



YMCA Awards

Level 3 Applied anatomy and
physiology

2018

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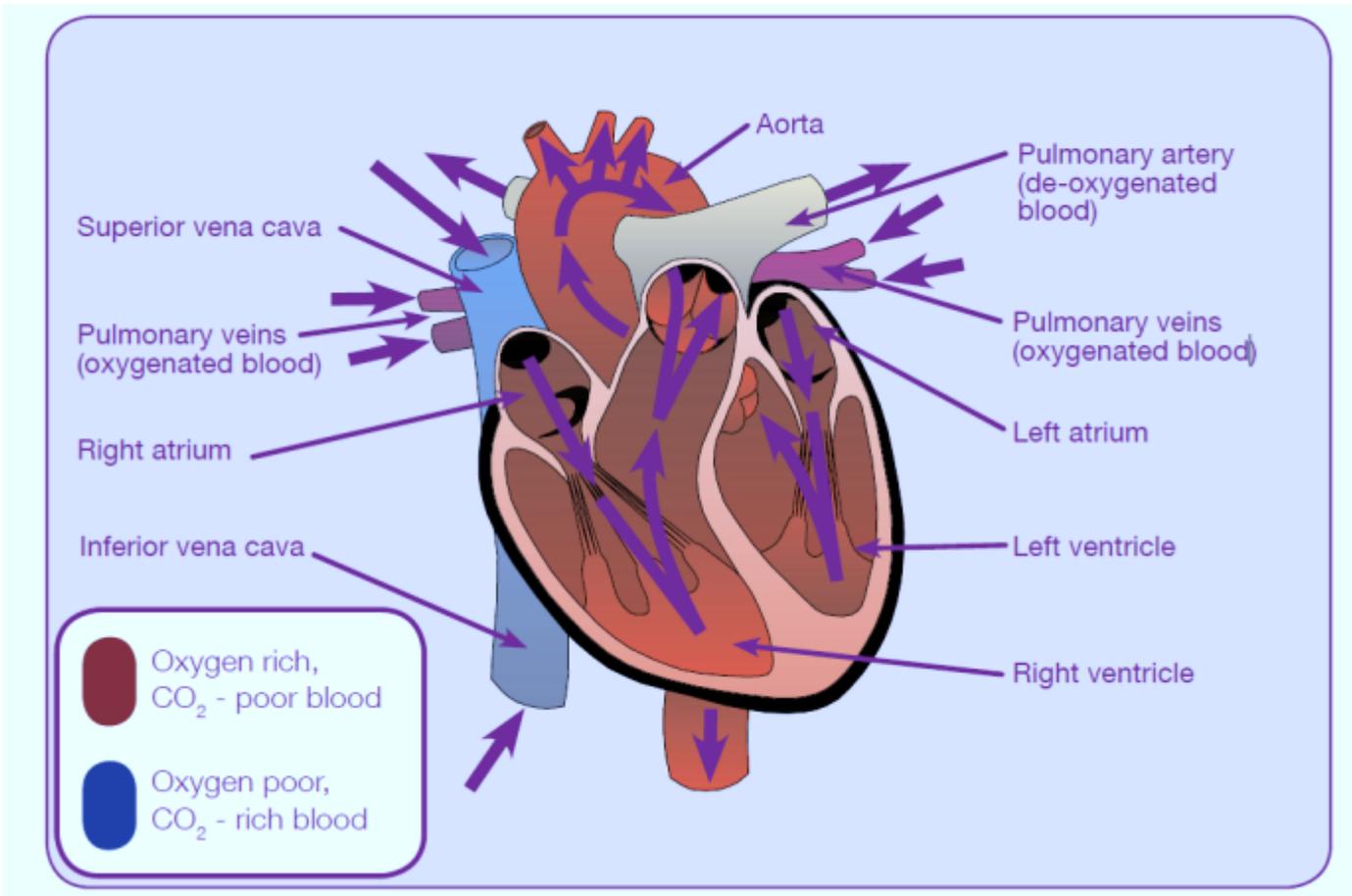
The structure and function of the cardio-respiratory system

Learning outcomes

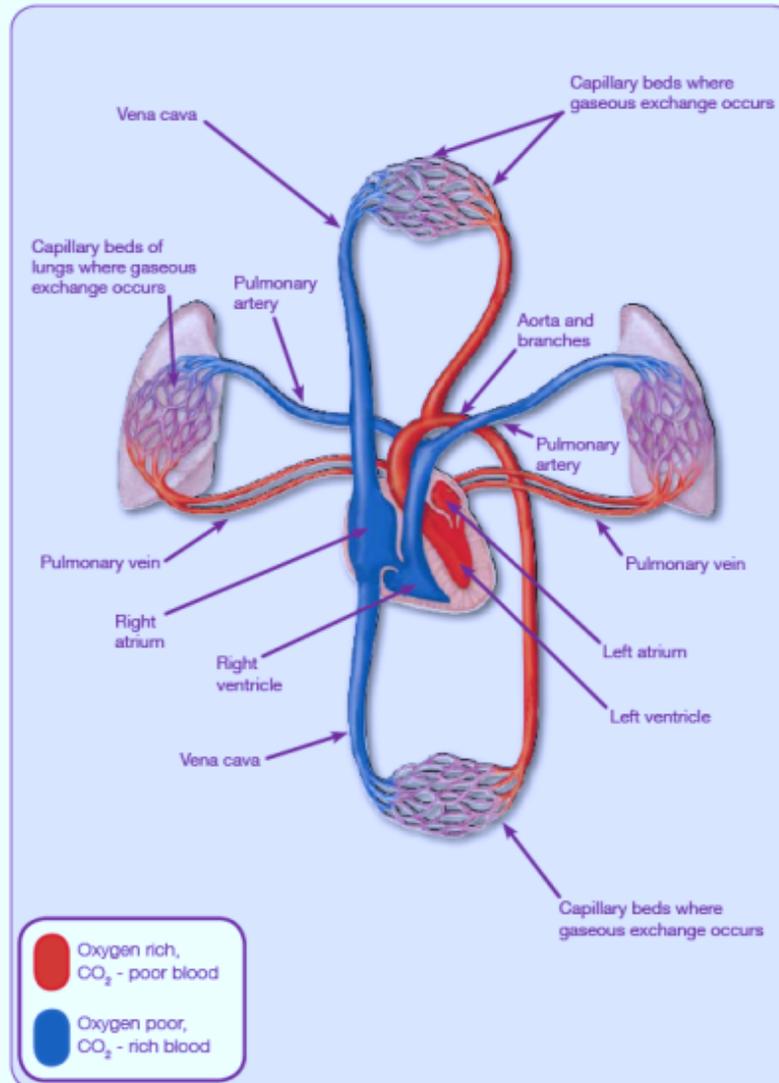
By the end of this session you will be able to:

- Describe coronary circulation
- Describe the effect of disease processes on the structure and functions of blood vessels
- Identify blood pressure classifications and associated risks
- Explain the cardiac cycle, stroke volume and cardiac output
- Identify the short and long-term effects of exercise on the cardio-respiratory system

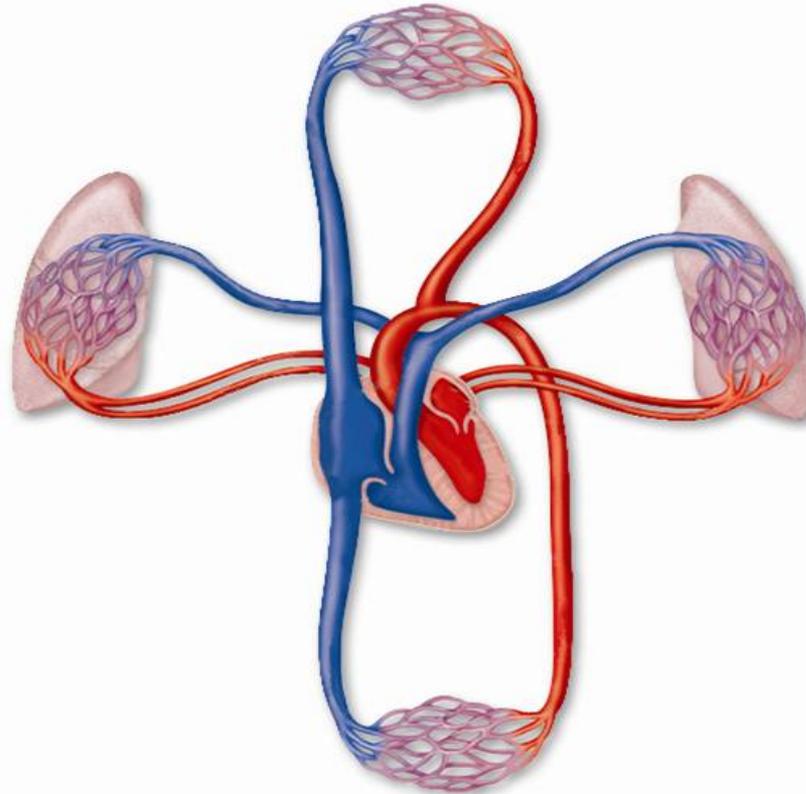
The heart



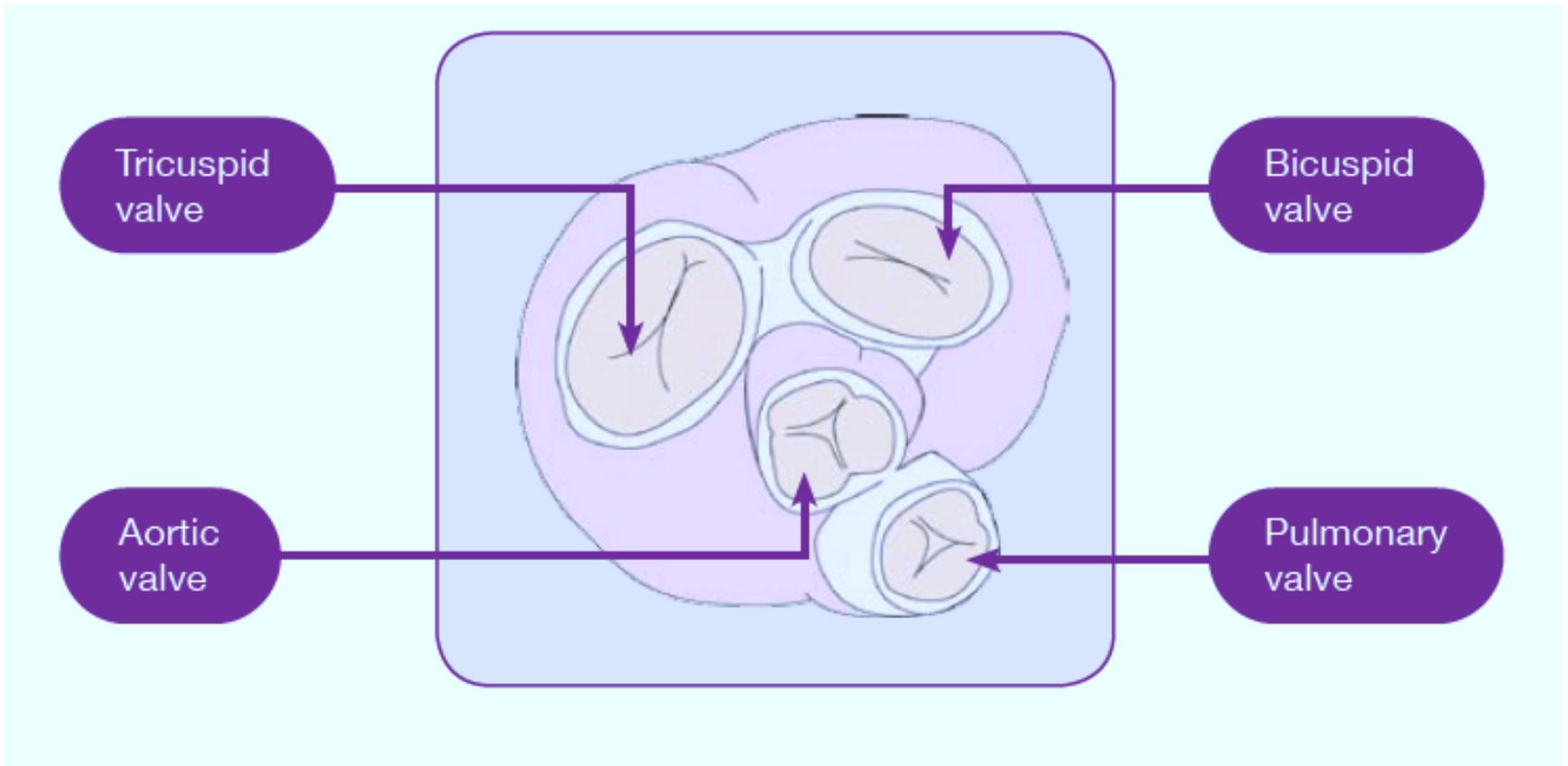
The human circulation system



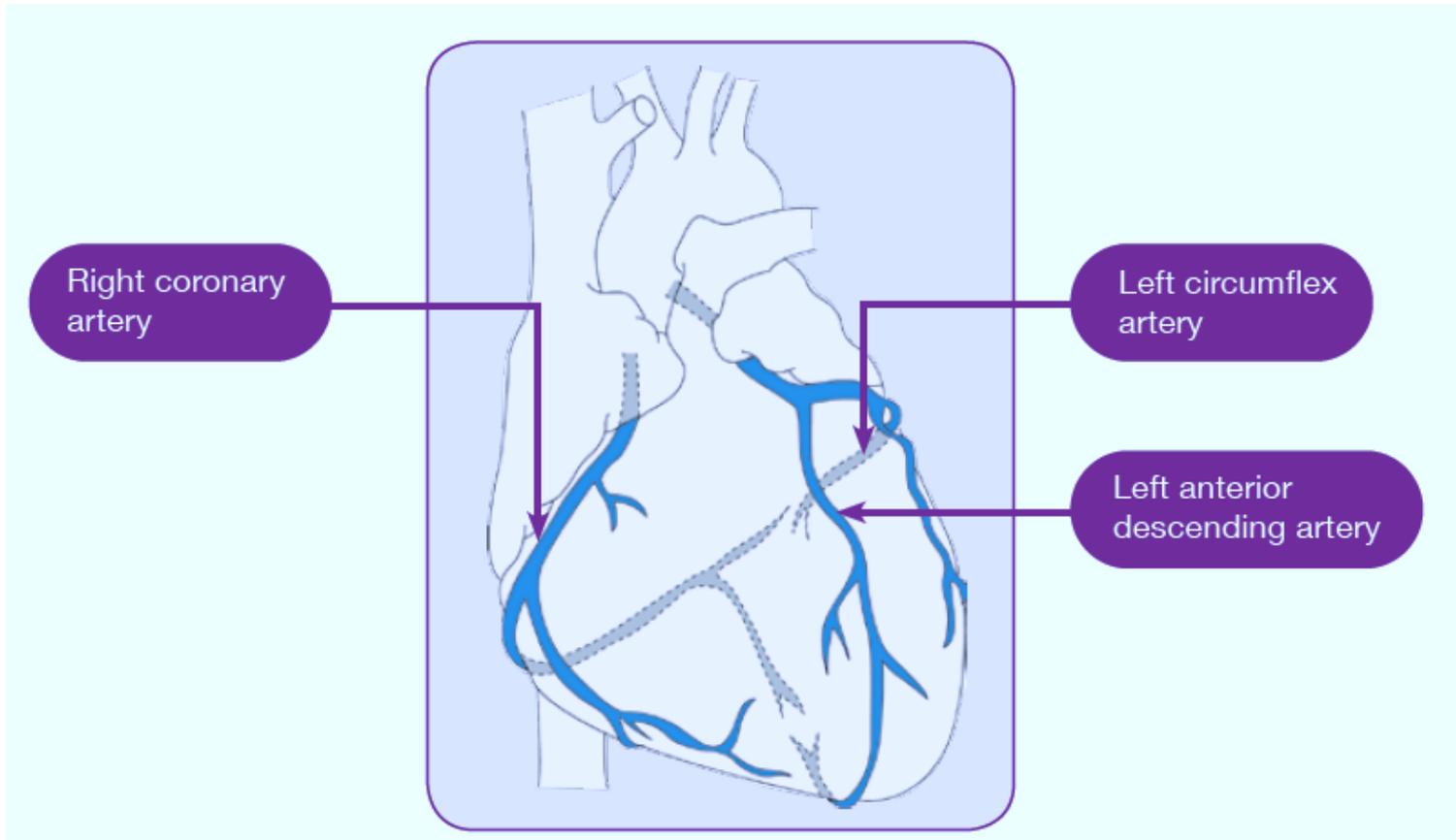
Circulatory system



The heart valves



The coronary arteries



Coronary circulation

Coronary circulation, part of the systemic circulatory system that supplies oxygenated blood to and provides drainage from the tissues of the heart

- Arteriosclerosis is any hardening (stiffening) of artery walls
- This can happen through **atherosclerosis**, an arterial condition characterised by deposits of cholesterol, proteins and minerals on the walls of the artery
- Damage starts an inflammatory response
- Deposits are laid in an attempt to heal the area
- Plaques build up and narrow the artery
- Plaques rupture and release connective tissue and cholesterol into the artery
- A clot forms around which scars, hardens and blocks the artery

