

Veins

These carry blood towards the heart

How does the structure of an artery relate to its function?
(4 marks)

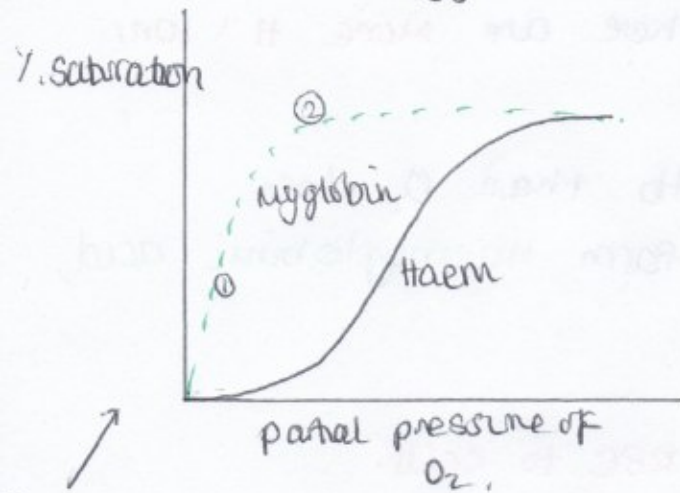
- ① Thinner walls than an artery
- As the blood pressure is lower in the veins
- ② Large Lumen
- so the blood flows easily, and it also accommodates the large volume of blood
- ③ There are thinner layers of collagen, elastic tissue and smooth muscle
- since veins have a lower blood pressure and don't need to stretch & recoil,
- ④ Have valves
- to stop the backflow of blood
- ⑤ Are flexible due to the thin walls
- so can be squeezed by skeletal muscles

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How does blood return to the heart?

- ① Residual pressure from ventricle contractions
- ② Gravity
- ③ Contraction of skeletal muscles, squeezing veins
- ④ negative thorax pressure

myoglobin



① At low partial pressures, myoglobin is more saturated than haemoglobin

② Myoglobin fully saturated at low O_2 levels

* myoglobin is a respiratory pigment in muscles

* it acts as a store of O_2

eg: when a muscle is very active, so supply must catch up with demand

* Thus, only when the O_2 levels are very low does myoglobin release oxygen. It is a sort of emergency O_2 store

NOTE: Myoglobin is NOT sigmoidal;

= as it only has one haem (Fe^{2+}) group, so only carries one O_2 molecule.

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