

THE HEART

(Collated by Michelle Wilkinson www.movingnaturally.co.uk)

The heart lies in the chest between the spinal vertebrae and the breastbone (sternum). It nestles between the right and left lung.

If you make two fists and place them together it creates a similar size and shape to your heart.

Each fist clearly reflects how the heart is divided into two sides with the left fist for the arterial (red) oxygenated blood flow while the right fist represents the venous (blue) blood flow.

The division between each side of the heart required to keep the oxygenated and deoxygenated blood separate, is called the interventricular septum.

In utero blood from the placenta enters the right side of the heart and then passes directly to the left side through a hole called a foramen. This usually closes at birth when the baby takes its first breath.

In the developing embryo the heart is the first major organ to mature and function. It begins as two primitive minute blood vessels which grow alongside each other.

When the primitive head grows and expands it curves around the beating heart. The face is formed as it presses against the heart.

The left side of the heart has two chambers the atrium and ventricle one on top of the other and is concerned with maintaining bodily blood circulation known as the systemic circulation.

The right side of the heart, mirrors that of the left by having two chambers the atrium and ventricle one on top of the other. It is responsible for the pulmonary circulation.

Blood passes from the atrium at the top to the ventricle below through a two-flapped valve (bicuspid) on the left and a three-flapped valve (tricuspid) on the right.

The deoxygenated (blue) blood when it returns to the heart enters the right atrium to then be sent to the right ventricle from which the blood is sent to the lungs. Here it collects oxygen and returns the (red) blood to the left atrium which then passes the blood to the powerful left ventricle to be sent throughout the body.

The heart is made of cardiac muscle an independent network of cells which quickly allow an electrical charge to spread through. The heartbeat involves a recharging and discharging of electrical charge at around 70-80 beats a minute.

Unconscious signals from the brain can speed up the heartbeat when scared or stressed. However, it can slow it down when there is a feeling of calm.

The heart rate can speed up to enable more oxygen take up in the bodily tissues during exercise. The brain is the most oxygen and energy hungry organ in the human body unable to last more than a couple of minutes without its supply.

The heart's electromagnetic field is 5,000 times greater than that of the brain.

In traditional Chinese Medicine (TCM) the pathway of the heart meridian begins deep in each armpit and travel along the medial inside of each arm between the biceps and triceps to follow along the lower arm to end at the inside corner of the little fingernail. In the leg it travels along the medial edge of the back of the legs to meet the median side of the heel bone (calcaneus) and finally curl under the heel pad.

In TCM the heart is a space which houses the *shen* which is the spirit and mind of a person. The *shen* is disturbed, unsettled or even flies away during shock and trauma.

The heart is regarded in TCM as having the nature of 'Being' rather than 'Doing' which allows the human spirit and mind to rest peacefully within.

Spirit's Gate is a heart acupuncture point (HT7) which lies in the medial wrist crease between two tendons. It nourishes the heart blood and calms the mind.

It is claimed that Fred Astaire danced as though his legs grew from the bottom of his heart. Anatomically, there is a myofascial continuity from the feet which travels through the legs, along the iliopsoas on each side until it arrives at where the psoas interlocks with the posterior attachment of the diaphragm that forms the foundation on which the heart floats.

The psoas originates on the front surface of the transverse processes of the 12th thoracic vertebrae to the 5th lumbar joint. It inserts into the inside of the upper leg bone (femur).

Due to its anatomical connection of leg, spine and heart this muscle is regarded as a holistic muscle which integrates the body, mind, emotion and spirit.