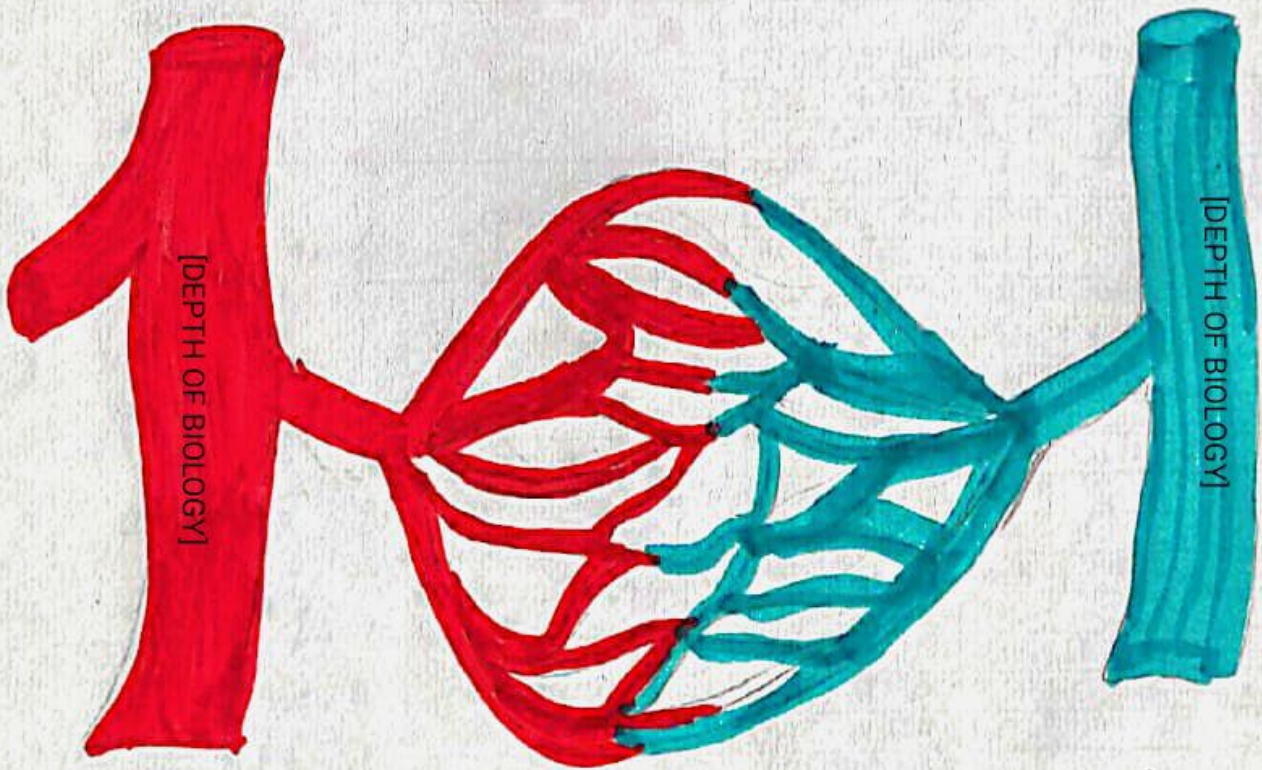


Arteries

[DEPTH OF BIOLOGY]

Veins and

Capillaries



Artery

capillaries

[DEPTH OF BIOLOGY]

Vein

Artery

Vein

[DEPTH OF BIOLOGY]

Function

1. Always carry oxygenated blood except Pulmonary Arteries.

2. Transports blood away from the heart

1. Always carry deoxygenated blood except pulmonary vein

2. Transports blood towards the heart.

Appearance and

Positioning

3. Arteries are red in colour due to the oxyhemoglobin

3. Veins appear blue in colour due to the deoxygenated blood.

* Though the actual reason blue light does not penetrate, red light does. Hence, surface of skin will more back to eyes. [DEPTH OF BIOLOGY]

Behind the appearance is human tissue as deeply as veins which are close to likely reflect blue light

4. Arteries are deep seated.

4. These are peripherally located close to skin. (superficial)

Structure

[DEPTH OF BIOLOGY]

5. It is comprised of 3

5. It is also comprised of 3

distinct layers.
These layers are comparatively thicker, rigid and are highly muscular.

layer but these are thinner and less muscular in comparison with arteries.

[DEPTH OF BIOLOGY]

Innermost	-	Tunica Intima
Middle	-	Tunica Media
Outermost	-	Tunica Adventitia

6. Arteries have narrower lumen

6. Veins have wider lumen

7. Valves are present to prevent back flow and maintain pressure.

7. No such valves are present in veins.

Direction and Rate of Pressure

8. High pressure is observed due to the pumping pressure of heart.

8. Low pressure is observed

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9. Blood flows in downward direction from heart to body.

9. Blood flows in upward direction from body to heart.

Conc. of Various Gases

[DEPTH OF BIOLOGY]

10. Has high O_2 level

10. Has comparatively lower

11. Level of carbon dioxide is lower in Arteries

O₂ levels in Veins.

11. Level of CO₂ is higher in veins.

Susceptibility to Disorders

12. Arteries are more susceptible towards disorders like angina pectoris, atherosclerosis etc. due to diseases like CAD.

12. Veins are less susceptible to the earlier mentioned disorders and disease but may suffer with Varicose Veins. [DEPTH OF BIOLOGY]

Capillaries..

- These are very narrow blood vessel that are very thin walled.
- These connects Arteries and Veins and forms a network throughout the body in all living cells. [DEPTH OF BIOLOGY]
- Capillaries are the sites where the exchange of substance takes place between blood vessels and tissues.
- Unlike arteries capillaries do not have any valves.

