MODULE 3 : Circulatory system

Biochemistry – Undergraduate Programme

Faculty of Medicine and Allied Sciences
Rajarata University of Sri Lanka

Broad Objectives

At the end of this course, a student is expected to,

- know the cells and the structures that line the blood vessels and their contribution towards the flow of blood and aberrations resulting from their dysfunction.
- know ischaemia and measures taken to reduce it.

Specific Objectives

1. ***Blood Vessels***

1.1 Explain the difference in the pH, glucose and the colour of blood flowing through arteries and veins.
1.2 Recall the structure of the capillary bed (Anatomy) and explain the action of nitric oxide on the cells lining it.

2. ***Ischaemia***

2.1 Recall that atherosclerosis begins early in life and is triggered off by abnormalities and damage to the lining of blood vessels.
2.2 Giving reasons, explain why elevated LDL cholesterol is considered a predisposing factor in the development of ischaemia.
2.3 State the factors that promote atherosclerosis, explaining the mechanism of their action, wherever possible.
2.4 Recall the measures that can be taken to reduce atherosclerosis, and the rationale behind their use.
2.5 Describe the basis of the biomolecular mechanisms involved in the therapeutic use of substances, such as, aspirin, heparin, warfarin and streptokinase.
2.6 Recall the common free radicals produced, the damage caused by them and the biochemical pathways that inactivate them.

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