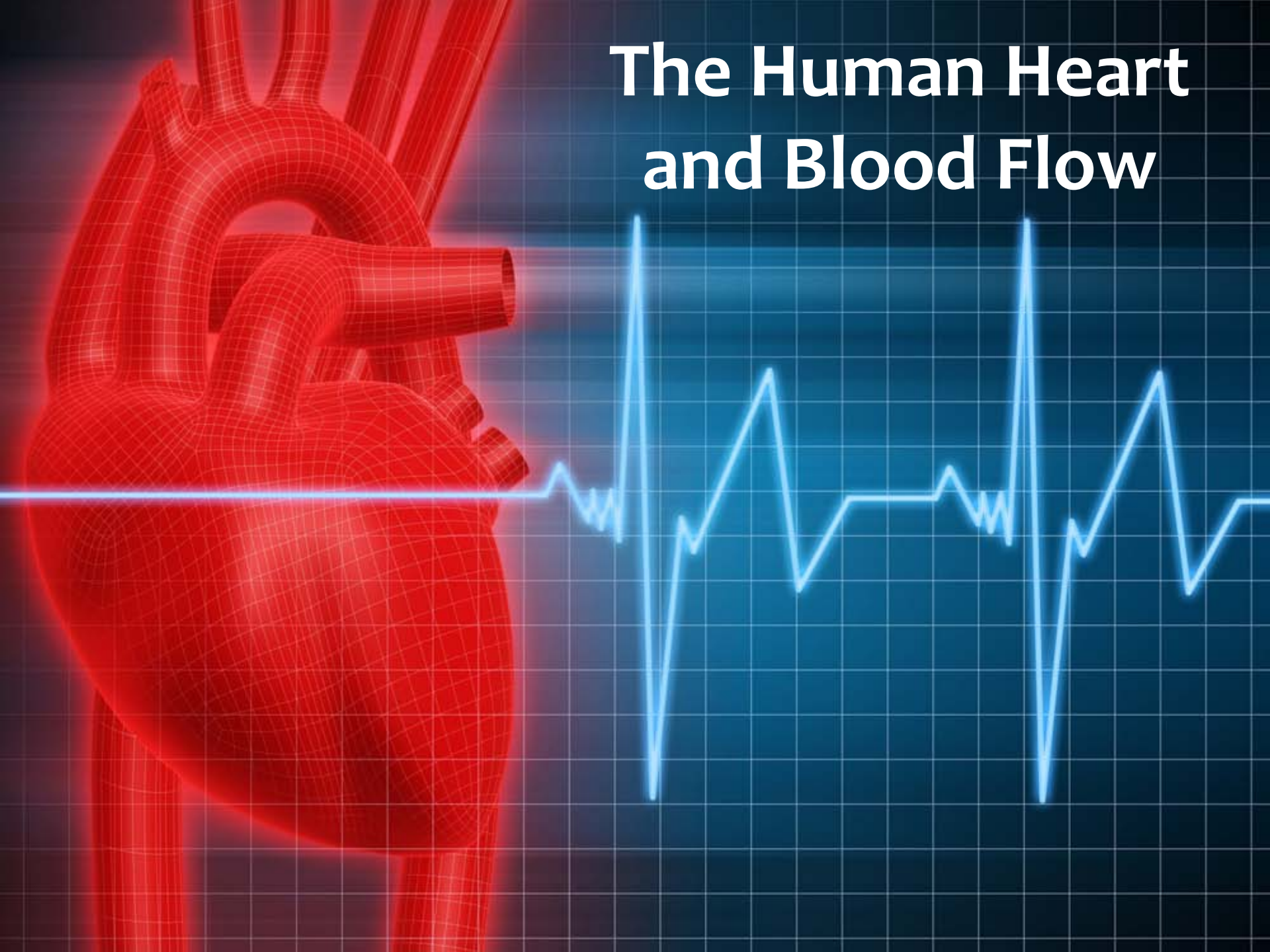
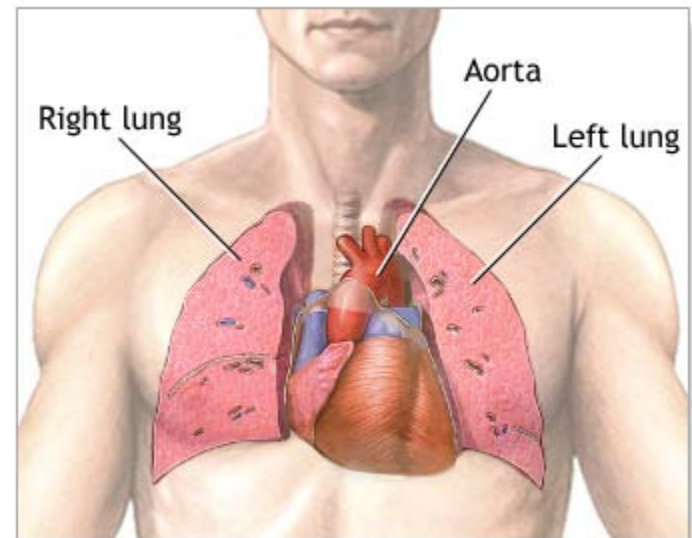


# The Human Heart and Blood Flow



# The Human Heart

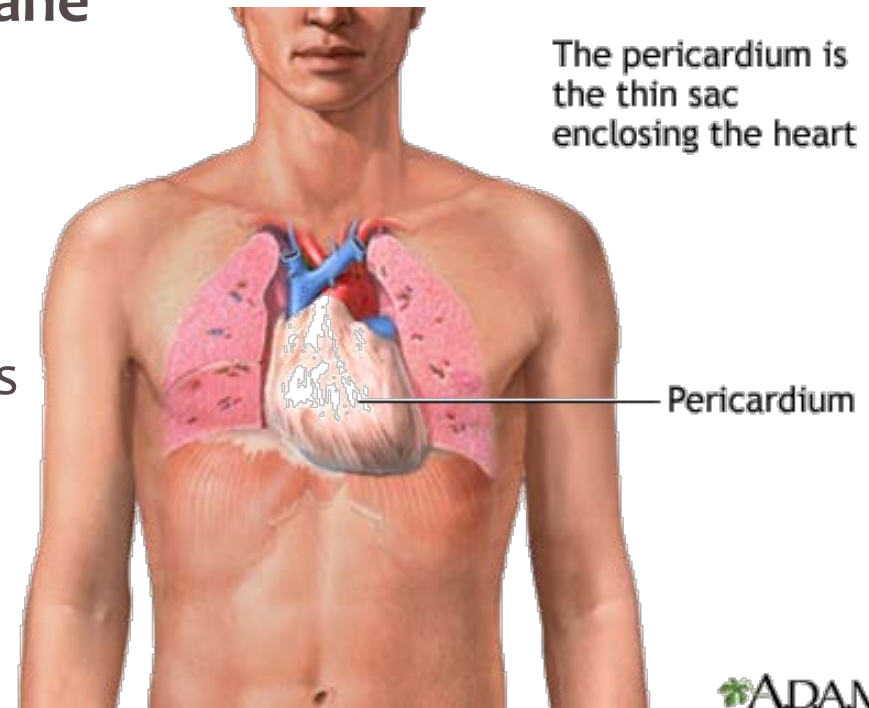
- \* Located in the *Thoracic Cavity*, between the two lungs and slightly to the left
- \* About the size of a clenched fist.
- \* Weighs around a ½ pound



ADAM.

# Pericardium: Protecting the Heart

- \* **Pericardium – protective membrane around the heart**
- \* **Made up of 3 layers:**
  - \* Epicardium – outermost layer, reduces friction
  - \* Myocardium – thick layer, contains cardiac muscle
  - \* Endocardium – innermost layer, contact with blood



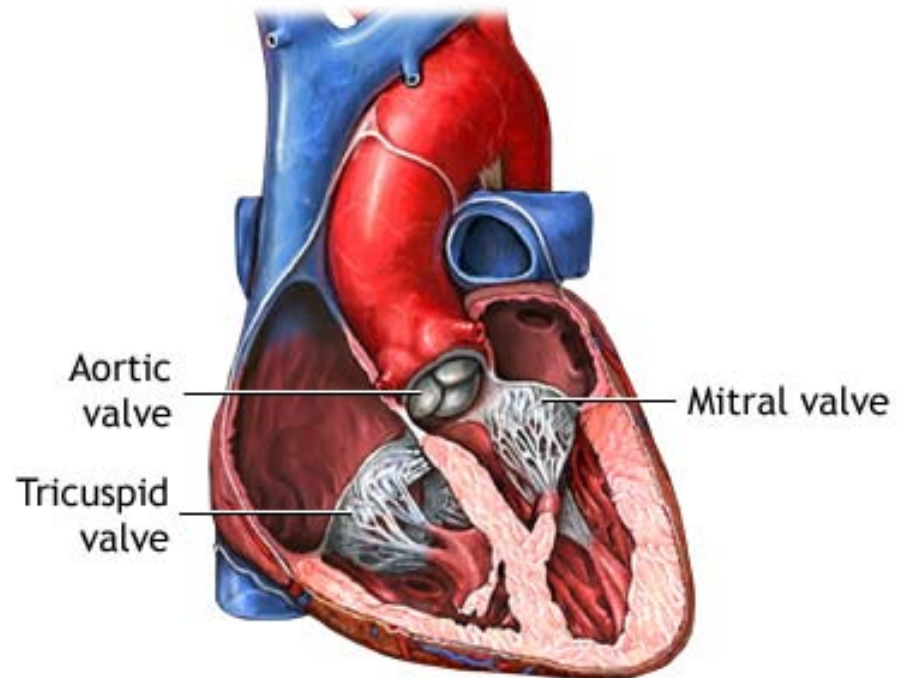
# Heart Pumping

Heart pumps blood through the body through contraction.  
What do valves do for our heart?

## MRI of a Human Heart



MRI at Charite Mitte, Berlin [http://commons.wikimedia.org/wiki/File:Cardiac\\_mri\\_ani\\_sagittal\\_bionerd.gif](http://commons.wikimedia.org/wiki/File:Cardiac_mri_ani_sagittal_bionerd.gif)



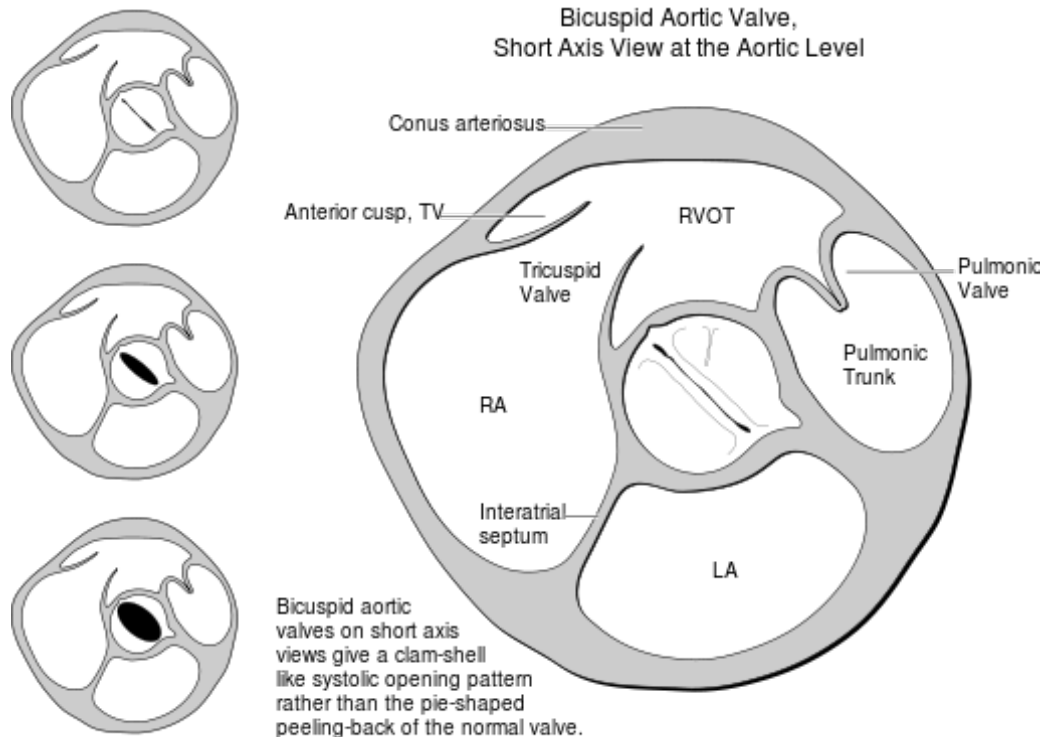
ADAM.

<http://www.ncbi.nlm.nih.gov/pubmedhealth/PMH0004820/>

# Heart Valves

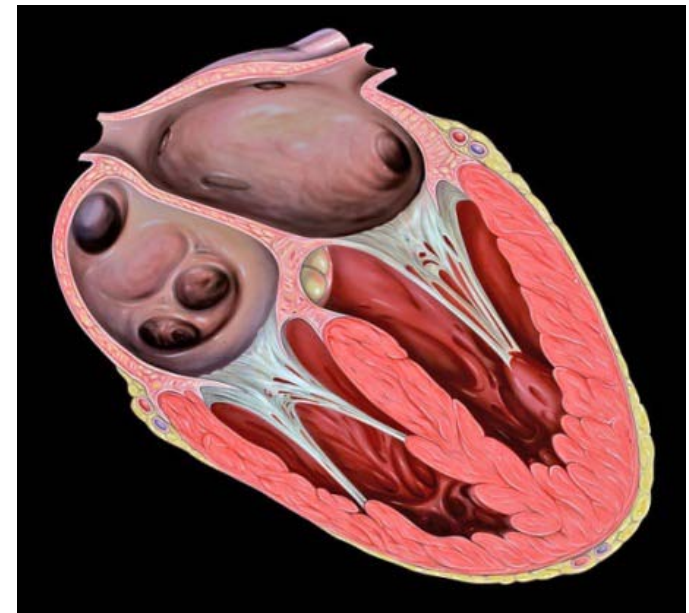
One-way valves are vital to move blood in the correct direction

## Cross section of the heart, focusing on the Aortic Valve



2006 Patrick J. Lynch, medical illustrator  
[http://commons.wikimedia.org/wiki/File:Heart\\_bicuspid\\_aortic\\_valve.svg](http://commons.wikimedia.org/wiki/File:Heart_bicuspid_aortic_valve.svg)

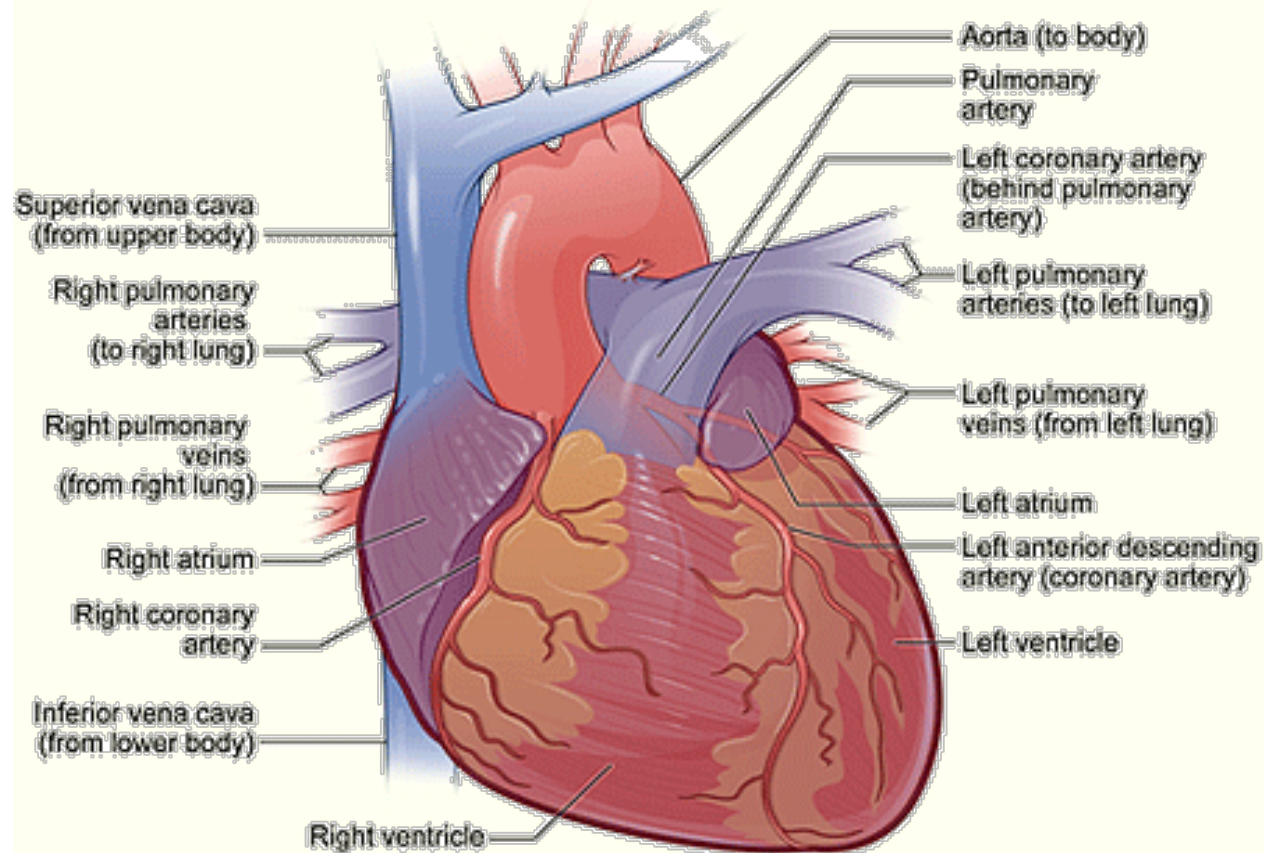
## Tricuspid Valve



2006 Patrick J. Lynch, medical illustrator  
[http://commons.wikimedia.org/wiki/File:Heart\\_tee\\_tricuspid\\_valve.jpg](http://commons.wikimedia.org/wiki/File:Heart_tee_tricuspid_valve.jpg)

# The Heart and the Path of Blood

## Exterior View of the Heart



# The Heart and the Path of Blood

## Interior View of the Heart, with the path of the blood

