Date 05/06/2021 Lipids (2nd)

Deptt of Zoology
Dr. Pritam Kumar

The ligesive enzyme of lecithin is called lecithinase which digests the lecithin into lycolecithin. Lycolecithin is harmful for human being and causes health hazard. Lecithinase is present in the venom of cobra and honey bee. Lecithin is necessary for transportation and synthesis of other lipids in our body. Deficiency of lecithin in our body causes accumulation of lipids in liver as a result it causes fatty ~~acid~~ disease in human being.

(II) Cophetins:— it is an important component of thromboplastin which is necessary for blood clotting mechanism in our body.

(III) Plasmalogens:— it is found in brain and muscles of animals. In higher group of plants. it is found at central region.

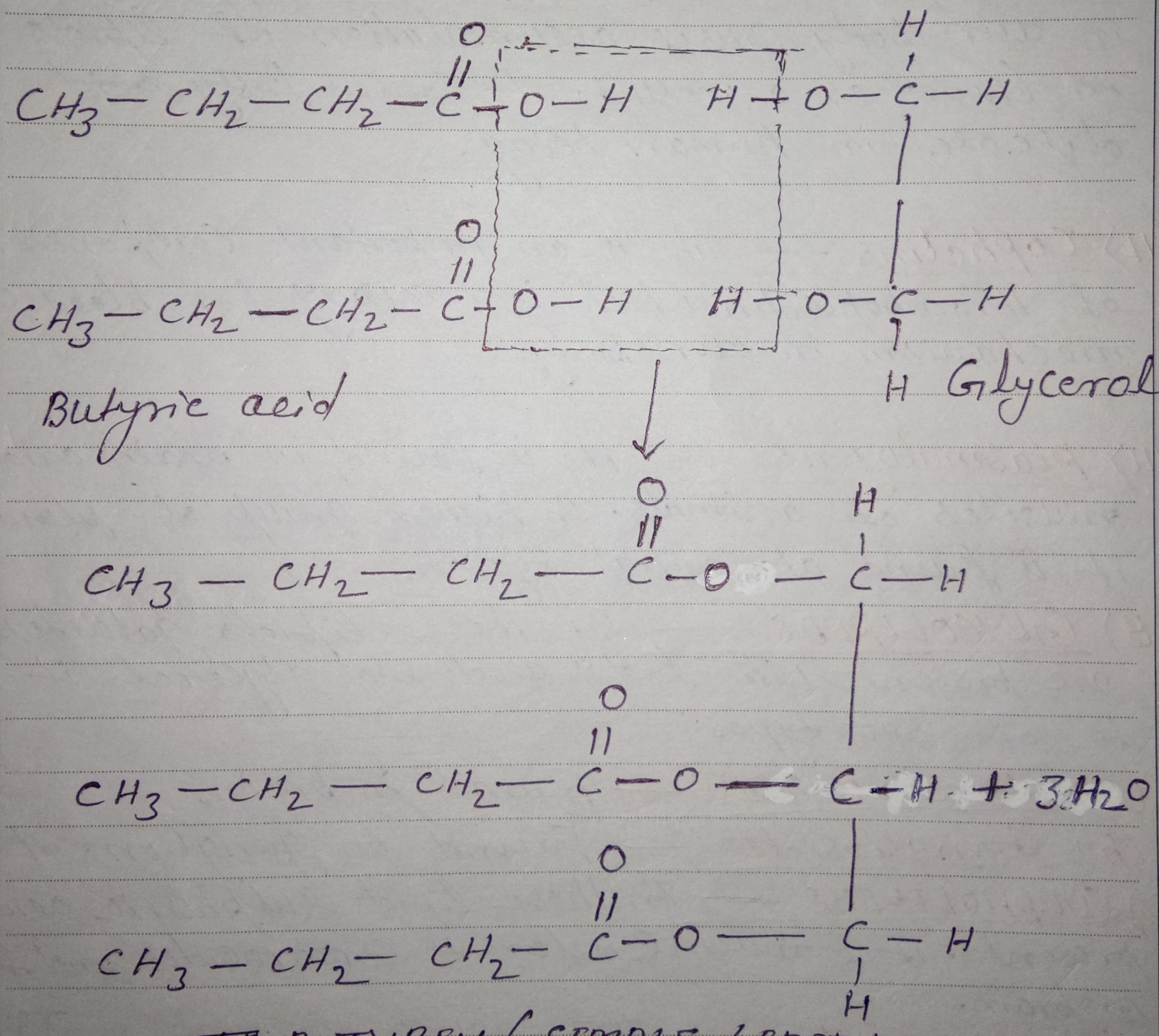
(B) GLYCOLIPIDS:— In these lipids galactose are present with fatty acid and glyceral. it may be of two types:—

(a) Cerebrocides:— found in brain.

(b) Gangliosides:— found in ganglions of nerves

(C) SULPHOLIPIDS:— In these lipids sulphuric acid is present. it is much similar to cerebrocides and found in brain.

(D) LIPIPROTEINS— In these lipids protein are present with fatty acid and glyceral. it is an important component of plasma membrane.


Butyric acid
Glycerol.
TRIBUTYRIN (SIMPLE LIPID)

DERIVED LIPIDS :— These lipids are derived from Simple lipids and Compaund lipids in which one functional hydroxyl group is present. Some important derives lipids are Sterols, steroi -ds, Vitamin A, D, E, K and Some pigments of plants and animals. Description of Some imp -ortant derived lipids are as fallows :—

(A) STEROLS :— These are Solid and waxy Sub -stances present in both plants and animals. In animals its best example is Cholestrol which is faund in brain and Spinal Cord of all Verte brates. In Some Cases, it Causes health hazard bellause in gall bladder it takes part in the formation of stone. it also deposited at the internal Surface of blood vessels and Causes hypertention and Cardiac Failure. In plants Sterols are present in the form of argosterol.

(B) Steroids :— These are present in gall bladder, Sex hormones, hormones of aderenal gland etc. Some importaint examples are as fallows :—

(i) Cholic acid :— it is present in gall bladder, and necessary for emulsification of fats.

(ii) progesterone :— it is an important female sex hormone which is secreted by Corpus luteum. it prevents the menstral cycle period in female after pregnancy and necessary for growth of uterus.

(iii) Estrogen :— it is also an important female sex hormone which is secreted by uterus after six month of pregnancy and also necessary for growth of uterus.

(iv) Testosterone :— it is an important male sex hormone which is secreted by interstitial cells of testis. it is necessary for development of secondary sexual characters in male.

(v) Cortisol :— it is an important hormone which is secreted by Corten of adrenal gland and necessary for carbohydrate, protein and fats metabolism.

(vi) Aldosterone :— it is also a hormone which is secre-ted by Corten of adrenal gland and necessary for control the electrolites of body.

Functions :— (i) fats are important energy yielding substances for us. (2) it acts as reserve food material in our body. (3) steroids are used as horm-ones in our body. (4) some derived fats are found in the form of vitamins which are necessary for control the activities of our bobly. (5) some fats are important part of our nervous system and found in brain, Spinal Cord