



BIOCHEMISTRY

1ST YEAR MBBS

Weekly study schedule (23-03-2020 to 28-03-2020)

Topic: Lipid Chemistry

Sub Topic: Eicosanoids, phospholipids & Gangliosides

Learning objectives/out come:

- a. Classification & significance of fatty acid.
- b. Nutritionally essential fatty acids and their functions.
- c. Eicosanoids and their biologic functions along with their significance in health and disease.
- d. Structure and biologic functions & significance of phospholipids, glycolipids sulfolipids and gangliosides.

Sources:

- 1. Lecture Power Point.**
- 2. Harper's illustrated Biochemistry 31st Edition.**
Chapter 21, Page 195 – 205.
- 3. Lippincott illustrated Reviews 7th Edition.**
Chapter 11, Page 181 – 210 (Relevant pages only).

Assignment (Must be Pen written on assignment sheet)

1. Define Eicosanoid & classification of Eicosanoid?
2. How Eicosanoid are formed by modification of the structure of unsaturated fatty acids?
3. What is the role of leukotriene & lipoxin?
4. Give structure of triacylglycerol & their functions? What is normal serum level?
5. Name the important ω 3 fatty acids? Give the role of ω 3 fatty acid?
6. Name the essential fatty acid? Give function & deficiency symptoms?
7. Give the structure & function of sphingomyelins. What is the fate of sphingomyelins on hydrolysis?

8. Give the structure & role of cordiolipin?
9. Name the ether lipids? Briefly explain structure & function of ether lipids?
10. What are glycolipids (Glycosphingolipids)?
11. Briefly explain the structure & function of ganglioside?
12. Give Biological significance of GM₁?
13. Define Isoprene unit & mention its product?
14. Briefly explain the Lipid peroxidation?
15. What are reactive oxygen species (ROS)?
16. Name the food additive and naturally occurring antioxidants?
17. Enumerate preventive & chain breaking antioxidation?
18. Give significance of malondialdehyde?
19. Give formation of lipid membrane, micelles, emulsions and liposomes from amphipatide lipids?



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Copy forwarded to :

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4. The Dean/Principal, Punjab Medical College, Faisalabad.