

The heart

Name the structures of the mammalian heart.

The heart

Which vessels carry blood away from, and to, the heart?

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Where are the atrioventricular and semilunar valves?

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Why is the septum important?

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Why is the left ventricle wall thicker than the right?

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Why are the atria walls thinner than the ventricle walls?

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What happens to the valves when the ventricles contract?

The heart

Three ways to monitor the heart?

Arteries carry blood away from the heart;
veins return it to the heart.

Muscular wall, septum, left and right
ventricles, left and right atria, one-way
valves, coronary arteries.

It separates oxygenated and deoxygenated
blood so they do not mix.

Atrioventricular: between atria and
ventricles. Semilunar: at the start of the
aorta and pulmonary artery.

Atria push blood only a short distance into
the ventricles.

It pumps blood to the whole body at high
pressure; the right pumps only to the lungs.

ECG, pulse rate and listening to the sounds
of the valves closing.

Atrioventricular valves close and semilunar
valves open, so blood leaves through the
arteries.

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How do you calculate heart rate from a 15-second pulse count?

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Effect of exercise on heart rate?

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Why does heart rate rise during exercise?

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What is coronary heart disease?

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Risk factors for CHD?

The heart

How can diet and exercise reduce the risk of CHD?

Heart rate increases during exercise and returns to the resting rate during recovery.

Multiply the number of beats by 4 to give beats per minute.

Blockage of the coronary arteries by fatty deposits, reducing blood flow to the heart muscle.

Muscles respire faster, so more oxygen and glucose are delivered and carbon dioxide is removed faster.

Less saturated fat reduces fatty deposits; exercise strengthens the heart and helps control body mass.

Diet, lack of exercise, stress, smoking, genetic predisposition, age and sex.