The heart is an extraordinary organ that has incredible endurance and strength.

The heart beats 60 times per minute.
The heart is an extraordinary organ that has incredible endurance and strength.

The heart beats 100,000 times per day.
The heart is an extraordinary organ that has incredible endurance and strength.

The heart beats:

Over 2.5 billion times per lifetime.
This talk focuses on the importance of the heart, its anatomy, and how blood flows through the heart and body.

- Importance of blood for the body
- Anatomy of the heart
- Blood flow through the heart and body
The heart functions to pump blood to all parts of the body in order to supply oxygen to cells.
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○ = $O_2$

○○ = Nutrients
The heart functions to pump blood to all parts of the body in order to supply oxygen to cells.

- Green circle = CO₂
- Blue circle = O₂
- Yellow star = Wastes
- Pink flower = Nutrients
There are three main components of the heart through which blood flows: chambers, great vessels, and valves.
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The four chambers of the heart contract in order to pump blood through the heart and to the body and lungs.
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The great vessels carry blood between the body, heart, and lungs.
The great vessels carry blood between the body, heart, and lungs.
There are four valves in the heart which open to let blood pass and subsequently close to prevent backflow.

Valves

Mitral valve
There are four valves in the heart which open to let blood pass and subsequently close to prevent backflow.

Valves

Mitral valve

Aortic valve
There are four valves in the heart which open to let blood pass and subsequently close to prevent backflow.

- Tricuspid valve
- Aortic valve
- Mitral valve
There are four valves in the heart which open to let blood pass and subsequently close to prevent backflow.

- Mitral valve
- Aortic valve
- Tricuspid valve
- Pulmonary valve
Oxygenated blood begins its journey through the body in the lungs
The left side of the heart is responsible for pumping oxygenated blood out to the cells of the body.
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The left side of the heart is responsible for pumping oxygenated blood out to the cells of the body.

Lungs → Pulmonary vein → Left atrium → Mitral valve → Left ventricle → Aortic valve → Aorta
The left side of the heart is responsible for pumping oxygenated blood out to the cells of the body.
The right side of the heart collects deoxygenated blood from the body and pumps it to the lungs.

- Superior/inferior vena cava
  - Body
  - Right atrium
The right side of the heart collects deoxygenated blood from the body and pumps it to the lungs.

- Superior/inferior vena cava
- Right atrium
- Right ventricle

Diagram of the heart with labels for the right atrium and right ventricle.
The right side of the heart collects deoxygenated blood from the body and pumps it to the lungs.

- Superior/inferior vena cava
- Right atrium
- Right ventricle
- Pulmonary artery
The right side of the heart collects deoxygenated blood from the body and pumps it to the lungs.

- Superior/inferior vena cava
- Right atrium
- Tricuspid valve
- Right ventricle
- Aortic valve
- Pulmonary artery
- Lungs
Simultaneous contraction of the atria and then the ventricles pumps blood through the heart
Simultaneous contraction of the atria and then the ventricles pumps blood through the heart.
In summary, the heart’s well organized series of vessels, chambers, and valves help supply oxygen to the body.