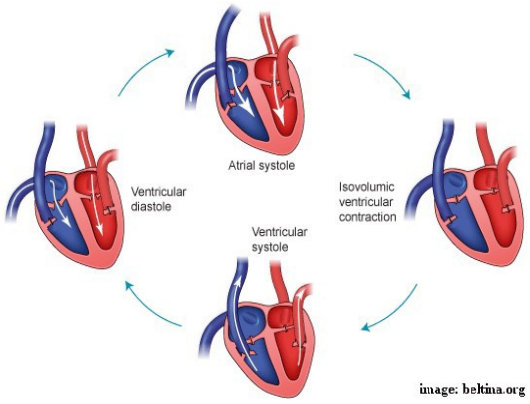
# Copying the Creator: The Heart & The Internal Combustion Engine

Of all the intricacies of the human body, there is none more glorious and fascinating than the main pump – the heart. This amazing piece of equipment is divided into two sections by the septum. It is then subdivided by a valve into two chambers per side, the upper part being called the atrium, and the lower part the ventricle. The actual heartbeat sequence is fascinating, as it is very precise. To begin the sequence, the right atrium fills with deoxygenated blood coming from the body, while the left atrium fills with blood freshly oxygenated by the lungs. This phase is called ***Atrial diastole***. The next phase, ***Atrial systole*** (also called ***Ventricular diastole***), finds the right and left atria contracting, forcing the triscupid valve in the right ventricle, and the mitral valve in the left ventricle, to open, and the right ventricle becoming dilated with deoxygenated blood, and the left with oxygenated blood. In the final phase, ***Ventricular systole***, the ventricles contract while the one-way valves remain shut, and the deoxygenated blood is forced through the pulmonary valve into the pulmonary trunk, and on into the lungs to be re-oxygenated, while the aortic valve opens and the freshly oxygenated blood is forced up through the aorta, and to the rest of the body. This amazing process takes just about 3 ½ seconds to occur in the average human, and happens as many as 29,000 times per day!




The modern internal combustion engine bears some resemblance to the heart. As its name implies, the 4-cycle engine has four cycles that it goes through in the combustion process.

These cycles are intake, compression, combustion, and exhaust. Similar to the heart in its cycles, the 4-cycle engine is not used as a pump but as a power source for centrifugal energy, oftentimes attached to a transmission which together make up a power-train. While it is not certain that the 4-cycle engine was knowingly replicated from the human heart, it is fascinating to think that man has copied a very efficient and clever design from his Creator!