Organisation: Arteries & Veins

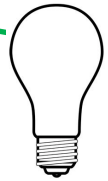
Exam Question

Arteries and veins have different structures and different functions. Explain how the different structures of arteries and veins relates to their different functions [6 marks]

What do we need to know?

	Arteries	Veins
Function	Carry blood away from the heart at high pressure	Return blood to the heart at low pressure
Structure of wall	-Thick, strong -Contain muscles, elastic fibres and fibrous tissue	-Thin -Mainly fibrous tissue -Contain far less muscle and elastic tissue than arteries
Lumen	-Narrow -Varies with heartbeat (increases as a pulse of blood passes through)	Wide
Valves	(-)	(+) Prevent backflow
How structure fits function	-Strength and elasticity needed to withstand the pulsing of the blood, prevent bursting and maintain pressure wave -Helps to maintain high blood pressure, preventing blood flowing backwards	- No need for strong walls, as most of the blood pressure has been lost - Wide lumen offers less resistance to blood flow

What is the question asking us?



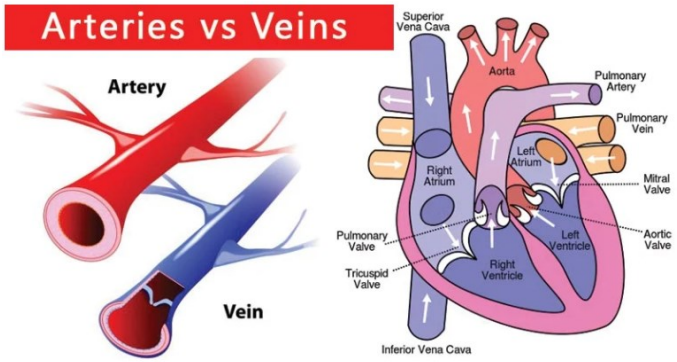
Identify the different structures.

Relate structure to function, what do they do?

What do veins and do? Wat is their job? Arteries and veins have different structures? How does this make them more efficient at carrying out their function/job?

Command word: Explain:

Students should make something clear, or state the reasons for something happening.



Organisation: Arteries & Veins

1st Draft:

2nd Draft:

Organisation: Arteries & Veins

Model Answer:

An artery has a thicker wall and a thicker layer of muscle, [1] this is because an artery has to withstand higher pressure as it carries blood away from the heart. [1]. Arteries also are able to stretch and return to its original size / shape.,[1] this all helps arteries to maintain the force from the blood.. [1]

Veins have valves, valves prevent the backflow of blood. [1] Veins carry blood to wards the heart. [1]