wave the blood could not travel through the circulatory system; however efficient the heart is, without the blood having its own momentum and

⁹³ Paul Pearsall *The Heart's Code: Tapping the Wisdom and Power of our Heart's Energy: The New Findings About Cellular Memories and Their Role in the Mind/Body/Spirit Connection*.

⁹⁴ This is poetic licence. It isn't, strictly speaking, a figure of eight...

being helped along by the arteries and veins, the heart would not be strong enough to force blood all the way along. As I said earlier, through studying chicken embryos scientists have learnt that in fact the blood begins to circulate even before the heart develops, making a figure of eight and traveling along like a vortex, a hurricane, through the vessels. When the heart forms it begins to beat in time with this movement.⁹⁵

The right side of the heart contains blood without oxygen and the left side carries blood with oxygen. These two sides must be kept separate, otherwise deoxygenated blood gets into the left ventricle and is pumped round the body, this happens when there is a ‘hole in the heart’. This is inefficient and can mean that not enough oxygen is available to the cells of the body, causing tiredness, fatigue and blueness. A developing foetus does not rely on its own breathing for oxygen, instead receiving oxygenated blood from mum via the placenta. Our heart is present and beating from a few weeks after conception but the septum is not fully formed, and in fact does not become so until quite late on in the pregnancy. Sometimes there is still a hole in the septum when a person is born – the baby may be blue. However, it can happen that a small hole will close over as the septum continues to grow and form after birth. With medium and large holes, more blood crosses the septum and the hole does not close on its own. Then the baby needs an operation to close the hole.

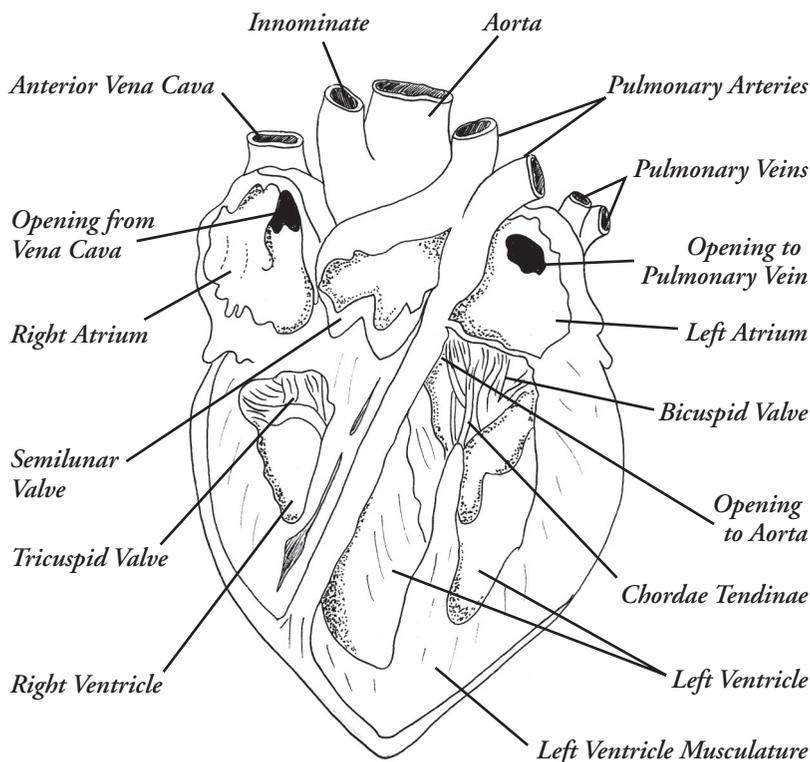
The entire heart is enclosed in a protective connective tissue sac called the **pericardium**. The outer layer of pericardium is loose-fitting, tough and fibrous, and is attached to surrounding tissues – the diaphragm below and the great blood vessels above. Inside this is a ‘serous’ membrane, the top layer being attached to the fibrous pericardium, and the deeper layer to the heart muscle. Between these two layers is found slippery serous fluid, which allows the membranes to smoothly glide over each other as the heart beats.⁹⁶ The pericardium protects the heart and anchors it in position in the chest.

Our heart is amazing. It starts to beat, as we have said, within weeks of conception, and continues to beat, on and on, until the time of our death. The only rest the cardiac muscle gets is a fraction of a second between each heartbeat. The heart muscle is highly specialized to allow it to work like this. It also has another amazing modification: it has an ‘intrinsic’ rhythm. A collection of special cells in the right atrium, known as the sino-atrial node, or colloquially as the ‘pacemaker’, continually and regularly initiates contraction. The contraction spreads out from here to the left atrium, and the two atria contract together. The contraction is then relayed to the ventricles and a moment later these contract. This happens over and over throughout life. The cells in the heart want to beat in concert – one cell alone doesn’t quite know what to do, but two cells or more will keep a regular beat, and beat in time with each other.⁹⁷

⁹⁵ Stephen H. Buhner *The Secret Teachings of Plants*.

⁹⁶As you may recall, serous membranes contain a layer of epithelial cells resting on a loose connective tissue base. The epithelial cells secrete the fluid. They are found in the heart (the pericardium), the lungs (the pleura) and the guts (the peritoneum).

⁹⁷ Stephen Buhner *The Secret Teachings of Plants*.



If you took a heart out of a body and put it in a bowl full of sugared and oxygenated water, (yuck...), it would continue to beat even though completely separated from the body. In fact, the intrinsic beat of the heart is faster than our normal resting heartbeat; nerves come from the central nervous system and tell it to either speed up (sympathetic nerves), or slow down (parasympathetic nerves). Sometimes people have an artificial pacemaker fitted; this is a small machine that regularly emits an electrical pulse to initiate heart contraction. You can feel the pacemaker just under the skin, kind of the shape and size of a largish watch face.

In classical Chinese medicine, the Heart Official was called the Emperor, or the **Supreme Controller**. Her/his role is to sit in the temple, in prayerful contemplation and connection with the Divine, to steer our lives in accordance with Divine Will. Our lives have a purpose, which we follow as part of the Divine plan, and it is the Supreme Controller, our heart, which keeps us on track. (You can think of him or her as being a bit like Captain Kirk, or Jean Luc Picard, in charge of all the exciting and important missions of the Enterprise). You may be as delighted as I am to learn that recent research actually backs up this view: As well as the cellular memory already mentioned, it seems the heart acts as the ‘largest brain in the body’.

From ‘The Intention Experiment’ by Lynne McTaggart;⁹⁸

‘McCraty discovered that (these) forebodings of good and bad news were felt in both the heart and the brain, whose electromagnetic waves would speed up or slow down just before a disturbing or tranquil picture was shown (*at random to people in experiment*)...most astonishing of all, the heart appeared to receive this information moments before the brain did. This suggested that the body has certain perceptual apparatus that enables it continually to scan and intuit the future, but that the heart may contain the largest antenna. After the heart receives this information, it conveys it to the brain. McCraty’s conclusion – that the heart is the largest ‘brain’ of the body – has now gained credibility after research findings by Dr John Andrew Armour at the University of Montreal and the Hospital du Sacre-Coeur in Montreal. Armour discovered neurotransmitters in the heart that signal and influence aspects of higher thought in the brain.’

Spiritual traditions the world over describe this by saying it’s not the brain (the ego) which is making the decisions; we are moved by Spirit; Consciousness, All-That-Is, God, before the brain gets a look in. In truth the heart is so much more than a mechanical pump. It is an endocrine gland in its own right, producing at least five important hormones (so far discovered). Hormones from the heart include **atrial natriuretic factor** (or peptide) known as **ANF**, and **brain natriuretic factor** (or peptide) known as **BNF**, which are made in the ventricles. BNF is activated when we are under stress, leading to protection of the brain from damaging stress chemicals. ANF release is linked to blood pressure. It is a hormone which affects the blood vessels, lymphatic system, brain, kidneys, adrenal glands, pituitary gland, pineal gland, lungs, liver, eyes and small intestine, as well as reproductive function – in other words, pretty much everything. In addition to this endocrine function and heart-brain aspect, the heart is central in generating the electromagnetic field around our bodies, which allows not only communication within the body, but with all other electromagnetic fields outside.⁹⁹

More about Capillaries

This seems a good place to take a closer look at the tube stations themselves in our underground map of the circulatory system; the capillary beds where fluid, full of nutrients, *leaves* the circulation, and fluid and waste products *enter*.

Imagine a wave coming up on the beach. Picture it whoosh up the sand, linger a moment, then retreat back into the sea. It takes with it all sorts of bits of debris: sand, pebbles, driftwood, seaweed. What happens in our tissues, where the capillaries meet the cells, is a bit like this. (Well, all right. Not much like this, but be honest, you enjoyed thinking about the sea for a moment didn’t you...).

As the heart beats, a pulse wave travels along the arteries, pushing the blood along with it. As this wave of fresh blood enters the capillary bed the pressure in the vessels forces a wave

⁹⁸ Printed here with kind permission thanks to Lynne McTaggart *The Intention Experiment*.

⁹⁹ Stephen Buhner *The Secret Teachings of Plants*.