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1. Shock absorption- c
1. Fatty acids are carboxylic acids.
2. The sterol nucleus of steroid is called a phenanthrene.
3. Chylomicrons transport dietary fat and dietary lipids from the intestines to the adipose tissue for storage and muscle to or heart.
4. Functional characteristics of nucleus, mitochondria and endoplasmic reticulum:

   Nucleus

   It controls the heredity characteristics of an organism. It main cellular metabolism through controlling synthesis of particular enzymes. It is responsible for protein synthesis, cell division, growth and differentiation. Stores heredity material in the form of deoxy-ribonucleic acid (DNA) strands.

   Mitochondria

   Mitochondria are known as the powerhouses of the cell. They are organelles that act like a digestive system which takes in nutrients, breaks them down, and creates energy rich molecules for the cell. The biochemical processes of the cell are known as cellular respiration.

   Endoplasmic reticulum

   The endoplasmic reticulum is generally classified into rough and smooth varieties. The rough appearance is due to ribosomes attached to cytoplasmic side of membrane where the proteins are being synthesized. Smooth endoplasmic reticulum is tubular and the site of complex lipid and steroid synthesis.
5. Classes of glycoproteins are:
   - Cerebrosides
   - Sulfatides
   - Globosides
   - Gangliosides

Cerebrosides: is the simplest glycolipid in which there is only one sugar residue, either glucose or galactose linked to ceramide and named as glucocerebroside and galactocerebroside respectively.#

Sulfatides: sulfatides are cerebrosides in which the monosaccharide contains a sulfate ester.

Globosides: globosides contain two or more sugar molecules attached to ceramide. These glycolipids are important constituents of the RBC- membrane and are the determinants of the A,B,O blood group system.

Gangliosides: gangliosides are complex glycolipids, derived from glucocereboside. Ganglioside contains oligosaccharides and one or more molecules of sialic acid, which is usually N-acetylneuraminic acid (NANA) attached to ceramide. Several types of gangliosides such as GM1, GM2, GM3, etc have been isolated from brain and other tissues.

Ceramide

Sphingosine- Fatty acid

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Glucose- Galactose- NANA

Structure of GM3- Ganglioside