

## Circulatory System

The components of the circulatory system are: heart, lungs, blood vessels and blood. Vessels listed in order of leaving the heart and returning to the heart are:

- arteries
- arterioles (branches)
- capillaries (very fine microscopic branches)  
gas and nutrient exchange can only occur  
in capillaries
- venules (returning branches)
- veins

Goals:, provide gas exchange (oxygen in, carbon dioxide out - cellular respiration), provide food nutrients, remove wastes (kidneys).

Your heart has a double circuit (two hearts in one)

- body circuit (systemic circuit on your left to the outside of your chest)
- lung circuit (pulmonary circuit on your right toward the centre of your chest)

Each circuit has two chambers (total of four chambers)

- atrium at the top of the heart collect blood into the heart
- ventricles at the bottom of the heart pump blood away from the heart
- right hand chambers are the pulmonary circuit (lungs)
- left hand chambers are the systemic circuit (body)

right atrium from body	left atrium from lungs
right ventricle to lungs	left ventricle to body
deoxygenated	oxygenated